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REPORT

OF THE

STORES PURCHASE COMMITTEE

VOLUME I.

SIMLA
SUPERINTENDENT GOVERNMENT CENTRAL PRESS
1920

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REPORT OF THE STORES PURCHASE COMMITTEE (1919-1920.)

VOLUME I.

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REPORT

OF THE

STORES PURCHASE COMMITTEE.

(1919-1920)

CHAPTER I.

INTRODUCTORY.

Origin of Committee.

The origin, the personnel, and the terms of reference of the Stores Purchase Committee are set out in Resolution No. B-506-11 of the Government of India, dated 5th December 1919, published in the Gazette of India of the 6th December 1919 and here reproduced at length :—

"The most obvious and direct form of assistance which the Government of India can give to the industries of the country is by the purchase of supplies required for the public services so far as possible in the country itself. This principle is already clearly expressed in the existing Stores Rules, although their key note is economy, an essential factor in any scheme for the purchase of Government stores; but indenting officers have in practice been too often deterred by the risk involved in purchasing in India in the absence of an expert purchasing and inspecting agency. It follows, therefore, that the constitution of a fully equipped stores agency in this country is a very important item in the policy of industrial improvement on which the Government of India are now embarked.

"2. The foregoing principles were set forth by the Indian Industrial Commission, accepted by the Government of India and approved by the Secretary of State; they have already been put into practice to a limited extent under war conditions by the Indian Munitions Board and the time has now come to give them permanent effect. The Government of India have, therefore, with the sanction of the Secretary of State, decided on the appointment of a Committee to work out a detailed scheme.

"3. There are, however, other factors which must be considered in framing any such scheme. In the first place, the provincial Governments have generally expressed a desire for some measure of freedom in arranging for their own purchases, although they recognise the assistance that the creation of an efficient central purchasing and inspecting department could afford, even to the largest and best equipped provincial Stores department. Although from the point of view of the producer provincial

Governments are not individually very important purchasers in comparison with the large consuming departments of the Government of India, yet their demands are on a sufficient scale to make the waste of public money, which inevitably attends inexpert purchase and ineffective inspection, run into considerable figures; and this is bound to lead in the long run to dissatisfaction with local sources of supply. It will be for the Committee, in consultation with the officers of Local Governments and with private suppliers, to devise a system which will, so far as possible, meet the wishes of Local Governments, while securing to the fullest extent practicable the great advantages of centralised purchase, thereby eliminating competition between the different Government agencies, and of an expert and highly specialised inspecting agency, whose advice and assistance will be of no less value to the private manufacturer than to the Government indentor.

"4. The great railways of India, whether Company or Government lines, are large consumers of stores, and have, therefore, found it necessary to create their own agencies for holding stocks, and for effecting local purchases, the latter being often on a very considerable scale. There is, however, at present no agency for ascertaining whether stores bought through the Director General of Stores could have been obtained in India; nor do the railways possess any specialised purchasing or inspecting agency for the different classes of articles which they require; but they are able to rely to some extent on the Superintendent of Local Manufactures and on the Test House at Alipore to check samples of articles locally obtained. The usefulness of the institution has been considerable, though limited in direction; and proposals are on foot for establishing another test house in Bombay. The Government of India, who have large financial interests in railways, desire to have before them clear information regarding the probable benefits which railways could expect from the assistance and advice of a fully equipped stores agency, and as to the lines on which that assistance could be most advantageously afforded. In this connection it will be desirable for the Committee to frame proposals for the future control, duties and equipment of the existing test house and for the provision of additional test houses if necessary.

"5. The method of providing military stores is a matter which will be doubtless considered by the Committee, which has been appointed to report on the administration and organisation of the Army in India. This Committee will derive great assistance from the conclusions of an expert body such as that which is being appointed under this Resolution; and the Government of India consider that the most convenient procedure will be for the Indian

Stores Committee to proceed with their enquiries on the assumption that the military authorities will require to be provided with stores purchased in India under much the same conditions as other departments of the Government of India; but to ascertain from time to time the views of the Committee on the Army in India, and have regard in framing their own proposals, so far as appears to them proper and feasible, to the views of that Committee.

"6. The Government of India have had under consideration the question of the purchase of food and fodder for the Army. It has, however, been decided not to include this question within the scope of the present enquiry.

"7. The Government of India have decided to constitute a Committee to enquire into the matters indicated in this Resolution, and to frame a definite and so far as possible a detailed scheme for the purchase and inspection of stores in India. Certain general principles have been, it will be observed, accepted by the Government of India and the Secretary of State. It will not be necessary for the Committee to discuss these further; and they should concentrate their attention on the difficult and complicated task of devising a scheme which will as far as possible meet the needs of the different interests concerned, while keeping fully in view the fundamental principles of efficiency and economy.

"8. The Committee will consist of the following gentlemen:—

President:

"1. Mr. F. D. Couchman, M.I.C.E., Member, Railway Board.

Members:

"2. Mr. G. H. Collier, C.I.E., Director General of Stores, India Office, London.

"3. Mr. F. Palmer, C.I.E., M.I.C.E., M.A.S.C.E., F.R.G.S., late Chief Engineer, Port of London Authority.

"4. Colonel H. A. K. Jennings, C.I.E., Inspector of Quartermaster General's Services.

"5. Lieutenant-Colonel C. C. H. Hogg, C.M.G., R.E., Superintending Engineer and Secretary to the Hon'ble the Agent to the Governor-General in Rajputana in the Public Works Department.

"6. Mr. H. N. Heseltine, C.I.E., Accountant General, Railways (*retired*).

"7. Mr. A. W. Dods, of Messrs. Burn and Co., Calcutta.

"8. Rai Bahadur Lala Milki Ram, Chief Store-Keeper, Oudh and Rohilkhand Railway (*retired*).

"9. Mr. Lalji Naranji, of Messrs. Lalji Naranji and Co., Managing Agents, the Jupiter General Insurance Co., Ltd., Bombay.

" Mr. J. C. Highet, Assistant Secretary, Railway Board, has been appointed Secretary to the Committee.

'9. The terms of reference are as follows :—

" In view of the necessity of encouraging Indian industries, while at the same time securing economy and efficiency in the purchase of Government requirements, the Committee should enquire and report :—

" (*a*) what measures are required to enable the Departments of the Government of India and of Local Governments to obtain their requirements as far as possible in India, and what central and local agencies for purchase and inspection should be constituted;

" (*b*) what should be the relations of such agencies with one another and with the Stores Department of the India Office, or such other purchasing organisation in England as may hereafter take the place of that Department;

" (*c*) what modifications of the Stores Rules will the scheme, recommended by the Committee, necessitate. "

Changes in personnel.

2. Mr. Palmer's engagements rendered it impossible for him to join the Committee as originally intended, and it was therefore arranged that he should appear as a witness. In losing his services the Committee were deprived of the technical knowledge and assistance of one whose experience in India as a Railway Engineer and as Chief Engineer, Calcutta Port Trust, and in England as Chief Engineer, Port of London Authority, and as one of the Consulting Engineers to the India Office, would have been invaluable to them in considering the difficult problems that arose during their investigations. The Committee also suffered a serious loss when the services of Mr. Heseltine, the only member possessing expert financial knowledge, were withdrawn by Government in February 1920 for employment on other duties which they considered more immediately called for his special qualifications. Mr. Heseltine's intimate knowledge of matters of personnel and establishment would have been of the greatest assistance in appreciating the problems of recruitment of staff, nature and pay of the various appointments, flow of promotion, and other cognate matters affecting our proposals for the new department, and we experienced considerable difficulty in this respect in his absence. The inconvenience was greatly increased by the fact that, as it was understood that his removal from the Committee would be temporary only, no steps were taken to replace him by a suitable substitute until the 1st May 1920, when Mr. T. Ryan, a Member of the Board of Industries and Munitions, was appointed a member of the Committee.

Memorandum by Messrs. Collier and Ryan.

3. Other engagements necessitated Mr. Collier's absence from the Committee during the greater part of our first visit to Calcutta and our visit to Rangoon. He was also unable to remain in India after June 1920 as he felt it to be necessary for him to resume his duties at the India Office, and he has therefore been unable to sign the report, the substance of which however in all material points had already been embodied in a draft before his departure. He has recorded the extent of his agreement with, and divergence from, the majority of the Committee in the separate memorandum by himself and Mr. Ryan which is appended to the report. With these exceptions the constitution of the Committee remained unchanged throughout its proceedings; but its work was further interfered with by the labour unrest, which necessitated the absence on several occasions of the commercial members, and by an accident to Sir Francis Couchman at Jamshedpur which confined him to hospital in Calcutta for a fortnight, and practically removed him from the Committee for some three weeks at an important stage.

Preliminary work.

4. Prior to the assembly of the Committee a questionnaire (reproduced in the separate volume of evidence) was prepared in the office of the Indian Munitions Board, and copies were distributed to a large number of officials and commercial men, nominated by departments of the Government of India, Local Governments and Administrations, Chambers of Commerce, Trade Associations, etc., as well as to certain representatives of Indian public opinion; the list was subsequently added to by the Committee. Replies were received from nearly all of those addressed, and the majority were further examined in person. A list of the witnesses is given in Appendix A to this report; and the evidence received has been printed in a separate volume.

Returns of expenditure.

5. In order that the Committee might be in a position to appreciate the amount of money annually spent on stores, the Indian Munitions Board called on all Imperial Departments, Local Governments, and Railway Administrations, to furnish returns showing their expenditure year by year from 1910-11 onwards under the following headings:—

(*a*) Imported stores locally purchased;

(*b*) Produce of India:

(*i*) from government factories,

(*ii*) from private dealers;

(*c*) Stores obtained through the Director General of Stores;

(*d*) Stores purchased direct from outside India.

Tables compiled from these returns will be found in Appendix D.

Method of enquiry.

6. The Committee assembled at Calcutta on the 17th December 1919 and, after devoting a month to preliminary organisation, local enquiries and the examination of witnesses, proceeded to tour in accordance with the following itinerary:—

Rangoon,	arrival	15th January 1920.
Madras	„	27th „ „
Bombay	„	5th February „

Nagpur,	arrival	18th	February	1920.
Jamshedpur	,,	21st	,,	,,
Calcutta	,,	22nd	,,	,,
Cawnpore	,,	3rd	March	,,
Lucknow	,,	7th	,,	,,
Lahore	,,	11th	,,	,,
Delhi	,,	22nd	,,	,,
Simla	,,	24th	,,	,,

In the course of this tour the following institutions and works were visited; the special thanks of the Committee are due to the proprietors and others who kindly gave access to their works, conducted the members round, and explained the various processes:—

Calcutta—

Gun and Shell Factory, Cossipore.

Small Arms Ammunition Factory, Dum Dum.

Munitions Inspection Depot, Hastings.

Howrah Iron Works—Messrs. Burn and Company.

Industrial Exhibition.

Test House and Laboratory, Alipore.

Madras—

Buckingham Mills.

Medical Store Depot.

Chrome Leather Company's Tannery.

Messrs. P. Orr and Sons, Scientific Instrument Manufacturers.

Bombay—

Government Dockyard.

Jamshedpur—

Messrs. The Tata Iron and Steel Company's Works.

Lahore—

Glass Works—Messrs. Mehar Singh Sapuran Singh.

Government Turpentine Factory, Jallo.

Army in India Committee.

7. Following the direction contained in paragraph 5 of the Resolution, quoted at the beginning of this chapter, touch was maintained with the Army in India Committee, and towards the end of January 1920, General Jennings specially visited that Committee in Delhi in this connection. It may be mentioned at once that we were advised that the provisional view of the Army in India Committee was that the Army should make full use of the proposed Indian stores purchasing agency; and it was ascertained by cablegram in May 1920 that the same opinion was maintained.

Co-opted members.

8. In order that we might have the benefit of local knowledge and experience, Local Governments nominated one or more officers to be co-opted as members when witnesses from their respective provinces

were being examined. The following gentlemen, to all of whom we are indebted for valuable assistance, and several of whom also wrote special memoranda for our guidance, were co-opted in this manner, and acted temporarily as our colleagues :—

For Bengal ...	Mr. D. B. Meek, M.A., B. Sc., Director of Industries, Bengal.
For Assam ...	Rai Kanak Lal Barua Bahadur, B.L., Director of Industries, Assam.
For Burma ...	Mr. J. P. Hardiman, B.A., I.C.S., Commissioner, Meiktila Division.
	Mr. F. Reily Collins, M.I.C.E., M.C.I., Superintending Engineer, Rangoon Circle.
For Madras ...	The Hon'ble Mr. W. J. J. Howley, A.M.I.C.E., Chief Engineer and Secretary to Government, Public Works Department (General and Irrigation).
	The Hon'ble Mr. A. Y. G. Campbell, C.I.E., I.C.S., Director of Industries.
For Bombay ...	Mr. E. M. Proes, A.M.I.C.E., Joint Secretary to Government, Public Works Department.
	Mr. R. D. Bell, C.I.E., M.A., B.Sc., I.C.S., Director of Industries.
For the Central Provinces.	Mr. A. L. Hoyle, I.C.S., Director of Industries.
For the United Provinces.	The Hon'ble Mr. P. H. Clutterbuck, C.I.E., C.B.E, V.D., Chief Conservator of Forests, United Provinces.
For the Punjab	The Hon'ble Mr. C. A. H. Townsend, B.A., I.C.S., Director of Industries, Punjab.

Assistance received.

9. During our tour, we received cordial co-operation from the local authorities and we desire to acknowledge our obligations to them for their assistance. We also wish to record our indebtedness to all who, at the expense of time and labour, furnished us with written memoranda of their views, or gave oral evidence before us; and our appreciation of the willing assistance afforded us by all officers of Government in the difficult task of framing a scheme to meet the different interests involved. The completion of our duties and the submission of our report has taken a few weeks longer than was at first anticipated. This, however, is not surprising in view of the important changes in personnel and other unforeseen contingencies mentioned in paragraphs 2 to 5 above. The contentious nature of the subject with which we have been dealing, described in the Resolution appointing the Committee as our "difficult and complicated task", and the diverse views received from witnesses, have prevented us from presenting an entirely unanimous report, notwithstanding the care and attention we have devoted to the subject. Throughout our proceedings, both on tour and subsequently at headquarters, we have received valuable assistance from our Secretary, Mr. J. C. Highet, who has materially lightened our labours and we desire to record our cordial appreciation of the assistance rendered by him.

Average annual value, in thousands of rupees, of stores purchased by government departments and state railways. (Abstracted from Table I.)

Purchaser.	Produce of India.		Imported stores purchased in India.		Imported stores purchased through Director General of Stores, London.		Total*.	
	Peace.	War.	Peace.	War.	Peace.	War.	Peace.	War.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Government of India—								
State Railways	1,62,55	2,54,11	19,68	62,93	3,52,01	1,38,32	5,34,24	4,55,35
Civil Departments	38,61	68,25	6,14	17,40	29,75	41,40	74,50	1,27,14
Army Departments	1,15,82	2,18,10	6,59	52,24	71,18	2,59,87	1,93,59	5,30,21
Total ...	3,16,98	5,40,46	32,41	1,32,65	4,52,94	4,39,59	8,02,33	11,12,70
Local Governments and Administrations	69,92	1,36,01	50,05	1,01,51	29,83	29,77	1,49,80	2,67,29
Grand Total ...	3,86,90	6,76,47	82,46	2,34,16	4,82,77	4,69,36	9,52,13	13,79,99

* This abstract excludes insignificant purchases from other sources, totalling Rs. 4,63 and Rs. 6,72 made mostly by Local Governments; and also does not include figures for company-worked railways as these are not complete.

CHAPTER II.

SUBJECT MATTER AND SCOPE OF THE ENQUIRY.

Statistics.

10. The question before us relates to the purchase of stores required by government departments in India, and possibly by cognate bodies. The supply of food and fodder for the Army has been specifically excluded from our enquiry, and we have also left out of consideration articles which are commonly procured in all parts of India of local origin, such as bricks, lime, stone, sand, ballast, basket work, and common furniture. This leaves for consideration the requirements indicated in the tables set out in Appendix D to the report; though the figures include information regarding purchases of coal and stationery, we may at once mention that in view of the existence of efficient and self-contained departments specially organised for the purchase and inspection of supplies of those kinds, with which it would not be advantageous to interfere, we have been led to exclude these categories of stores also from the scope of our proposals. The tables cover expenditure from 1910 to 1919 inclusive, and thus comprise periods both of peace and war. They have been framed so as to show the incidence of expenditure between the Imperial and Provincial Governments and State Railway Administrations; the distribution of expenditure between India and England; and the relative outlay on certain groups of commodities. We invite particular attention to the explanatory notes prefixed to the tables which, for the reasons therein explained, must be regarded as illustrative and comparative rather than as affording accurate statistics of expenditure. The abstract, on the opposite page, from the figures in Table I will afford a clear idea of the relative importance of the purchases made by the principal government consumers, and of the sources of supply as hitherto utilised.

Influence of policy.

11. In respect of the stores to which these figures relate we have to consider the existing methods of purchase, and how far it is desirable to modify them or introduce new methods in the light of our terms of reference, so as to achieve the object of Government, namely, the encouragement of Indian industries while maintaining, and if practicable increasing, economy and efficiency in the purchasing procedure. From the striking variations in the relative quantities of stores obtained from the several sources of supply, occasioned by the change from peace to war conditions, it will be manifest how great may be the effects of an alteration of the stores purchase policy of Government. The abstract referred to in paragraph 10 shows that the total expenditure on stores by government departments and state-worked railways amounted to 9½ and 14 crores per annum in the pre-war (1910-11 to 1913-14) and war (1914-15 to 1918-19) periods respectively; since the returns are admittedly not complete the figures are an under, rather than an over, estimate. The returns from company-worked railways for the pre-war period are unfortunately only available for two railways, but we shall not perhaps be far wrong in assuming the annual expenditure to be ten crores, as for the war period. Now although company-worked railways are not bound

by the Stores Rules of the Government of India, we may take it for granted that in actual practice they buy their stores under conditions similar to those governing the purchases of state-worked railways, but substituting their Home Boards for the Director General of Stores; this assumption is borne out by the percentages given for the war period in Table II where the proportionate expenditure on imported stores, produce of India, and produce of England by the two groups of railways differs by little over five per cent. We may therefore take the percentages for the grand totals in Table II as showing, with fair approximation, the incidence of expenditure on stores by Indian Government and Railway Administrations under the three main heads as follows:—

Source of Supply.	1910-14.	1914-19.
	Per cent.	Per cent.
Local purchase of imported stores ...	9	18
Produce of India including government factories	41	52
Director General of Stores or Home Board of company-worked railways.	50	30

Generally speaking then, the result of the war has been to double the proportion of imported stores locally purchased; to increase by 25 per cent the amount spent on produce of India; and to reduce the amounts obtained from England from one-half to one-third of the total.

Dependenc of imperiae Departmel on Store Department of India Office.

12. Turning to branches of the Administration, we find that departments of the Government of India depend, to a very much larger extent than those of Local Governments, on the Director General of Stores, India Office, for their supplies; this is only natural seeing that they include the great technical departments, such as the Army, State Railways and Telegraphs. We find that Local Governments, as a whole, are relatively the largest purchasers of imported stores in the country and that they procured only 20 and 10 per cent of their stores, in the pre-war and war periods respectively, through the India Office; even this percentage is influenced by the expenditure in England on supplies of paper and stationery by the Governments of Madras and Bombay. An analysis of provincial expenditure for two provinces for which details are available shows that 42 per cent is due to expenditure in the Public Works Department, and that for the whole period 1910-19 the average expenditure of this department in these two provinces had been 48 per cent on imported stores, 40 per cent on produce of India and 12 per cent through the Director General of Stores, India Office.

13. The figures for the war period indicate that there is but little difference in the practice obtaining in State-worked and company-worked lines; the tendency in the latter to purchase a somewhat larger percentage of imported stores locally is due no doubt to their freedom from the restrictions of the Stores Rules. We think that the proposals we are making in respect of purchase of stores by State-worked railways will prove generally suitable to company-worked railways. The tables show that the total expenditure on stores by company-worked railways amounts to about double that of State-worked railways and is nearly half the total for the whole of India; this lends weight to our suggestion, made elsewhere, that, on the completion of existing contracts, the company-worked railways should be amenable to the Stores Rules, as are the State-worked railways

Comparison of practice of State and company-worked railways.

14. In addition to the stores purchases to which these observations refer, we have also considered the analogous question of the purchase of public requirements of a special kind, namely, ships, which cannot be classed as 'stores', but the method of procuring which is the subject of special rules laid down by Government: Chapter X of the report is devoted to the discussion of this matter.

Ships.

15. It has already been laid down by Government that, in order to give all possible encouragement to Indian industries while at the same time to ensure economy and efficiency in obtaining supplies for the public services, the establishment of an efficient organisation in India for the purchase and inspection of stores is essential; the main purpose for which this Committee was appointed is to work out the detailed organisation which will be required for this purpose. To do this it is necessary to consider the present methods adopted in supplying government requirements and to what extent alterations are desirable. We have also interpreted our terms of reference, which are reproduced in the preceding chapter, as requiring us to consider the policy governing, and methods adopted for, the purchase of all classes of stores, imported as well as those of indigenous origin and local manufacture. Two of our members have taken a more restricted view of the scope of our enquiry, and have recorded their views in the memorandum accompanying this report. In view of this difference of opinion, we consider it desirable to state somewhat fully the reasons for the view taken by the majority. The wording of the terms of reference is clear and unmistakable; we are to enquire and report:

Scope of enquiry.

> "What measures are required to enable the departments of the Government of India and of Local Governments to obtain their requirements as far as possible in India *
>
> * * *."

and again:

> "What modifications of the Stores Rules will the scheme, recommended by the Committee, necessitate."

Under the rules referred to in the latter reference the requirements of government departments, alluded to in the former, are to a considerable extent met by the authorised purchase in India of imported stores, and still more largely by the purchase of stores of a similar nature in the United Kingdom.

Imported stores.

16. An analysis of the returns of expenditure, specially prepared for our use at the instance of the Indian Munitions Board, shows that the proportion of imported stores purchased in India amounted, for the pre-war and war periods respectively, to 9 per cent. and 18 per cent. for the whole of India, and to 32 per cent. and 37 per cent. for Local Governments; while the ratio of the purchases of stores in the United Kingdom to the total stores purchases for government purposes was no less than 51 per cent. and 35 per cent. respectively. Imported stores thus form so large a part, under normal conditions decidedly the preponderating part, of the requirements of Government, that the total exclusion of their consideration, or the treatment of this as a subsidiary matter, as contemplated by our colleagues, would, in our opinion, have been a course which could not be justified; it is clear to us that, had there been any intention of restricting our enquiry in the manner suggested, Government would not have failed to make this clear. Nor could we afford to neglect the evidence offered to us in regard to the bearing of this matter on the questions of economy and efficiency. The majority of the witnesses who have appeared before us have been in favour, in varying degrees, of the removal of the restrictions now existing in respect of the purchase of imported stores, although they have made it clear that they have no intention of suggesting that Government should be expected to purchase in India inferior imported articles at an exorbitant price merely for the purpose of enriching merchants; the reasons advanced by them in support of their views have reference to the advantages of positive economy, convenience in more rapid supplies, the availability of expert advice and assistance, as well as the prospective encouragement and increase of local manufactures. We do not desire further to labour the point, nor do we consider it necessary throughout the report to controvert the observations, arising out of the application of their own opinions, by our colleagues on the various details hereafter discussed.

Stock depots.

17. The question, whether the proposed Indian stores agency, or department, which it is one of our main duties to formulate, should maintain central stock depots for the general convenience of the departments which it will supply, was naturally one that came prominently to our notice at an early stage, since it was evident that our proposals as regards methods of supply and details of the organisation would depend to a considerable extent on the decision arrived at on this point. The idea is not a new one; it will be seen from the summary of the correspondence in Appendix B that a proposal to instal depots for imported stores at the principal ports for Railway Administrations was made by the Secretary of State in 1888, but was not acceptable to the Government of India on the grounds that "whatever system was adopted for State railways, guaranteed railways must be

allowed to make their own arrangements, and that as far as State railways were concerned each was served by a different port, hence each line would in effect have its own reserve depot, which it was the special object of the proposed system to avoid." Again, in 1917, the Secretary of State drew the attention of the Government of India to the question of forming depots of general stores in connection with the amalgamation of Public Works and Military Works indents, but did not press the matter. In noting on the proposal, the Director General of Military Works stated that "the system of maintaining special stocks of ordinary stores at the ports has been tried by the Military Works Services and found not to be a success". In the Public Works Department the question was examined in some detail; excluding machinery and special stores, for which it was obviously impossible to amalgamate indents or desirable to form depots, it was ascertained that in 1914 the total value of indents for ordinary materials (*i. e.*, cement, cast-iron pipes, steel sections, corrugated sheets, paints, oils and varnishes) sent to the India Office amounted to £122,000, of which £19,000 only represented the demands from non-maritime provinces. It was therefore considered that, since it was open to the maritime provinces to institute provincial depots if they so desired, no case had been made out for the maintenance of Imperial depots at the ports to serve the whole of India.

Their disadvantages.

18. The proposal to introduce large stock depots at one or more suitable centres in the country is however one which merits further consideration. The evidence received on the subject varied considerably; some witnesses visualised the new stores department working on this system with a reservoir of stores capable of meeting almost any demand, and thus avoiding the tedious delays of waiting for supplies from England; the majority consider that any attempt in this direction would be cumbrous and costly. There is no question that such depots would frequently be a source of considerable convenience, but to be in any way efficient they would necessarily be very costly, and would involve the investment of a large capital sum, as well as considerable recurring expenditure on staff engaged both for handling the goods and for accounting purposes. The initial outlay in acquiring lands, erection of store houses and construction of railway sidings would be heavy. The cost of such an installation in a port would be prohibitive and it would be necessary to establish it at some convenient railway centre away from the coast, all imports being railed in bulk from the ports or manufacturing centres. Climatic considerations alone, owing to deterioration of material, would necessitate this course; we understand that two military arsenals have been removed from coast towns mainly on this account. There are already, scattered over the country, many government stock depots, notably those of railways, in which, though the stores themselves are for the most part constantly changing and being utilised, a very large capital is permanently locked up. The deciding factor as to whether central stock depots are desirable and would be justified must, we think, be whether their introduction would render possible such reduction and economy in existing stocks as would compare reasonably with the cost of the new depots.

Amalgamation undesirable.

19. An examination of the existing position as regards stock depots, based mainly on evidence received from witnesses, gives the following results. Railways, which are necessarily dependent to a considerable extent on imported stores, maintain large and carefully organised depots, the capital locked up amounting to some five and seven crores of rupees respectively in State and company-worked systems. The Army, more particularly in the ordnance branch, are also considerable stock-holders for military reasons. Apart however from these we do not find in other departments that the stocks held are much more than those required as expense stores. In the Military Works, there are no central depots except those for military operations, and the practice of maintaining stocks of imported stores at the ports for the benefit of districts in the interior has been abandoned. In the Public Works Department, two provinces only, Madras and Burma, adopt the central store system. As regards railways, we are satisfied that, in any event, they would have to maintain very large stocks of their own, and we do not consider that there would be any more likelihood now of reduction in the stocks held by them than was anticipated in 1888. It would be impracticable for a central store to deal with departmental demands from individual railway officers, and to supply railway stores from central depots would mean additional handling of the goods. Similar arguments would hold for the Army: issues could only be made to arsenals, or factories, or divisional or similar stores, which would in their turn deal with indents from units or individuals. The only case in which central depots might be of use would be for provincial services, or as a common depot for use by Public Works, Forests, Police, Jails, Dispensaries, etc. Looking, however, to the very diverse requirements of the services which might be expected to benefit by a central depot, there is no doubt that the variety of stock would be immense, and that fluctuation of demands would be caused by many indeterminate factors; unless such a depot were in a position to meet practically all demands at once from stock it would fail in its principal function.

Stock depots not justified.

20. We have, therefore, arrived at the conclusion that the great expense central stock depots would necessarily involve would not be justified.

Periodical review of stocks.

21. In view, however, of the very large sums at present lying idle in stock depots, especially in those of railways, we consider it well to draw attention to the desirability of instituting searching periodical inspections of all such depots, to ensure a full enquiry into the details of the stocks held, how they compare with issues, and the periods the different classes of articles are held in stock before issue, with the view of ascertaining whether, and if so in what directions, stock balances can be reduced and really surplus stock got rid of. We are of opinion that the demands by individual officers for special commodities are, to some extent, responsible for the large quantities of surplus articles, and that the remedy for this will be found largely in enforced standardisation.

CHAPTER III.

STORES POLICY.

Government officials bound by rules.

22. Government officials are not free agents in the matter of purchase of the stores they require for their work, but are bound by rules issued from time to time by the Government of India in accordance with the policy dictated by the Secretary of State. A history of the rules for the supply of articles for the public service will be found in Appendix B to this report; but it will be convenient to summarise it briefly in this chapter.

Rules of 1862.

23. In 1862 the Secretary of State gave instructions that all articles manufactured in England were to be obtained only through the Store Department of the India Office; in those days the policy of encouraging local industry was not apparently contemplated. These rules were relaxed in 1875 to the extent of permitting the local purchase of European stores when inconvenience would arise from delay in supply from England; in cases of urgency; and when the articles were perishable, or for occasional consumption only.

Change of policy in 1876.

24. In 1876 the Secretary of State, anxious to bring about a complete change of policy, proposed that, with the exceptions of railway plant, special machinery, and military and ordnance stores, in respect to which the agency of the Store Department could hardly be avoided, everything should be bought either through agents in India or direct from firms in England; this he considered to be in the interests of economy, trade, and the exchange. He forwarded extracts from a report of a special Committee, which he had appointed to enquire into the functions and administration of the Store Department of the India Office, in which they recommended that, in substitution of the rule requiring purchase to be made through the India Office, it should be left to the Government of India and Local Governments to decide as to the mode in which, and persons by whom, supplies of any kind might be made; he requested the Government of India to issue the necessary instructions for carrying these recommendations into effect.

Rules of 1878.

25. The Government of India accordingly issued new rules in 1878 laying down the class of stores which should still be obtained from the India Office. All other stores were to be obtained, as far as practicable, independently of the India Office by local purchase, or direct from Europe from manufacturers, or through private agents. In accepting these rules as being in general accordance with the views expressed in Lord Salisbury's Despatch of 7th December 1876, the Secretary of State directed that the special attention of local Governments should be drawn to the importance of substituting local manufactures for European articles even at some temporary increased cost, and that, as regards provision of stores not produced in India, the practice of dealing with merchants or agents should be adopted.

Reversal of policy in 1880.

26. In 1880 the Secretary of State forwarded reports by the Director General of Stores, India Office, and by the Inspecting Engineer for State Railways, both of whom were very averse to the purchase of European stores otherwise than through the India Office. Lord Kimberley, considering that the objects of the Home Government had been imperfectly appreciated, and that the language of the special Committee of 1876 was not so clear as it might have been, desired that orders might be issued that, when stores were of such a nature that they had to be purchased in England, there should be no departure from the system of indenting on the Store Department of the India Office New rules were accordingly issued laying down that European articles were to be obtained through the Secretary of State except in cases of delay, or when local purchase was more economical. The utmost encouragement, however, was to be given to the supply of European articles by the local market consistent with true economy, and it was held that, wherever possible, articles of innigenous origin or of local manufacture should be substituted for European articles.

Encouragement of local industries in 1883.

27. The policy of encouragement of local industries was asserted by Lord Ripon's Government in a Resolution, issued in 1883, in which it was declared that the utmost encouragement was to be given to every effort to substitute, for articles now obtained from Europe, articles of *bona fide* local manufacture, or of indigenous origin; that, when articles of European and Indian manufacture did not materially differ in price and quality, Government would always be disposed to give preference to the latter; and that the Governor General in Council desired to remind all officers of Government that there was no reason why articles manufactured in India should not be obtained locally, even though the raw material necessary to their manufacture might have been originally imported from Europe.

Director General of Stores to be responsible to the Government of India.

28. In 1887 the Government of India, on the report of the Finance Sub-Committee on the value of stores purchased locally and the loss of public money entailed thereby, reported to the Secretary of State that the volume of these purchases was necessitated by delay in supply on the part of the Store Department of the India Office, and suggested that the head of that department should be considered as the agent of the Government of India. The Secretary of State replied that this was not compatible with his responsibility to Parliament for the expenditure of the revenues of India, but suggested the constitution of depots for imported stores at the principal ports, and the appointment of an officer to control purchases, as had been proposed by the Finance Sub-Committee. The Government of India, after full consideration, did not think the appointment of a Director of Stores feasible, nor did they think the establishment of depots at the ports necessary; the Secretary of State in 1890 agreed to abandon the proposals.

Appointment of inspectors negatived.

29. In 1890 a memorial was presented to the Government of India, by 34 firms engaged in iron and engineering industries, appealing against a decision by the Secretary of State that the preference to be accorded to local manufactures was not intended to apply to

articles of iron and steel manufactured from material imported in a raw or semi-raw state. The Secretary of State had based his objections on the inferior quality of material, the absence of testing appliances and the want of free competition. The Government of India proposed to remedy this by the appointment of inspectors, but the Secretary of State was unable to agree. Eventually a Resolution was issued in 1891 permitting, as a temporary measure, the local purchase of articles of iron and steel manufactured from imported material, to be limited to bridges and roofs of small span for the Public Works Department, and not to be applied to the requirements of State railways under construction.

Resolution of 1898.

30. The iron and engineering industries were, however, still dissatisfied, and, as a result of representations made to the Government of India and the Secretary of State, a Resolution was issued in 1898 extending the number of steel and iron articles manufactured in India which might be purchased locally, and dispensing with the condition limiting such purchase to articles the certain want of which could not be foreseen.

Powers of local purchase extended.

31. In 1903 the Government of India again addressed the Secretary of State with regard to the delays incidental to the supply of stores by the Store Department of the India Office, and pointed out that, if it was not possible to reduce the time taken in complying with indents, it would be necessary to exercise more freely the powers of local purchase, and to increase the limit of powers of officers of the Public Works Department to purchase English stores. The Secretary of State in reply stated that delays, due among other reasons to manufacturing difficulties, were inevitable, and approved of the proposal to extend the powers of Public Works Department officers to purchase English stores locally, and thus diminish the number of indents sent Home for stores of small value.

Rules of 1904.

32. Accordingly, rules for the guidance of officers of the Public Works and Railway Departments were issued as an appendix to the Public Works Department Code in 1904, and these rules formed the basis of similar instructions issued to military officers in Army Regulations (India), Volume III. The rules were permissive in form and, so far from including any declaration of the policy of Government to give preference to local manufactures, they laid stress on the advantages offered by the method of supply through the Store Department of the India Office. The prohibition against the purchase in India of articles of iron and steel manufacture for State railways under construction, and for first equipment of large engineering projects, was removed.

Stores Committee 1906.

33. In 1905 the first conference of the Indian and Ceylon Chambers of Commerce passed an unanimous resolution to the effect that the policy of encouragement, announced in 1883, was materially retarded by the rules laid down for the guidance of officers; this was followed a few months later by a memorial to the same effect from the Engineering and Iron Trades Association (now the Indian Engineering Association). This led the Government of India to appoint the Stores Committee of 1906 to investigate the working of the Stores Rules. The Committee recommended that

preference should be given to articles manufactured in India from materials produced in the country; that articles manufactured in India from imported material should, by preference, be bought in the country unless a similar article could be obtained at less price from the India Office; and that articles not manufactured in India should be obtained by indent on the Store Department of the India Office when necessity for provision could be readily foreseen, and when purchase in India was not considered advisable.

Store Rules of 1909 and 1913.

34. The proposed rules met with considerable criticism at the hands of the Director General of Stores and the Consulting Engineer to the India Office; the Secretary of State, acting on their advice, returned the rules revised in the form he was prepared to sanction. The main points of difference between the rules proposed by the Government of India and those sanctioned by the Secretary of State are :—

(*i*) Absence in the preamble of any declaration of policy of preference to articles of indigenous origin, or local manufacture.

(*ii*) The stipulation that articles of European manufacture must always be in India at the time of order, whatever the reason for purchase.

(*iii*) Omission of the proviso that, in cases of emergency, articles of Indian origin should be purchased irrespective of price.

(*iv*) Omission of establishment charges of Store Department of the India Office when effecting comparison of price.

(*v*) Injunction that articles not manufactured in India must be obtained by indent on the Store Department of the India Office except when the article is in India at the time of order, and the cost does not exceed Rs. 3,000, unless the urgency clause can be invoked.

These rules were issued in 1909, and were re-issued in 1913 with a few minor alterations. They have remained in force since that date although temporary relaxations have been introduced to suit war conditions.

Purchase of plant and machinery.

35. In 1913 proposals were put forward by the Government of India that certain classes of imported stores should be purchased in India from established branches of British manufacturing firms, and opportunity was taken to discuss this matter at Delhi in 1914 with the Assistant Under Secretary of State for India; the proposal was agreed to, and Lord Crewe accepted the suggestions as contained in the memorandum of the meeting which had been drawn up by Sir Lionel Abrahams.

Proposals postponed for further consideration.

36. In 1917 the Government of India submitted to the Secretary of State a draft rule embodying the proposals, accompanied by a list of the plant and machinery it was proposed to buy in India, and the names of the firms who were recommended as fulfilling the conditions laid down. Mr. Montagu replied that he

had submitted the proposals to the criticisms of the officers of the Store Department and of his Consulting Engineers, and that they were unanimous in considering the proposed change open to very serious objection. He could not see his way to disregard their conclusions entirely, although he realised that many of their objections were those which had influenced his predecessors, but to which the Government of India had consistently taken objection. He was disposed, however, to approve the proposals subject to certain conditions; as it was unlikely that there would be any scope for the operations of the new rule for some years owing to war conditions, he asked the Government of India to give the matter their further consideration.

Deductions.

37. A study of the correspondence between the Government of India and the Secretary of State brings two points prominently to notice. The first is that since 1880 the Government of India have consistently, but not always with success, pressed for relaxation of the rules laid down from time to time by the Secretary of State, both in respect of local purchase of imported stores and of the encouragement of local industries. The second point is the influence of the Store Department and the Consulting Engineers to the India Office. The advice of permanent officials is naturally of great value, since they are the guardians of tradition and of the accumulated experience of the departments over which they preside. They, however, lack knowledge of Indian conditions and the changes and developments which occur from time to time in the matter of supply of articles for the public service in India: we find this influence has had a marked effect on the decisions of the Secretary of State more than once during the last forty years. The first occasion was when the policy, of purchasing and paying for all articles in India as far as possible, initiated by Lord Salisbury in 1876, was superseded by Lord Kimberley in 1880, in favour of that laid down nearly twenty years previously. We are not prepared to criticise the wisdom of this decision, but we notice that as long ago as 1875 the India Office Committee, whose recommendations met with Lord Salisbury's approval, remarked that the conditions under which the existing system arose were to a considerable extent obsolete. Again in 1889, Lord Cross viewed unfavourably the manufacture in India of iron and steel articles from imported material, with the result that the Government of India declared that their Resolution of 1883 in favour of local industries did not apply to the articles in question, and that objections to local purchase applied to these articles in the highest degree. In 1908 Lord Morley was unable to accept the draft rules proposed by the Government of India on the recommendation of the Stores Committee; similarly in 1913 the proposals for local purchase of plant and machinery, which had been discussed with Sir Lionel Abrahams, and accepted in principle by Lord Crewe, were returned by the Secretary of State for further consideration. In all these case the correspondence shows the advice of the India Store Department to have been the dominating factor, and we cannot but observe that the attitude of that department has been, in the main, one of opposition to any measure which would lead to either purchase or

manufacture in India, and thus result in the gradual transfer of the supply of stores from the British to the Indian field.

Altered conditions.

38. With the establishment of an expert agency in India for the purchase and inspection of stores, the position will be fundamentally altered, and we consider that full powers can advantageously be delegated to the Government of India in all matters relating to the supply of their requirements, except in so far as they affect matters of Imperial Policy. We realise that, in the absence of a stores organization in India, it was inevitable that the Secretary of State should have leant on his technical advisers and it was but natural that they, owing perhaps to ignorance of Indian conditions, progress, and capabilities, should favour supply from England rather than India. We consider that, in the interests of India, the professional advisers should now be in India, and not in Whitehall, and we have accordingly drawn up our recommendations on paragraph (*b*) of our terms of reference in such a way as to secure to the Government of India freedom from control over their purchases. We advise that the Secretary of State should be asked to abstain by convention from interference in the supply of stores, and to delegate to the Governor-General in Council his responsibilities in the matter.

Policy recommended.

39. We have, after full consideration of the question in all its bearings, formed the opinion that present conditions require the fullest freedom to be granted to India in the matter of supply of articles for her public services. We admit that there will not be, in the first instance, that unrestricted competition which is rightly claimed for the existing system of purchase in the United Kingdom, but we contend that refusal to give the system a trial can only be due to failure to appreciate the trend of events. We cannot avoid comparison between the undeveloped state of the industries of India and those of other Eastern countries, and we look forward to an era of industrial development which will provide this competition. We therefore recommend the acceptance by the Government of India, as a definite policy, of the principle that all articles required for the public service shall be obtained in India whenever they are procurable in the local market of suitable quality and reasonable price, as well as that preference shall be given in all cases to indigenous articles or to those of local manufacture, except where it is manifestly disadvantageous to do so. These recommendations, and the considerations specially affecting them, are more fully expanded in Chapters VII and VIII of this report with reference to indigenous and imported stores respectively.

Extended purchase of imported stores unobjectionable.

40. We attach no importance to the arguments that have been advanced against the extended purchase in the country of imported stores. It is contended that, because middlemen must make a living, all imported stores purchased through them in India must be dearer than if they had been obtained through the Director General of Stores, India Office; but the evidence given before us is far from bearing out any such contention. If this were the case, the result, under the Stores Rules

as recommended by us, will be that no imported stores will be purchased through them, the proviso as to price being definite. There is no doubt that commercial firms in India make large purchases of imported stores in the country, and we doubt if this would be done at the expense of economy. The contention that the Director General of Stores at the India Office can obtain cheaper freight than that obtained by private firms may be true as far as taking advantage of freight on government-owned ships is concerned, but no proof or evidence has been furnished to show that, when shipment has to be made by ordinary vessels, special freight terms are granted for the carriage of government stores. The question of trade discounts is one on which we have been unable to obtain conclusive evidence, but it is beyond dispute that discounts are given to the trade in respect of certain stores which does enable them to supply them in this country at as cheap rates as Government can purchase in England. There is the additional advantage that, in the case of perishable or breakable articles, merchants undertake delivery of stores in this country in good condition thus obviating possible loss or damage in transit. It is not necessary for us again to give detailed arguments in support since the question of relative cost was examined at length by the Stores Committee of 1906, and the Government of India, in forwarding the report to the Secretary of State (Despatch No. 33 of 1907), stated that "we cannot therefore avoid the conclusion, at which the Committee have arrived, that the advantage of economy whether actual or final, which is so often claimed for the present procedure, cannot in point of fact be held to be indubitably proved". This being so, the advantage of prompt supply by utilizing middlemen of good repute should undoubtedly be secured; moreover the possibility of buying in a favourable market, a practice of commercial life, will fall to the head of a well equipped organization unfettered in his choice of markets.

No risk involved.

41. Another argument against the purchase of imported stores in this country, on which stress has been laid, is the difficulty attending their inspection. We see no force in this: stores require inspection either during manufacture, or as finished articles, and sometimes in both stages. We have stipulated that inspection during manufacture shall be arranged for by the London Branch of the Indian Stores Department. Efficient inspection of the finished article depends solely on the honesty and ability of the inspector, conditions which are unaffected whether the article be indigenous or imported. A firm that resorts to dishonest methods for the acceptance of its stores will do so equally whether it manufactures or imports its goods; any difficulty anticipated on this score therefore applies equally to the manufacturer as to the importer. It must be remembered that the inspector, in a properly organized department, is not concerned with the question whether stores are urgently required or not; quality is the sole criterion to guide him in acceptance or rejection. It was a grave defect in the system of certain departments prior to the war, a defect that still exists in some, that purchase and inspection were centred in one authority. In such circumstances temptation may prevail with an inspector, apart from any dishonest motive, to accept stores

not fully up to standard in order to meet pressing demands; but under the organization we recommend this defect will not exist, and we therefore attach no importance to the argument that inspection of imported stores presents difficulties. That delay will occur if imported stores are rejected is obvious; this objection applies also to stores manufactured in the country, but since we contemplate dealing only with approved and reputable firms rejections should be exceptional and delays few; while evidence, on which all witnesses were practically unanimous, is that provision of imported stores through the Director General of Stores, India Office, is usually attended with delay.

Store Department in London to become a Branch of the Department in India.

42. The second general conclusion to which we have come is that the work that will remain to be done in England will, in due course, be dealt with as efficiently and more conveniently by a London Branch of the Indian Stores Department, directly responsible to a Director General of Stores in India, than by an independent department acting under the orders of a High Commissioner. It is important to bear in mind that the channel of responsibility of the Home purchasing branch to the Government of India is determined by a new factor, *i.e.*, the presence in India of a specially constituted department, staffed with expert inspectors, responsible for the supply of stores to all departments of the Government of India, and to such local Governments as care to avail themselves of its services. This idea is not a novel one, a somewhat similar proposal having been made by the Government of India in 1887. An arrangement on these lines appears to have been present in the mind of the Government of India when framing our terms of reference; we are required by them to report "what should be the relationship of the agencies we propose with the Stores Department of the India Office or such other purchasing organisation in England as may hereafter take the place of that Department." This undoubtedly adumbrates the replacement of the existing Store Department of the India Office by a "purchasing organization," and clearly no advantage would be gained by substituting another independent department for one which is admitted to be efficient. We are supported in our conclusions by the opinions of a number of witnesses well qualified to speak. It has, we admit, been urged that it would be a mistake to discard the advantages of retaining the existing India Office Store Department and of placing it under the control of a High Commissioner. It is claimed that the Department has reached its present high level of efficiency as the result of over sixty years' experience; that the staff are well versed in business; and that, in technical matters, the professional knowledge of its officers is supplemented by that of Consulting Engineers, Naval Architects and other specialists of repute. We admit the correctness and force of these arguments; it would indeed be strange if this were not so, and we would be the last to suggest that the experience of a department, of whose efficiency there can be no question, should be thrown away.

Functions of Store Department, India Office.

43. We may at this point explain that, as shewn in Table VIII, Appendix D, only about one-third of the total volume of stores supplied through the India Office

is handled departmentally by the officers of the India Store Department in respect of both purchase and inspection. Various stores, mainly armaments, are supplied by the War Office and other government departments, and indents for such, we are advised, might without disadvantage go direct to such departments and not through the Director General of Stores. The remaining stores, amounting to more than about half the total, are purchased on the advice of Consulting Engineers, who prepare specifications, advise as to the acceptance of contracts and carry out inspection, leaving to the officials of the India Store Department the preparation, acceptance and watching of contracts and the shipment of stores. The total volume of business for which the India Store Department at present takes credit might apparently therefore be considerably reduced at once by a change of procedure without any loss of efficiency.

Subordination of the Home to the Indian Stores Department.

44. We have explained in paragraph 40 why we anticipate the ability to purchase in India at once certain classes of stores at present imported through the agency of the Store Department of the India Office. The inauguration of an inspection branch under the Indian Stores Department will lead immediately to the reduction in other classes of stores similarly imported, *e.g.*, paints, which have been manufactured in India for many years. From a scrutiny of pre-war indents, we find that, in the case of annual demands from arsenals, practically no paints were procured in this country, while railways purchased considerable amounts; this we understand was solely due to the absence of expert inspection. It will therefore be the more common articles, which are purchased and inspected by the officers of the Store Department of the India Office, that will be procurable in increasing quantities in India, while the articles which it will still be necessary to procure from the United Kingdom will be those of which purchase is effected on the advice of, and which are actually inspected by, the Consulting Engineers. Consequently as the work of the Store Department of the India Office will steadily diminish from the commencement and its cadre be capable of reduction, we do not think that we are making an inappropriate move when we suggest that the present Store Department of the India Office shall eventually become a branch of the Stores Department in India. We predict no date by which this change will be effected; the circumstances forbid any certainty on this point. Assuming however that the response of the people of India to the whole-hearted encouragement by Government of their industries is equal to that of the people of Japan in similar circumstances, an assumption that need not be doubted, we see no reason why the change should not take place within five years; we however attach no importance to the period within which this change is effected. Given time for preparation, the new department should experience no difficulty in taking over and arranging effectively for the provision of stores already purchased in the country, and in exercising a scrutiny over the other demands. To maintain efficiency and economy, and to obviate all risk of inconvenience to indenting officers, the process of eliminating articles from the Home Supply list and

adding them to the Local Supply list must at first be slow, while further data are being accumulated and suitable procedure arranged. When once this has been effected and industries develop, the process should accelerate in geometrical progression. We consider it essential that the principle of the subordination of the Home to the Indian Stores Department should at once be accepted, so that when the time is ripe the change can be carried out without further delay in examining the subject afrash.

Disadvantages of two separate Departments.

45. We are not satisfied with the suggestion that the successor to an India Store Department under a Secretary of State should be an independent body under the direct control of a High Commissioner. The existence of two departments, both responsible through separate channels to the Government of India for the supply of stores of English and Indian origin respectively, is unsound for administrative reasons, while two independent departments can hardly fail to be more expensive than one. It is inevitable that the department in England should strive to uphold its status even though the work is diminished, and not unnatural that it should receive support in this respect from the High Commissioner. In paragraph 43 we have explained how more accurate allocation of the work which the Store Department of the India Office actually does would apparently permit at once of a reduction in its status without any risk to efficiency. As the work of procuring stores in India increases, and that of procuring them from England decreases, it is desirable that the corresponding increases and demands of establishment should proceed *pari passu* and without any friction between the two branches; this is only possible when one authority controls both. The Director in England would of course be given wide powers in the conduct of business, and it would be a matter of primary importance to maintain the London Branch at its present high level of efficiency by continuance of the existing staff and procedure to the extent required for the work that remains. The Director would, however, be responsible and directly subordinate to the Director General in India, submitting to the latter any proposals he might have to make as to changes of policy. It would not, we think, be inconsistent with these proposals to recommend that the London Branch should be subject to the jurisdiction of the High Commissioner in all matters affecting the discipline of the staff and employés, and in questions, affecting English law and practice, which might arise in respect of contracts, fines, compensation, etc., and in which it would be necessary to invoke the aid of an authority and prestige higher than that of a departmental head. We see no difficulty in this arrangement, nor do we consider that it savours of dual control; it is customary in military administration for branches of technical services, controlled by the departmental chief at headquarters responsible for their efficiency and working, to be subordinate to the local military authority in matters of discipline and interior economy.

CHAPTER IV.

Existing methods of stores purchase.

Introductory.

46. In the following paragraphs an account is given of the system at present in force in the principal departments of Government for procuring their requirements both of locally produced and imported stores. We have gone into considerable detail in describing the procedure in the case of the State-worked railways in view of the large percentage the purchases, by railway administrations generally, bear to those of the whole of India. During the war period 1914-19, when the railway grants were necessarily curtailed and when supplies from England were reduced to a minimum, the railway expenditure, including that of company-worked lines, amounted to about three-fifths of the total; with an expanding programme we may expect large increases in the amount spent annually on railway stores. We have also explained the Army procedure at some length, both because of the number of the different services concerned, and of the extent to which it is proposed that in future the Army should utilise the services of the Indian Stores Department.

Railways.

State-worked Railways.

47. Each railway is self-contained in the matter of its stores purchases, and maintains a properly equipped organisation, designated the 'Stores Department', to meet the requirements of all departments, for stores, plant, machinery, locomotives, rolling stock, etc., (excepting coal, timber and sleepers, which are arranged for by the departments, directly concerned). The Stores Department is managed by a Controller of Stores at headquarters, assisted by District and Assistant Controllers. The bulk of the stocks are kept at headquarters where all arrangements for obtaining supplies are made. For facility in distribution, outstation depots are maintained at important centres, with a number of smaller depots to serve the various Locomotive and Carriage and Wagon Shops. The important out-depots are in charge of a District Controller of Stores, and the smaller depots are placed under a senior subordinate designated 'Sub-Storekeeper'. Stores are divided into two main classes, *viz.*,

(*a*) Stores usually purchased in the country.

(*b*) Imported stores obtained from England.

[Country stores.]

48. For stores falling under class (*a*), supplies are generally arranged for under annual contracts. The Stores Department prepares a forecast of the annual demands, based on the average annual consumption for the previous two or three years, in consultation, where necessary, with the consuming departments; for these stores public tenders are invited. Where standard samples are maintained tenderers are required to quote to those samples; in other cases samples are called for, and are received with the tenders. The tenders and samples are examined by a Committee composed of the Agent and the heads of departments, or their deputies, and the most favourable quotations

Aggregate value of stocks held by Indian railways.

54. The total amount locked up in railway stores balances is thus :—

		Rs.
State-worked railways	...	4,96,67,000
Company-worked railways	...	7,65,30,000
Grand Total	...	12,61,97,000

The Army.

Departmental organisation.

55. In all branches of the Army the procedure in force for replenishment of stores is alike, in that a demand is prepared at specified periods, at least once a year, for stores of all descriptions irrespective of source of supply. In the case of ammunition, technical instruments, lethal weapons, their spare parts, and certain other stores, there are special rules for forecasting the requirements of the coming year, but for expendable or ordinary stores the demand is based on the average of the past three years' consumption. The departmental services are organised for administration in Commands, Divisions and Brigades in conformity with the general organisation of the Army in India. All branches of the Army have establishments in different parts of India, where stores are stocked for their own use or for issue to troops dependent on them. The areas of the establishments for executive duties are not in all cases co-terminous with those of Divisions and Brigades, nor with those of each other, *e.g.*, in the Military Works Services there are thirty-five Districts and Independent Brigades, each of which forms the charge of an Assistant Commanding Royal Engineer, while for the Indian Ordnance Department there are only seven arsenals and four depots to undertake the supply of all ordnance equipment. The manner in which the annual demands of the several establishments is dealt with after preparation differs somewhat, depending on the organisation of the branch which has been found by experience to be most suitable. Thus in certain cases the demands of all executive establishments are checked and combined at Army Headquarters, in others the demands are dealt with divisionally, or partly divisionally and partly at Army Headquarters.

Ordnance procedure.

56. The procedure described below is typical of those departments whose requirements are regularly recurring. Provision is made under three heads :—

(*a*) articles obtained from England;

(*b*) articles manufactured in Ordnance Factories in India;

(*c*) articles purchased in India.

Demands are prepared in printed forms according to the source of supply, items being grouped sectionally. These forms are scrutinised periodically and items transferred from one heading to another as necessary; such transfer usually is from (*a*) and (*b*) to (*c*) as industries in India develop.

[Home stores.]

57. The demand for Home stores is taken in hand on the 1st April of the year preceding that for which the demand is being prepared. Thus the demand for the year 1921-22 would be commenced on the 1st April 1920. The demand has to be taken in hand so early, partly because of the time required for preparation, and partly because the cost must be known in advance for budget purposes. Ordnance equipment is classified in official 'vocabularies' by sections, and is stored in arsenals by groups of sections; the number of items in a group varies from one to three thousand. The Store-holder responsible for the custody and care of the stores prepares the demand. He is expected to have an intimate knowledge of his stores, the purposes for which they are issued, and the rules authorising their issue. His work is checked by a divisional officer who is responsible for the supervision of one or more groups; and the ordnance officer in charge of the arsenal also scrutinises the demand, checking important items and any which for special reasons require his attention. Column one of the annual demand form shows the actual issues of the past three years. If these figures vary greatly the reason is enquired into through the detailed issues recorded in the ledgers, and due allowance is made for any special cause. As the demands arrive at the office of the Director of Equipment and Ordnance Stores the items are abstracted into a form showing the amounts demanded by each establishment. This summary is then scrutinised by expert clerks who are acquainted with prospective changes of equipment and future programmes, and who are thus able to check and bring up-to-date the demands of the establishments. The annual demands as received also show the stocks in hand and under order on the 1st April, and where any demand has been made, which is not based on the figures of the past three years' issues, an explanation is given. After allowing for surpluses, which may have accumulated at any establishments owing to abnormal circumstances, the total requirements for the whole department are arrived at, and a printed and bound demand is prepared, priced, and submitted to the India Office. In the case of requirements for the ordnance factories, the work of preparation of the annual demand continues throughout the year, and section by section is is printed as ready and sent to England.

[Demands on ordnance factories and purchases in India.]

58. Demands under (*b*) and (*c*) are similarly prepared. Those on ordnance factories, are notified to the Director General of Ordnance, who places work orders on the factories concerned. The requirements of indigenous stores are divided into three categories, classed as 'local purchase,' 'annual contract,' and 'group contract.' In the first category the requirements are so small that it is not considered worth while to look beyond the station of the demanding officer, who is authorised to obtain items so classified in his own station; the rates to be paid, and the shop or firm from which purchased, are matters for the executive officer concerned. For articles in the second category ('annual contract'), the executive officer has to invite public tenders, by advertisement in the local Gazette, and in the leading newspapers, both English and vernacular. The rates tendered are entered in a summary and submitted,

with the recommendations of the executive officer, to the Director of Equipment and Ordnance Stores for approval. The rates are compared with those previously paid in the same district and with prices being tendered for similar articles in other areas; the lowest quotations from reliable contractors are approved unless, as occasionally happens, it is cheaper to get the items from elsewhere, taking into consideration the additional cost of freight from a greater distance. For articles classified as 'group contract' the Director of Equipment and Ordnance Stores himself invites tenders, advertising in a similar way. Such articles would be coal, soap, oils, flannelette, tents, etc., *i.e.*, articles required in great numbers, or not everywhere procurable, or more suitably provided by specially equipped firms. In some cases the contract would be for a term of years extending to five, and the contractor might be required to maintain a reserve of the finished article or of raw materials, such being open to inspection by appointed officers without notice.

[Inspection.] 59. The stores under contract are delivered as a rule at the depot or arsenal which demanded them. Occasionally, for some special reason, stores for one establishment are received at another, this is not unusual in the case of 'group contract' articles. The stores, accompanied by an invoice quoting the authority for their supply, are, on receipt at the arsenal or depot, inspected and compared with the sealed sample or specification. Formerly, this inspection was carried out by the ordnance officer in charge, but more recently inspectors have been appointed to carry out this duty. This inspection is a detailed one, every item under supply being handled and scrutinised by the subordinates of the inspection branch and sorted out into three lots, fit for receipt, doubtful, and unfit for receipt; the inspecting officer then examines, and passes or rejects them. After this the invoice is completed according to his decision, and the accepted stores are brought to account, the ledger and folio of their posting being entered in the invoice. This invoice, together with the rejected stores, is returned to the contractor, the reason for rejection of all items not passed being entered in the invoice. The contractor then completes the invoice as a bill, and after obtaining the countersignature of the officer in charge presents it for payment to the local treasury office.

Royal Indian Marine. 60. Annual indents are based on the consumption of the preceding three years and their preparation occupies about six months. Articles of indigenous orgin are demanded separately from those of Home Supply, which include certain requirements for the vessels of the Royal Navy. The standard of stores supplied to the Royal Navy is a very high one and stores must be up to the Admiralty specification. For indigenous stores tenders are invited every six months.

Military Works Services. 61. In the Military Works Services, whose main duty is in connection with new and varying works, provision of stores is made as required for each measure and on dates convenient for the purpose. In such cases the indents are not co-ordinated at Army Headquarters, but are submitted divisionally direct to the Director General

of Stores, India Office. In the case of a large project involving the erection of a number of similar buildings in various stations, it is some times found convenient to send one consolidated indent for English stores from the office of the Director General of Military Works. Local purchases are made, from time to time as may be necessary, by Assistant Commanding Royal Engineers who arrange for their own inspection, but it may be noted that Assistant Commanding Royal Engineers are located in the presidency towns and at Karachi and these officers are available for, and frequently perform the duty of, both purchase and inspection on behalf of up-country districts. In respect of machinery, a fully technically qualified officer is posted to the staff of each Chief Engineer of a command, in addition to an expert in the Director General's Office. The Military Works Services may thus be defined, in respect of purchase of stores, as a department which to a large degree, exercises the functions of a central purchasing agency, and which is capable, under its own Director General, of extending those functions to a marked degree.

Supply and Transport Corps.

62. In the Supply and Transport Corps the Deputy Director of Stocks receives estimates of requirements from Assistant Directors, Supply and Transport, of Divisions, and after co-ordinating these with the existing stocks, sanctioned reserves, and current forward arrangements, makes demands on the Controller of Contracts. After extracting those items which can be arranged for at suitable prices in India, the Controller frames the demand and obtains the approval of the Quartermaster General and the Finance Department to his indent, which is then transmitted to the Director General of Stores, India Office.

Mechanical Transport stores.

63. For mechanical transport stores the Central Depot at Chaklala makes provision for all technical stores, other than vehicles which are dealt with by the Mechanical Transport Directorate at Army Headquarters. Demands for these stores are not compiled annually but are formulated whenever necessary to replenish stocks, on the basis of the average rate of demand for six months, subject to the latitude permitted by a maximum and minimum stock formula.

Royal Air Forces.

64. The stores for the Royal Air Force are divided into two classes (*i*) technical (*ii*) other stores, *i.e.*, anything not part of an aeroplane or its engine. The former are obtained by indent on the Air Ministry through the Director General of Stores, India Office. The latter are obtained entirely through the Quartermaster General in India. Requirements of indigenous stores are small, timber being the chief item.

Medical Stores.

65. Medical stores required by government institutions, both civil and military, are purchased and distributed by the Medical Store Depots, Calcutta, Lahore Cantonment, Madras, Bombay and Rangoon. Stores required by the Medical Stores Department are obtained from three sources :—

(i) England.

(ii) Civil Departments in India.

(iii) Suppliers in India.

Many of the requirements of the Department are manufactured in, and obtained from, the laboratories of the Lahore Cantonment, Madras and Bombay depots from raw materials, either imported or indigenous.

[From England.] 66. Annual indents for stores to be imported from England are prepared by Medical Storekeepers and submitted to the office of the Director General, Indian Medical Service, on the 15th August of the year preceding that to which they relate. Requirements are calculated on the basis that each depot should hold a stock of non-perishable articles equivalent to the expenditure of the three previous years, and of perishable articles equivalent to half the expenditure of the same three years. On receipt from Medical Storekeepers, the indents are consolidated in the office of the Director General, Indian Medical Service, and despatched to the Director General of Stores, India Office, early in the financial year for direct supply to each Medical Store Depot. Supplementary indents on the India Office are also submitted from time to time as required. All indents are priced in the Director General's Office from contract rates received direct from the India Office. In arriving at the actual quantities required from England, surplus stocks available at depots are taken into consideration, and surpluses are transferred from one depot to another thus avoiding overstocking.

[From Civil Departments.] 67. Such drugs as quinine, opium, morphia, confiscated cocaine, etc., are obtained from civil departments in India.

[From suppliers in India.] 68. Articles which can be satisfactorily obtained locally are, in most cases, obtained by annual contract, tenders being invited from agents, contractors, and tradesmen by means of advertisements, in newspapers, government gazettes, etc. When the tendered rates or samples are not considered favourable, requirements are purchased either out of contract in the local market, or through other Medical Store Depots where local prices are found to be more favourable. After tenders are opened they are entered by each Medical Storekeeper in a comparative statement which is despatched, with recommendations, to the Director General, Indian Medical Service, who, after considering the various quotations, sanctions the annual contracts. The comparative statement is then returned to the Medical Storekeeper concerned with the Director General's orders endorsed thereon. Purchase of local articles out of contract is also sanctioned by the Director General. The Government of India have recently granted contractual powers to Medical Storekeepers up to Rs. 1,000 per annum in the case of any one article.

Public Works Department.

69. The public works in each province are divided up for administrative purposes into circles in charge of Superintending Engineers; each circle consists of a number of executive charges called divisions under Executive Engineers who do not, as a rule, hold stock, although in certain provinces, *i.e.*, Madras and Burma, central stores are maintained for the province as a whole. In Madras a stock of about Rs. 12 lakhs is

maintained; the Superintendent, Public Works Department Stores, consolidates all indents from divisions on the Store Department of the India Office and in addition submits an annual indent to recoup stocks of ordinary articles, such as paints, fittings, metals, etc., on the basis of the annual consumption of the last three years. In Rangoon the stock consists mostly of metals to the value of about Rs. 7 lakhs; the procedure for obtaining stores from England is similar to that prevailing in Madras. In other provinces indents on the Store Department of the India Office are submitted by Superintending Engineers. Petty stores are usually supplied under annual contracts, and other material as required by tender. If the recommendation of the Public Works Department Reorganisation Committee that contracts shall be entered into for complete works, contractors being encouraged to supply all the materials required for their construction, is carried into effect there will be little necessity to arrange for the supply of imported building materials in ordinary use.

Telegraph Department.

70. The Superintendent of Telegraph Stores, Calcutta, purchases practically all indigenous stores required by the Telegraph Department in the local market; these amount to about Rs. 5 lakhs annually; purchases of coal, coke and pig iron, etc, required for the Telegraph Workshops are purchased by the Superintendent of the shops. The Superintendent of Stores also prepares and sends to the India Office the annual indent for construction and general stores. Indents for instruments and cables are prepared by the Chief Electrician, and those for consumable material for the shops are made out by the Superintendent, Telegraph Workshops. Indents are based on the average annual consumption of the last three years.

Post Office.

71. Very few stores are obtained from the India Office, those procured in India are usually supplied on contracts made by the Post Masters General of the nine circles into which India is divided. The contract for postal bags is negotiated by the Director General, Posts and Telegraphs.

Printing, Stationery and Stamps.

72. About 80 per cent of the stores supplied are the produce of India. Twelve months stocks of imported stores are maintained. Articles, such as typewriters and duplicators, which are of American make are purchased in India. Annual indents representing a year's consumption are submitted in March to the Director General of Stores at the India Office, one year before the articles are actually required. Country made paper is purchased on contracts from Indian mills entered into by the Controller for periods of one or more years and is delivered into the Controller's store at Calcutta for small consumers, or direct to presses and others who are large consumers. Country made articles, other than paper, are purchased on annual contracts made on consideration of rates. All paper and other materials are tested and examined before being passed into the public service.

His Majesty's Mint.

73. The procedure in the mints is to obtain imported stores required regularly by annual indents on the Director General of Stores, India Office, and to purchase all other requirements, except coal and coke, through a general contractor at schedule rates. Stores of local manufacture used in large quantities are the subject of an advertised annual contract. Items but seldom required are tendered for on enquiry by several merchants and the best tender accepted. The wholesale merchant is dealt with wherever possible.

Other Civil Departments.

74. Other Civil Departments, except Jails and Police whose purchases of textiles for uniforms form a large item in their expenditure, do not individually or collectively expend large sums on stores and the bulk of their purchases are made in India. Many departments undertake research and experimental work and are empowered to obtain scientific instruments and machinery direct from the makers; their indents on the Director General of Stores at the India Office are thus proportionately small.

Need for a purchasing organisation India.

75. It will be seen that there is no inter-departmental centralisation of purchase, but that, in general, stores of local production are bought by appropriate departmental officers, and imported stores (except when bought locally in small quantities under the special provisions of the Stores Rules) are procured by separate departmental indents on the Director General of Stores, India Office; these indents give the estimated cost of each item and this is taken as an indication of the extent to which funds have been earmarked to cover the cost of the stores. It is the practice of the Director General of Stores, when the expenditure is likely to differ materially from the amounts so estimated, to inform the indenting officer and to await his further instructions; substantial savings in the estimates of cost are also notified. The special considerations needing the attention of the Committee in respect of the purchase of indigenous and imported stores will be discussed more fully in Chapters VII and VIII following. It will, however, be evident at once that, as experience has confirmed, local officials in India must be greatly handicapped in obtaining their requirements; and in the absence of any central authority possessing an adequate knowledge of Indian resources, and of an organization competent to place orders and to see that they are properly met, are often practically forced into the English market.

CHAPTER V.

GOVERNMENT FACTORIES.

General consideration.

76. Although the work done in the various government workshops and factories throughout India obviously employs local labour and other local resources to a very large extent, the conditions attaching to such work are so special that the case of these institutions appear to us to require particular attention. They undertake in the aggregate a large amount of manufacturing and repair work of particular classes some of which at least might be distributed to commercial firms, and, in the absence of such a distribution, not only do they not afford encouragement to private enterprise in the country, but they positively discourage it by the maintenance of an organised opposition, which has the advantage of practical freedom from the need of showing a financial profit on its working. The result cannot but be disadvantageous to private enterprise ; by failing to broaden the basis of supply of particular kinds of goods it has the effect of limiting unduly resources which may be of vital importance in time of war, when demands are suddenly increased to an extent out of all proportion to the capacity of the specialised factories, and outside supplies may be cut off. We have therefore devoted special consideration to the question of maintenance by Government of factories for special purposes, and have reached the conclusion that it would be advantageous on the whole for Government to adopt, in this matter, a more definite policy of reliance on private enterprise than is at present indicated. The existing government factories fall into three classes, the consideration of which involves different principles according as to whether the factories are maintained merely as a matter of convenience to do work which otherwise might be entrusted to private firms ; are intended more particularly to serve as a stand-by in time of war (including ordnance factories which manufacture articles whose nature suggests that direct government control is essential) ; or are designed to serve as pioneer factories to introduce and establish some new industry. Before, however, considering the particular kinds of factory in question, attention may be drawn to one general aspect of the case on which stress has been laid by many witnesses ; that is the question of relative economy.

Claim of economy not established.

77. It has frequently been urged upon our consideration that justification of the maintenance of particular government factories is to be found in the claim, that these enable the requirements of Government to be supplied more economically than if the work were given out to private firms. We regret, however, that we have not usually been able to obtain reliable accounts which would show beyond doubt whether the claim, that such economy is attained, can be established. It is obvious that the officers who maintained this view may easily have been misled as to the results secured ; and we have little doubt that, if the truth could be ascertained, it would be manifest that government workshops could not successfully compete with private firms, after making all reasonable allowance for profit. To take a case in point,

the example of a railway locomotive shop may be considered. The professional capacity of the staff employed in such a shop, and the excellence of the work turned out may be above question, but it must be evident that similar staff employed by a commercial engineering firm, which is constantly checking the value of the work done in competition with others by the practical test of dividend earning capacity, has an ever-present incentive to put forth an effort towards efficiency and economy which is lacking in the case of a railway whose profits or losses (even if these ever come under so searching a scrutiny) can be but slightly affected by the workshop results. This is, we believe, the general result of experience all the world over, and it involves no reflection upon the individuals employed in the railway workshop to suggest that they must suffer some loss of efficiency by not being subjected to the influence of this incentive. But though it must always be an important factor, we do not think that the question of economy, even if it could be authoritatively determined, is the one on which the answer to the question, whether or not a government factory should be maintained, should solely depend. To say that, if the State can manufacture a particular class of the goods, which it requires, more cheaply than it could buy similar articles from a private manufacturer, then it should do so, would be definitely to recognise the principle of government trading, and while this might conceivably lead to some special classes of goods being obtained at a slightly lower cost, this consideration might well be outweighed by the indirect benefits to the community incidental to the existence of successful industrial enterprises. We think, therefore, that the question of maintaining government workshops should be determined by the more immediate considerations of their convenience, and, in certain cases, of their necessity as means of national insurance, or as pioneers of industry. Typical cases of factories to which these considerations apply, are :—

(*a*) *Government factories which are maintained mainly on the ground of convenience.*

Railway Workshops,
Telegraph Department Workshops,
Mathematical Instrument Office Workshops,
Public Works Department Workshops.

(*b*) *Government factories which are maintained mainly as a measrre of national insurance.*

Ordnance Factories,
Army Clothing Factories,
Royal Indian Marine Dockyards.

(*c*) *Government factories which are maintained as pioneers of industry.*

Medical Store Depots (factories),
Government Turpentine and other pioneer factories.

It will be convenient briefly to consider these individually.

Railway Workshops.

78. In the early days of railways in India and before the expansion of the country's industries, it was necessary for railway administrations to make provision as far as possible for the manufacture and repair of as many of their requirements as was feasible. The position is altered by the development which has taken place in the iron and steel industries in India, and good facilities now exist for the manufacture in this country by private firms of many of the stores, appliances, and plant required; indeed signs are not wanting that, in the not far distant future, practically the whole of the equipment necessary for railways may be available from indigenous sources of supply. We may refer here to the opinion recorded in 1906 by Sir A. Rendal, late Consulting Engineer to the India Office, when commenting on the report of the Stores Committee of 1906 :—

> "I have always been an advocate for the encouragement of the industries of India by the manufacture of railway material in India, not only as a duty to her labouring classes, but as a means of, in some measure, freeing her from the disastrous effect on her railway finance of the high prices which sometimes prevail in England. I have, therefore, with some, and I hope increasing effect, urged the construction of locomotives, rolling stock, permanent-way material and other railway plant, in the various railway workshops, and though I have not been so anxious to see railway work done in private Indian shops, yet I have advised the placing of a good deal of work with them." (Secretary of State's Despatch No. 21-Financial-Stores, of 18th October 1907.)

Conditions however are different to those prevailing when the above note was written, and the expansion of private enterprise, and improvement of equipment and standard of outturn, due largely to the impetus given by the war, warrant our recommendation to place railway and other government contracts with private firms, with the confidence that our trust will not be misplaced. We recognise that ample facilities must be maintained by railway administrations for keeping their plant and rolling stock in efficient working order; but the railway workshops are equipped in some cases for a class of manufacture which we think falls outside their proper sphere and which we consider should not be encouraged. The combining in a railway system of what might be termed its legitimate work, *i.e.*, the transportation of goods and passengers and upkeep of the equipment necessary for their service, with the work of manufacturing material and plant required adds to the possibilities of danger when labour troubles arise. We consider that Government should encourage the development of industries in India by placing with industrial firms as far as possible the manufacture of its requirements for all State-worked railways, and that railway workshops should be maintained mainly for purposes of repair and experimental work.

Telegraph Department workshops.

79. These are kept up principally for the purpose of assembling and carrying out repairs to instruments and plant used by the department. Much of the work is of a technical nature and requires the attention of experts trained in the department; on the other hand,

a considerable amount of manufacturing work is carried out similar to that already being done by many private manufacturing firms in the country. In this case especially, the argument regarding the greater economy of the government factories, discussed in the opening portion of this chapter, has been advanced. Even if particular articles have been manufactured more cheaply than they could have been bought, we cannot believe that this would hold good as a general rule, or, for the reasons already given, that it should dominate the action of Government. We recommend that these workshops should be maintained for the purpose of carrying out the assembly and repair of instruments and other technical appliances, but should not manufacture stores which can be made satisfactorily by competing firms; in our opinion these stores can usually be purchased more cheaply from private firms if a true comparison of price is made.

Mathematical Instrument Office workshops.

80. The mathematical instrument office exists principally for the upkeep and repair of surveying and other instruments, and for the issue of instruments to government departments; it carries out the manufacture of certain instruments and is also responsible for the purchase of new ones. Most of its work is of a special character requiring a trained expert staff, but industrial firms have recently entered the field of scientific instrument manufacture, and are capable of producing efficient and satisfactory work. As in the case of the telegraph workshops, so we consider here that only such articles as cannot be obtained satisfactorily from indigenous supply should be manufactured by the department. The Indian workman has proved himself capable of carrying out work requiring great delicacy and accuracy, and Government can undoubtedly give much encouragement to this industry in particular by placing its orders with private firms in India.

Public Works Department workshops.

81. We endorse the following observations made on this subject by the Public Works Department Reorganisation Committee in paragraph 29 of their report:—

> "The same remarks apply, to a large extent, to the maintenance of workshops. We consider that there is no justification for the maintenance of workshops by Government except in the cases of temporary shops on large outlying works, where private enterprise is not available, and of small shops utilised solely for the execution of petty repairs. A workshop on any large scale can hardly be run economically unless the fluctuating demand for special work is supplemented by the more or less constant demand for standard articles, and it is particularly in regard to the latter that we consider government competition with private enterprise to be undesirable. The evidence that work executed in government shops is cheap is inconclusive in the absence of profit and loss accounts of these undertakings, and in the larger centres competition will prevent abnormal inflation of prices. An inquiry

into the workshop maintained by the public works department at Roorkee in the United Provinces led to its abolition, and there is less justification for the maintenance of such workshops in more advanced provinces like Madras. We therefore recommend that government workshops should be abolished, with the exception of those specified above, and private enterprise aided by the limitation of government competition and the addition of government trade to private trade. We realise that the abolition of the existing shops must be gradual, but we consider that the manufacture of articles of stock pattern therein should cease immediately, and that the use of such stock patterns should be insisted upon wherever possible."

Ordnance Factories.

82. The Indian Ordnance Factories include the Gun and Shell Factories at Cossipore and Ishapore; the Rifle Factory, Ishapore; the Small Arms Ammunition Factories at Dum-Dum and Kirkee; the Gun Carriage Factory, Jubblpore; the Cordite Factory near Coonoor; the Acetone Factory near Nasik; and the Harness and Saddlery Factory at Cawnpore. As regards these factories in general, we are of opinion that Government should maintain those which manufacture lethal weapons and such warlike stores as it is politic to continue to manufacture, either entirely or mainly, in government factories. But in respect of stores which can be looked upon as of ordinary manufacture, *e.g.*, harness, saddlery, clothing, accoutrements, carts, wagons, etc., the policy should be to distribute the work to private firms to the extent found practicable without loss of efficiency. The standard of work in government and departmental workshops is a high one; by diverting work of this nature to outside firms their standard should be improved by degrees, to the extent of their becoming competent to undertake commercial manufactures, which at present are beyond their scope. Further there are items of munitions, within the power of Indian firms to manufacture, the expenditure of which in war time increases to an enormous extent, and beyond possibility of being met by the ordnance factories alone, even allowing for recent extensions. Although sharing the peace requirements of such items with private manufacturers may, owing to the smallness of the orders, result in only an insignificant increase to a firm's business, yet this steady manufacture of certain types of munitions familiarises several firms with this class of work; consequently on the outbreak of war, the enormously increased requirements can be promptly met by the smooth and rapid expansion of the firms in question on the necessary lines.

Work to be shared with private firms.

83. This sharing of annual work orders with private firms involves two disadvantages to an ordnance factory. During peace time there is a lack of employment for the permanent supervising staff, which must always be maintained at a strength commensurate with the capacity of the factory. On the other hand, smooth

and rapid expansion of private firms to their full capacity on war work necessitates the upkeep during peace of specifications, gauges, patterns, jigs, etc., and it seems possible that this might afford employment to the staff of the ordnance factories. Moreover it is a general complaint that Government moves slowly, and, in an age of progress, official technical institutions are wont to deplore that, on this account, they are unable to keep pace with the times. Probably leisure on the part of an ordnance factory staff would afford the opportunity for research work which otherwise is not available, and on the whole this disadvantage might be ignored. The other disadvantage, to the factory administration is that, on the outbreak of war, workmen of the desired standard may not be readily forthcoming to enable the factory to work at once at its full capacity; the point is one that cannot be appreciated exactly beforehand. The Committee are of opinion that, considering together the encouragement of Indian industries and the insurance for war purposes given thereby, the balance lies in favour of sharing the work with private manufacturers; and they observe that this recommendation is in accordance with the policy which has long been accepted in the United Kingdom.

For insurance.

84. We have discussed this matter with the responsible Army officers concerned, and find some of them averse to being required to give up any part of the work because the annual requirements in peace time do not fully occupy the government factories. Any sharing of work orders with private firms reduces the volume of work over which the irreducible overhead charges can be spread, and this might lead to unfavourable criticism on the part of the Finance Department. We have carefully considered this matter, and are of opinion that it should be regarded from a broader point of view as a matter of policy. It is admitted that ordnance factories must be maintained for strategical and insurance purposes; this being so, it is manifest that cost of outturn cannot be made the prime factor in coming to a conclusion. The lesson of the great war is that ability to expand the resources of the country, so that they may be able to meet promptly the enormous demands of the modern battlefield, is the first essential. To jeopardise this possibility by appreciating, as dividend earners, institutions which exist primarily for insurance appears to us to be shortsighted.

Harness and Saddlery Factory, Cawnpore.

85. The case of the Government Harness and Saddlery Factory, Cawnpore, is one which requires consideration. We are informed by the military authorities that the demand in India for leather of any description is so great, that there is little incentive for manufacturers to attain the standard of government requirements; articles rejected on an Army contract are readily saleable in the public market at even better rates, this, no doubt, accounts for the survival to the present day of the Harness and Saddlery Factory, in spite of previous recommendation to the contrary; but, with the industrial awakening of India, a change may confidently be anticipated. The numerous tanneries, which have recently come into existence, indicate India's desire to secure profits by competing in the world markets for

leather rather than to be content with those attaching to the sale of hides. The next step is for her manufacturers of leather goods to improve their methods so that these articles may not only compete with imported goods, but also take their place in foreign markets. A great assistance in this respect will be, we consider, the placing out of large amounts of government requirements with private firms. The presence of expert inspectors to educate and encourage them should readily ensure that improvement in workmanship and finish which, at present, is so much needed. During the war large quantities of harness, saddlery and accoutrements have been supplied by firms in different parts of India. It may be contended that some of this was not up to the pre-war standard of Army requirements; and, while admitting this may be the case, it appears to the Committee that the remedy lies in distributing practically the whole of the peace requirements of this kind to manufacturing firms in India, who, for the reasons indicated above, may be expected to attain the correct standard; and also that this is the best means of ensuring ability to meet future sudden and heavy demands. There is nothing special in the conditions of the government factory at Cawnpore to throw doubt on the feasibility of this proposal, while on other grounds such a course is very desirable. In a country of India's size it cannot be economical to supply from one centre only, while there is danger, in the present unsettled state of the labour market, in retaining all the eggs in one basket. The Committee therefore recommend the reduction as early as possible of the Harness and Saddlery Factory, Cawnpore, to the status of the leather workshops at the Royal Arsenal, Woolwich, which are kept up for the purpose of educating artificers in leather for the Army, maintaining correct standards, and experiments. As far back as 1876 a Committee reported as follows (Enclosures to Despatch from Secretary of State No. 477 of 7th December 1876):

> "Though the extension of existing government establishments, such as the Tannery at Cawnpore, might be suggested among other means of attaining the object in view" (*i.e.*, resort to sources of indigenous origin for stores in substitution for articles obtained from England), "it is much more to be desired that the independent action of private persons or firms should be encouraged and developed, and this can only be accomplished by giving to such persons and firms a fair amount of orders."

Gun carriage Factory, Jubbulpore.

86. While it is recognised that the Gun Carriage Factory at Jubbulpore must be maintained, we see no reason why many of the articles now manufactured there should not, for similar reasons, be given out to private firms. We even go farther and would extend this principle to include certain items dealt with in other factories, *e.g.*, body work of shells which during the war were so made in large numbers.

Army Clothing Factories.

87. The necessity for the retention of the Army Clothing Factories appears to be even less than that for the leather factory at Cawnpore. The bulk of the work done at these factories is within the scope of workmen to be found almost anywhere in India, while the

garments are in use by troops practically everywhere. Cotton materials are produced in numerous parts of the country and woollen in more than one; yet the main clothing factory is located at Alipore, a place distant from most areas of consumption, where practically no materials are produced and where the labour market is high. This situation is no doubt a relic of the day when nearly all material was imported. The clothing factory at Madras is more fortunately situated, near to both cotton and woollen sources of supply. The concentration of materials for making up clothing at a place far removed from the locality where these materials are manufactured must add to the cost of production, and it appears doubtful if the expenditure, incurred on freight in railing material to Alipore and garments back from so distant a place, is included in the cost of the finished article. Possibly some of the work done in the Army clothing factories, *e.g.*, making up review order uniform, is not within the ability of the ordinary workman. But here again, as an encouragement to industry, the beneficial effect of giving out such work, by degrees, to private firms, and thus raising the standard of labour, should not be overlooked. Clothing store depots must of course exist in various parts of the country, and possess workshops for the repair of garments. It appears practicable to select depots in suitable centres for the training of master tailors and other workmen, for experiments, and for any other special work necessary in connection with clothing, as is the case at Woolwich with regard to leather, and as recommended above for the Harness and Saddlery Factory, Cawnpore. For the encouragement of industry, and in the interests of economy, the abolition of the existing clothing factories, and the distribution of work to contractors in all parts of the country, are recommended. We have been informed that, in at least one instance, reliance on contractors has given results quite equal to those obtained from the army clothing factories.

Royal Indian Marine Dockyards.

88. The dockyards in Bombay and Calcutta are principally for the purpose of docking and repairing ships of the Royal Navy, Royal Indian Marine and other government vessels; in addition they carry out the work of building craft for government and local administrations up to a certain size. It has recently been decided to abolish the Calcutta dockyard. We invite reference to Chapter X of this report, in which we have discussed the Shipbuilding Rules of the Government of India; it seems to us that, if Government desires to give support to the development of the important industry of shipbuilding in India, they must adopt a sympathetic attitude towards private firms. Witnesses from the Royal Indian Marine have contended that the building of vessels in the government dockyards is essential, as a means of keeping labour employed during periods when the dockyards are not fully occupied on their legitimate work of docking and repairing government vessels. We are not satisfied that, in practice, a larger permanent staff than would be necessary for this work is not maintained; and that this is so appears to us to be the more probable in view of the stress laid by these witnesses on the other argument that the dockyards

can carry out constructional work more cheaply than private shipbuilders. Through the courtesy of the Military Accountant General we have had the opportunity of investigating the latter argument. We find that a costing account system was introduced in connection with the Royal Indian Marine Dockyards shortly before the war, and that this enables the actual cost of work done to be determined. It appears, however, that a long-standing practice still prevails whereby the cost of particular items of work done for other departments is not debited to them in full. So long as this procedure remains in force it follows that, when comparisons are drawn between charges made for work done in the dockyards and the quotations of private firms for similar work, the result must be illusory. Taking all considerations into account we conclude that the work of the dockyards should be confined to the docking and repairing of Royal Navy and Royal Indian Marine vessels, and to any construction work which is of a secret nature; but that, apart from this, the building of all other craft required by government departments, and the repair work on such vessels should be placed with private firms, of which there are already several capable of turning out work of a high standard.

Medical Store Depots.

89. In addition to their primary function of storing, with which we are not concerned here, Medical Store Depots are maintained in certain cases for the purpose of manufacturing medicines, drugs, and surgical appliances required by the Medical Department. Until recently the manufacture of drugs in India has shown few signs of development, and the medical stores depots have been the means of bringing forward the possibilities of the country from the manufacturing point of view more than any effort on the part of private enterprise. We consider that Government should place at the disposal of manufacturing firms the result of its experience in this direction, and should only manufacture medical requirements which cannot be satisfactorily met from private manufacturing firms in India. We may, however, draw attention here to the opinion expressed by some of the medical officers who gave evidence before us that, so far as the private manufacture of drugs is concerned, not much progress can be hoped for until some form of Drugs Act is passed by Government.

Government Turpentine and similar factories.

90. These are 'pioneer' factories started by Government to test the commercial possibilities of utilising forest products, etc. It has been proved that turpentine and rosin of the best quality can be produced in India at a price cheaper than that of the imported article. With reference to these and similar 'pioneer' factories we endorse the views of the Indian Industrial Commission as expressed in the following extract from their report:—

> "205 * * * By 'pioneering' we mean the inception by Government of an industry on a small commercial scale, in order to ascertain and overcome the initial difficulties, and discover if the industry can be worked at a profit. It must be clearly understood that Government should only undertake the pioneering

of industries when private enterprise is not forthcoming, and that, as a general rule, Government participation should only be continued till the object with which the operations have been started has been fully attained. By this we do not mean that the government factory should necessarily be closed down, as soon as a private individual or company is willing to take it over, or it has reached some degree of commercial success. The opportune moment can be decided only by a full review of the circumstances of the case, and in some instances it will be found that the new industry is capable of development far beyond the initial stages at which it is profitable, before the withdrawal of Government becomes imperative in the interests of those who have invested, or are anxious to invest, capital in the new industry."

CHAPTER VI.

Relations with local Governments, etc.

Effect of Reforms.

91. It is necessary to take account of the altered position of provincial Governments due to the Reforms Act. The question has been considered by us in two aspects; first with reference to the legal position under the draft Rules which have been framed under the Government of India Act; and secondly with regard to the practical considerations which we think should be borne in mind. A good deal depends on the light in which the purchase of stores is viewed: it may be regarded as a 'subject' in itself, as the Government of India appear hitherto to have regarded it; or, may, on the other hand, be viewed as an operation ancillary to the particular service for which the stores in each case are required. The draft Rules are at present only provisional, and we understand that our recommendations will be taken into account before their final shape is determined so far as concerns the purchase of stores. We observe that 'stores' has been provisionally classified as a central subject; while the following have been classed as provincial, those marked with an asterisk being also proposed for transfer to ministers:—

*Medical Administration, including hospitals and dispensaries, etc.

*Public Works, including light and feeder railways, etc., water supplies, irrigation, water-power and storage.

*Agriculture.

Forests (*transferred in Bombay only).

*Development of Industries.

Minor Ports.

Inland Waterways.

Police.

Prisons.

All these subjects entail considerable expenditure in the supply of stores; we have seen (Chapter II, paragraph 12) that the expenditure on public works accounts for about 40 per cent. of the provincial expenditure, a percentage which is likely to increase with the expansion of light railways, educational buildings, and the improvement of roads, and construction of feeder roads which is certain to follow the increasing use of motor transport.

It is laid down in Rule 12 that:—

> "subject to the provision of these rules provincial subjects shall be administered by the local Government. But, save in the case of transferred subjects, nothing in these rules shall derogate from the power of superintendence, direction, and control, conferred on the Governor-General in Council by the Act;"

and with this may be read the provisions of Schedule III—Rule 2—paragraph (*vii*), which states that:—

"the previous sanction of the Secretary of State in Council is necessary to any expenditure upon the purchase of stores, either in the United Kingdom or in India, otherwise than in accordance with such rules as may be made on this behalf by the Secretary of State in Council;"

Rule 47 provides that :—

"the powers of superintendence, direction, and control, over the local Government vested in the Governor-General in Council under the Act, shall, in relation to transferred subjects, be exercised only for the following purposes namely :—

"(1) to safeguard the administration of central subjects.

"(2) to decide question arising between two provinces, in cases where the provinces concerned fail to arrive at an agreement."

From a consideration of these rules it would seem that, if they were enacted in their present form, the Imperial Government would have complete control over local Governments as regards their purchases of stores, partly in virtue of Section 45 of the Act, and partly in virtue of Rule 47 which would enable control to be exercised over the purchase of stores for transferred departments.

Local Governments.

92. We do not, however, regard it as a practical proposition that local Governments should be compelled to subject themselves in general to the guidance of the Indian Stores Department in respect of purchase of stores, but we consider that, at least as far as concerns stores of indigenous origin and local manufacture, it will only be in consonance with the spirit underlying the wide delegation of powers under the Reforms Scheme that local Governments should exercise complete freedom of action and should thus not be bound to conform to the rules prescribed for the guidance of imperial departments, or be forced, though they should be welcome if they so desire, to utilise the services of the Indian Stores Department. But as regards imported stores the case presents itself to us in another light. It will be clear, from the discussions in this report, that the development of Indian industries must depend to a large extent on the adoption of a wise stores policy, and we think it manifest that, if our conclusions as to the shape this should assume are sound as regards the effect of purchases for imperial needs, they must be equally so as regards that of purchases for other purposes. We hope, therefore, that, apart from all question of compulsion, it will be recognised by all concerned, that local Governments should be guided by the rules laid down by the Government of India regarding the purchase of imported stores, and that their demands should be made in conformity with the procedure proposed by us for imperial departments. For the foregoing reasons we are disposed to recommend that the purchase of stores should still be treated, for legislative purposes, as a 'subject' rather than as an incidental function of

administration; but that it should be divided, for the purpose of the rules under the Government of India Act, into two categories, namely :—

(*a*) *Purchase of imported stores*, to be a central subject, controlled by the Government of India, and

(*b*) *Purchase of stores of indigenous origin or local manufacture for provincial requirements*, to be a provincial, and, we think, a transferred subject.

Views of Mr. Lalji Naranji and Rai Bahadur Milki Ram.

93. Two members of the Committee (Messrs. Lalji Naranji and Milki Ram), while in general agreement with the principle underlying the foregoing observations, do not consider that the discretion of local Governments should be fettered in the matter of the purchase of imported any more than in that of indigenous, stores. They are of the opinion that the policy of purchase, in both cases, should be left to the decision of the local Governments ; though they anticipate that the conclusion these will arrive at will be in conformity with that indicated by the Committee, and therefore that they will readily adopt, in respect of provincial requirements of imported stores, the same rules and procedure as prescribed in the interests of the utilisation and development of Indian industries by the Government of India for the imperial services. It would follow, if this opinion be accepted, that 'stores' as a whole should be classified as a provincial (transferred) subject instead of being subdivided into central and provincial categories as proposed by the majority. In expressing this view, these two members are inspired both by a consideration of the policy of the Reforms Scheme, by which the majority have also been influenced though not quite to the same extent, and by the reflection that the purchases of imported stores for provincial requirements constitute a relatively small part of the agregate purchases made by Government.

Provincial Accounts Committees.

94. The freedom proposed in respect of local purchases may involve the possibility of some unnecessary expense being incurred by provincial Governments if they make independent purchases, but there will be the check of public criticism and in particular that of the provincial Accounts Committees. We do not attach much importance to the consideration that local Governments, acting independently, may be competing in the same market for stores of local manufacture ; their purchases are seldom relatively so large as to make this a matter of great importance, and, beyond advising that they should take advantage of the option of using the Indian Stores Department we do not think the case needs to be legislated for specially. Local Governments will, no doubt, appreciate the facilities offered by our proposed organization for undertaking purchase and inspection on their behalf, and for meeting any wishes they may express regarding the steps to be taken in complying with their requirements.

Company worked railways, Native States and quasi-public bodies.

95. Similar considerations apply to companies working government railways which at present are free agents and make their own arrangements for the purchase of their requirements as explained in Chapter IV. The general concensus of opinion of railway witnesses is that, as regards imported stores, the companies

should not buy through the Store Department of the India Office; and that, as regards indigenous stores, the existing arrangements are satisfactory. We trust that, by its efficiency, the Indian Stores Department will impress these, and other *quasi*-public bodies, such as municipalities, city corporations and port trusts, with the advantages to be gained from utilizing the new agency. We suggest, however, for the consideration of Government that, according as their existing agreements expire, railway companies, if continued as managing agents for State railways, should be required to conform to the imperial system of procuring stores and use the Indian Stores Department for the purpose both in India and in the United Kingdom. No railway company should, however, be required to change their consulting engineers without the consent of their Board of Directors. It appears to us also that, should any Indian Native States desire to take advantage of the facilities offered by the new department, they should be free to do so on the same conditions as apply to *quasi*-public bodies and to such extent as they may desire.

Levy of charges.

96. We do not contemplate any charge being levied on imperial departments for the services of the Indian Stores Department. Our view is that the new department will bear the same relation to imperial departments in respect of stores as the provincial Public Works Department does to other departments of a local Government in respect of the erection of buildings required by them. In the case of provincial departments and railway companies we make the same recommendation, but for another reason. We recognise that it is customary for the central and provincial Governments to make a charge for services rendered by their respective departments to each other, and that under the Reforms Scheme the revenues of Provincial Governments will be, to a much larger extent than formerly, independent of the Government of India since they will retain control of provincial balances. Moreover, the Store Department of the India office at present debits local Governments with departmental charges for stores supplied to them. We, however, consider that, as an inducement to local Governments and railway companies to make use of the new department, this charge might well be waived, and we think this concession a small price to pay for securing their co-operation. In the case of Indian Native States and *quasi*-public bodies such as municipalities, we do not consider that there exist sufficient reasons for departing from the ordinary practice of Government, and we think they should be expected to make a reasonable payment for the services rendered to them; this should be determined by the ratio between the actual annual cost of the department and the value of the stores dealt with by it. In regard to public works made over to local bodies for construction and maintenance, we recommend that they should have the same facilities for dealing with the Indian Stores Department as the Public Works Department. The policy of the Government of India is to encourage the transfer of public works to local bodies, and it is eminently desirable that there should be no deterioration in the standard of work. The grant of facilities to deal with the Indian Stores Department free of charge will be of assistance in maintaining the standard.

CHAPTER VII.

INDIGENOUS STORES.

Unsuitability of Stores Rules.

97. There is less room for complaint of the policy laid down by Government in respect of the purchase of indigenous stores and locally manufactured articles, than there is of the manner in which that policy is to a large extent defeated, owing to the complication of the rules in which it is embodied, and the absence of information and facilities necessary for carrying it into effect. The Stores Rules principally concerned are Rules Nos. 1, 2 and 10, reproduced in Appendix C. It will be seen that these give the preference to the use of locally produced goods, subject however to conditions, one of which involves a comparison of price between the articles in question and the cost of similar articles imported through the India Office. We deal in Chapter XI of this report with the prescribed method of comparing quotations which we consider unfair in detail, but apart from this we observe that it is difficult for the indenting officer to make such comparison at all; he frequently lacks up-to-date information on some of the factors affecting it.

Want of information.

98. Moreover, as we have already remarked in Chapter IV, individual consuming officers and departments are usually hampered in obtaining their requirements from Indian suppliers. Doubtless they know what is produced in their immediate vicinity, and such goods as they can themselves see, and inspect, can readily be purchased by them. But their information as to what is produced in more remote parts of India is necessarily scanty and defective; while even if an officer knows that a particular kind of manufacture exists beyond his own circle he has no means either of knowing whether, at any particular time, the capacity of the existing factories is fully engaged on other orders, or of ensuring inspection during manufacture or before delivery. The latter disability is one of peculiar importance in a country like India, where dealings must necessarily take place largely with new and untried firms which may not previously have had an opportunity of working up to the standard of quality required by government departments. The indentor is at once ill-informed as to India's resources, and ill-equipped to make use even of such resources as are within his knowledge. The result is summed up in the observation, quoted in the first paragraph of this report, that "indenting officers have, in practice, been too often deterred by the risk involved in purchasing in India in the absence of an expert purchasing and inspecting agency." They are constrained by the conditions described to send to the Director-General of Stores, India Office, demands for goods which, with better facilities, they might obtain of Indian manufacture; and these conditions contribute to the continual use of imported goods instead of those of Indian manufacture. There can be little doubt that not only are Indian industries thus discouraged, but also that actual loss of money and inconvenience to the public service is caused.

Inter-departmental competition.

99. Another defect of the existing system, or rather lack of system, is that such purchases as are made in

India are made by a large number of different officials, whose competition must, at least in some cases, lead to enhancement of prices. We do not, however, desire to lay great stress on this particular aspect of the case, since the country is so large, and its resources in general so wide if properly appreciated and utilised, that a moderate amount of competition by government purchasers, who must in any event compete with numerous private persons, is in our opinion unlikely to have a very marked effect; any attempt to obviate it completely would probably involve difficulties and expense incommensurate with the advantage secured. In our subsequent recommendations it will follow that, though centralising the purchase of certain kinds of stores to a considerable extent, we do not go as far in this direction as might at first have been expected.

Remedy.

100. What is clearly necessary is the establishment of an expert agency in India, which shall be so equipped that it will know what are the manufacturing resources throughout the country, and keep pace with their development; which will be able to purchase efficiently within the country, utilising the most appropriate market for particular demands; which will be able to carry out such inspection of goods under manufacture, or supply, as may be required; and whose services will be freely available to all consuming imperial services and to such provincial departments, and *quasi*-public bodies, as may desire to take advantage of them. This organisation, which in this report we refer to as the Indian Stores Department, must not only render these services in full to those who desire them, but must go further, by way of helping those who will still make their own purchases, by supplying these officers with such reliable and up-to-date information as will enable them to know where in India their requirements can be obtained, and by helping them in effecting such comparisons of cost as they should make in order to determine where to place their orders, and by providing efficient inspection. This department, in conclusion, must not only be able to render these services to consumers; it must further have authority and facilities for preventing orders, which, under the accepted policy of Government, should be placed in the country for goods of local production, from being placed outside. The requirements indicated above are so manifest, and so little open to dispute, that the statement of them in our report naturally occupies a brief space as compared with the discussion of other, and more complex, questions with which we are also concerned; we desire, therefore, to make it clear that the importance, which we attach to them, is not to be judged by the relatively short space assigned to them in this chapter. In designing the organisation, which is dealt with hereafter, we have kept prominently in view the fact that it is of the first importance that it shall meet the desiderata indicated above; and be capable of ensuring that Government shall, in future, not only profess the policy of utilising local industries to the utmost, and of purchasing their products in a businesslike manner, but shall also be in possession of the machinery necessary to carry that policy into effect.

Encouragement and protection of industries.

101. The measures thus framed will obviate a recurrence of the complaint that Government do not take proper advantage of those industries, already established

in India, which are in a position to compete with foreign manufacturers. It must be accepted, as a general postulate, that all transactions in connection with the supply of government stores should usually be governed by ordinary commercial principles. But the object of Government will only be partially attained unless a further advance is made in the direction of encouragement of local manufactures, especially in the initial stages of their enterprise, and of assuring them a reasonable measure of protection against the effects of accidental changes in conditions, which may at any time turn the balance in favour of extraneous sources of supply. We desire, therefore, to offer the following remarks under the heads of encouragement and protection of industries. It is clear that encouragement for a limited period may enable a nascent, or struggling, industry to cross the border line between failure and success, and to become established on a firm footing, with resultant advantage both to itself, and to the country whose resources are thus expanded. It would not be within our province to comment on some of the special measures of assistance which have been discussed by the Indian Industrial Commission. For instance, the financial help that may be afforded by industrial banks; and the technical assistance that it is the intention of Government to render (and which they have already begun to give in some instances) through the advice of experts in particular industries, as in the case of tanning, bootmaking, glass manufacture, are matters which hardly fall within our province, though we would invite attention to the observations in the preceding chapter on the co-operation of the expert inspection staff with other industrial advisers. But there are certain direct ways in which Government can materially assist local manufacturers. These are:—

(*a*) by guaranteeing orders for a definite period;

(*b*) by placing orders at specially favourable rates for a limited time;

(*c*) by securing favourable railway rates.

Guarantee of orders.

102. The first is a measure which can be adopted without much difficulty, though, if used too liberally, it may tie the hands of Government and discourage competition. It is particularly suitable to a new enterprise which requires a definite prospect of a steady demand for the goods to be produced. In such a case, it may be desirable for Government to pledge itself to buy a definite quantity of the goods throughout a considerable future period, subject to reasonable conditions as to price and quality. This form of guarantee was adopted in the case of at least two large Indian enterprises, which are now of the first importance and utility. We see no objection to the frequent adoption of this course when it seems desirable to afford encouragement to a form of industrial enterprise not already represented in the country. The conditions of different industries are so various that we do not think it practicable to lay down any precise rule to govern the exercise of his discretion by the Director General of Stores in guaranteeing assistance of this kind, and we think that it must be left to his judgment to determine whether, or not, to refer any particular proposal for the orders of Government.

Favourable rates.

103. The propriety of granting assistance in the second way, by placing orders at specially favourable rates, is more open to question: it would seem peculiarly applicable to cases in which the difficulty may have reference, less to the nature and duration of the firm's initial commitments, than to the fact that, until experience has been gained by the managing staff, and technical skill by the work people, the firm cannot hope, at the outset, to produce goods at a price that will compete with that of foreign manufacturers. This form of assistance amounts practically to a subsidy, and we consider that the correct principle to adopt is that the additional cost involved should not usually fall on the consumer, but be allocated to a special head from which grants should be made by the Imperial, or local Governments, as the case may be. When assistance under this head is granted by a local Government the matter should be arranged between the Director of Industries and the provincial agent of the Indian Stores Department concerned. We may mention here an analogous suggestion that has been made by some witnesses, namely that Government should be prepared to acquiesce, for a time, in the acceptance of goods of inferior quality in the expectation that a progressive improvement may be expected. We do not think that unsuitable goods should be accepted for such reasons in any circumstances. But there is obviously room for the exercise of judgment; as, though it may be impossible to procure goods of Indian manufacture which are up to the same standard as certain imported goods of the same kind, it will frequently be possible to procure Indian goods which can be utilised for the purpose to be served, and we think that the locally made articles should be given the preference in such cases.

Railway rates.

104. As regards the grant of favourable railway rates, we feel that the most we can do is to point out that distances in India are great and that consequently the cost of inland transport frequently has a considerable effect on the comparison of price between indigenous and imported articles; since practically all railways are the property of Government, we consider that more practical effect might be given to the expressed wish of Government to encourage Indian industries by the quotation of favourable rates to a greater extent than has hitherto been the custom. We understand that, in the past, the policy of quoting favourable rates to and from the major ports has, on occasion, resulted in a direct advantage to foreign goods to the disadvantage of Indian manufacturers. As an illustration it may be mentioned that concessions are allowed from the port of Bombay to Lahore, Delhi, and Cawnpore, to the advantage of importers of foreign goods, while manufacturers in the vicinity of Bombay, *e.g.*, Jalgaum, have to pay much higher rates to get their goods to the above-named markets.

Protection.

105. Turning now to the question of protecting existing industries, it would be difficult to exaggerate the importance to be attached to ensuring that existing industries, on which much capital has already been expended, and which give employment to large numbers of skilled workmen, are not compelled to close down on account of factors, over which they have no control,

introducing unforeseen competitive conditions. An example of such an occurrence is afforded by the effects of recent fluctuations in the exchange value of the rupee; previous to the rise in exchange, when the rupee was practically stabilised at 1*s.* 4*d.*, Indian manufacturers generally asked for a fair field and no favour, and were willing to supply Government with such stores as they manufactured in competition with imported stores and on equal terms. They feel, however, that the altered value of the rupee introduces a factor which, in some cases, renders it practically impossible for them to hope to compete with foreign manufacturers, and which, therefore, must involve them in serious losses, unless Government can adopt some measure of protection. (In this connexion we would refer to the observations in Chapter V regarding government factories). The question affects the further development, as well as the maintenance, of industries. Any failure of Government to extend, in such adverse circumstances, a reasonable degree of assistance to undertakings, which have already been established, must have a definitely deterrent effect on new enterprise. It must be borne in mind that, in some instances, the existing industries to which we refer have been established almost wholly with the object of meeting the demands of Government for particular classes of manufactures. The training of Indians in the engineering profession has recently received the attention of local Governments, and schemes are already being launched for the establishment of technical schools. Technical education in schools is only of value when combined with practical workshop experience, and workshop experience is only possible when factories exist, and are maintained, for the manufacture of such stores, material, plant and machinery, as the country is capable of producing. It is, therefore, the duty of Government, in the interests of education alone, to see that existing industries are supported as far as possible with government orders, and that the establishment of new industries receives every encouragement.

Fiscal measures.

106. The problem is thus one of genuine importance, and, though the consideration of some of its aspects must involve an excursion into a region with which most of the members of the Committee are unfamiliar, we feel that, in view of the primary object of Government in appointing us, namely the encouragement of Indian industries, it would be a serious failure on our part were we to omit to place the matter prominently before Government. We do not think that the fundamental consideration of economy can be overlooked, but we urge that it must be regarded broadly from a national point of view, and not merely from the standpoint of rupees, annas and pies; attention must also be devoted to the advantages that can be secured to the country by encouraging the spread of industrial education, and by ensuring the establishment of more convenient sources of supply. Experience during the past few years has abundantly shown the benefits to be derived, during war conditions, from the existence of indigenous resources, and the inconveniences, which might well prove disastrous on another occasion, caused by their absence. We feel, therefore, that the question of protection of indian industries as a means of maintaining those

already established and of encouraging the extension of others is a matter which urgently demands attention. The most obvious remedy is the adoption of such fiscal measures as will achieve the end in view; and some members of the Committee are emphatically of the opinion that this solution should be pressed upon the attention of Government. They urge that such excise duties as are at present imposed on manufactured articles in India should be removed, and that import duties should be levied on manufactured articles imported from outside India. These views will no doubt be fully considered by those who, we understand, are separately taking up the examination of the fiscal policy of the Indian Empire. Other members of the Committee, while agreeing that the most comprehensive and direct remedy for the position is that indicated above (especially if an import duty can be so regulated as to apply to imported articles which compete with local manufactures but not to those which, for the time being, must be imported because similar goods are not produced locally) are of the opinion that a measure of more immediate applicability is available, and should be adopted so far at least as relates to the purchase of government requirements. They consider that Government should rule that, when a comparison of price quotations is the deciding factor between the purchase of imported and locally manufactured articles, this comparison should be made at an assumed rupee exchange value which should represent the rate at which Indian industries may fairly be expected to compete on their merits with foreign manufacturers. They consider that, in existing conditions, such a rate might fairly be taken as one rupee equivalent to one shilling and six pence, as a maximum. The Committee as a whole recognise that the question is a difficult one, and that it is easier to criticise any particular solution than to suggest a better. We are at least unanimous in pressing the matter upon the attention of Government as one, the decision regarding which must vitally affect the industrial prosperity of the country.

Assimilation of contract conditions.

107. There is one other point bearing on the encouragement and protection of industries established in India, which appears to us to require special mention. It has been brought to our notice that special provisions are attached to contracts entered into with firms in the United Kingdom with the object of ensuring due allowance being made to, or by, the firms for variations in rates of wages or cost of certain materials. No such provision is usual at present in contracts made with manufacturers in India, who are thus placed in a position generally less advantageous than that of their competitors in the United Kingdom. It is only necessary for us to advise that, when competition may occur between manufacturers in both countries, the conditions of the contracts should be as nearly as possible the same in India as in the United Kingdom.

CHAPTER VIII.

IMPORTED STORES.

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Their importance.

108. In the preceding chapter, we have dealt with the question of purchasing those stores which are already manufactured or produced in India, and which should, *prima facie*, be bought to meet Indian requirements in preference to imported stores of the same kind. We now have to consider another important class of stores, namely, those which have to be imported from time to time, because there are no similar articles of local origin or manufacture available to meet the demand. As regards these imported stores the question for consideration is not the propriety, but the best method, of purchase. This question involves many conflicting considerations and requires therefore to be examined at some length. It is of greater importance, from the point of view of Indian industry, than may at first be realised, because, by adopting a suitable method of purchase for such imported goods, Indian industrialists may be led by degrees to embark on the manufacture of similar articles, the trade in imported goods thus leading naturally to a development of local industries. Hitherto, as indicated in preceding chapters, imported stores have, for the most part, been purchased through the agency of the Director General of Stores, India Office. The Stores Rules of 1913, it is true, allow of purchases being made in India to a limited extent but subject to various restrictions, the effect of which has been to discourage local purchases even in cases in which they may be strictly covered by the rules. This discouragement is enhanced by the difficulty in practice of applying the rule, unfair in itself and which incidentally we shall propose to revise, necessitating a comparision of price to ensure that the cost of imported articles, locally purchased, shall not exceed the price of similar articles bought through the India Office. To a large extent the difficulties experienced by individual indenting officers in buying stores of local origin beyond their immediate neighbourhood in India, which have been discussed in the preceding chapter, apply also to the local purchase of imported goods. In effect, under the Stores Rules as they now stand, and in the existing absence of special facilities for purchase and inspection, officers find themselves practically compelled, except in cases of urgent need, to take the line of least resistance and to indent on the India Office for the bulk of their requirements of imported stores. It will be seen from the statistics quoted in Chapter II, that, in normal times, imported stores form some 50 per cent. of the whole requirements of the public services, but that less than one fifth of these stores are actually bought in India, the balance being purchased through agencies in the United Kingdom. It is true that the proportion of local purchases was much increased during the war period, but the conditions then were of course exceptional, and no comfort can be derived from the occurrence of such abnormal variations.

Wider purchase in India recommended.

109. From a consideration of past experience, as brought out by the evidence received, we have already drawn the conclusion that the time has come when the artificial restrictions of the Stores Rules should be

withdrawn, and that full freedom should be exercised by India in the matter of stores purchase. We endorse the finding of the Industrial Commission, that the present methods of purchase of stores has had a deterrent effect on attempts to develop new industries, and that a radical change should be made in the methods of purchasing in India; and we share the view of the Public Works Department Reorganisation Committee, that the rules governing the purchase of stores militate against the success of local manufactures and the establishment of further ventures, and, in their opinion, adversely affect the working of the Public Works Department. Rules, however well intentioned, if they are so complicated and so difficult to work that they throw all the weight in the scale in favour of a particular method of purchase, seem to us to be clearly out of date, and we cannot ignore the volume of evidence which we have accumulated in favour of their revision. Indian opinion, and that of representatives of the British commercial community, are alike largely in favour of a policy of obtaining practically all imported stores through local importing firms rather than through the India Office; while indenting officials, though they recognise the efficiency of the Store Department of the India Office, have generally urged at least the need for greater elasticity in the Rules. Without any desire to magnify trifles, we may yet claim that there is a certain significance in such incidents as the inclusion in an indent on the India Office of a demand for one fish-hook at an estimated cost of one penny, and of an indent for chemicals, to the value of a few pounds, which contained a dozen items each of less value than half a crown; these serve to illustrate the paralysing effect of rigid rules. We consider that the general principle which should govern the purchase of imported stores is that advantage should be taken of the cheapest market in which suitable articles can be obtained, due consideration being given to cases of urgency or special advantages. We have not thought it necessary to consider which of the possible sources of supply is likely to prove the most advantageous, since, if practical effect is given to the above principle, each source will depend on its merits. We recommend, therefore, a discontinuance of the policy reflected in the Stores Rules of 1913, *i.e.*, that stores should, as a general rule, be obtained through the Director-General of Stores, India Office, and that purchase in India is the exception made under special conditions, and then only when the article is actually in India at the time of order. We consider that this condition should no longer hold good and we have recommended in the revised stores rules, proposed by us in Chapter XI, that purchase of all stores should be made in India when articles of suitable quality and reasonable price are procurable in the local market. This proposition is not a novel one; it was declared by Lord Salisbury in 1876 to be the policy of Her Majesty's Government, and we cannot but observe that purchase in England, which has held the field since 1880, has not led to that encouragement and expansion of Indian industry which was so confidently hoped for.

Channels of Supply.

110. To arrive at a clear idea of the scope of freedom which we think should be exercised by those in India who will be responsible for the purchase of

imported stores, we have reviewed the various methods which may be employed ; and the principal arguments in favour of, and against, may be briefly stated. For practical purposes these are covered by four heads :—

(*a*) a London agency ;

(*b*) accredited branches or agents in India of British manufacturing firms ;

(*c*) merchants or middlemen in India ;

(*d*) direct purchase from manufacturers abroad.

London agency.

111. Such an agency already exists in the Director General of Stores, India Office ; and, for railway companies, in their Home Boards of Directors. It offers advantages in having a wide field of selection in which to obtain competitive tenders for all kinds of goods ; in its close touch with manufacturers in the United Kingdom and its local facilities for inspection, payments, checking delays, etc. ; on the other hand, it is remote from indenting officers and out of touch with Indian conditions. It is a general complaint that supplies through this agency, though satisfactory in quality and price, tend to be slow and thus cause considerable administrative inconvenience, and to involve the unnecessary locking-up of funds in reserve stocks. Such an agency obviously can do nothing to encourage the substitution of local manufactures in India for the importation of goods from abroad.

Branches or agents.

112. This channel of supply consists of :—

(*i*) Accredited Indian branches of approved British manufacturing firms able to tender not only for the sale of technical stores, machinery or plant, but also for the installation and guaranteed satisfactory working of the plant they supply. They should have technical experts on their staff and should employ Indian workmen.

(*ii*) Accredited technical agents of approved British manufacturing firms who are already in India and employ Indian labour in the manufacture and repair of technical stores, machinery and plant, and who are able to tender not only for the sale of such technical stores, machinery or plant, but also for the installation and satisfactory working of the goods they supply.

The utilization of such agencies clearly promises certain decided advantages, notably the availability of expert advice which is at the disposal of prospective customers ; the full grasp of local conditions ; the rapid supply of requirements, which will frequently be obtainable from local stocks ; and assistance in erection of plant, etc., and in its maintenance in service. Possible disadvantages lie in the limitation of the field of enquiry and consequent increased cost, and in the difficulty, which can however be avoided by using the London stores agency, of arranging for the inspection of goods during manufacture. From the point of view of development of local industries there is much to be said in favour of encouraging the establishment, and of the freer utilization, of such branches and agencies. As

representatives of manufacturers, they will naturally not fail to notice the need of local repair shops, and possibilities of securing cheaper output by the development of their manufactures in India, either wholly or in part. There are thus good prospects of such branches and agencies initiating the manufacture in India of the articles which they primarily imported.

Merchants or middlemen.

113. The principal advantages offered by merchants and middlemen are the holding and maintenance in stock of general stores of kinds ordinarily in use by government departments; the immediate delivery of stores in stock, and probable quicker delivery of stores under order. They may tend to be more expensive to deal with as they must cover their middlemen's establishment and profit, though we have been advised by several witnesses that, against this, allowance must be made for the fact that such dealers obtain the benefit of trade discounts and can take advantage of the market for laying in stocks, and should, therefore, still be able to offer their goods at a reasonable price. They afford no facilities for inspection during manufacture, if required. They may also afford encouragement to manufacture in foreign countries under unfair economic conditions. The effect on Indian industry of utilising such sources of supply is arguable, and considerable divergence of opinion has been expressed to us in regard to it. We incline on the whole to the opinion that, in so far as such dealings give prominence to government requirements, they must conduce towards the inception of manufacture in India, especially if it is known that Government would prefer to obtain such requirements of local manufacture; this notwithstanding the fact that the interests of the merchants themselves may lie in the other direction. The establishment of an expert inspection staff in India must also increase this tendency.

Direct purchase from abroad.

114. Direct purchase from manufacturers abroad places the purchaser in immediate touch with the manufacturer, and enables him to obtain information and explain requirements quickly. Its practical advantage lies mainly in the purchase of experimental, or special, plant only manufactured by one or two firms. The disadvantages are, however, numerous and self-evident. Indentors in India are unlikely in practice to have a wide field for enquiries; the manufacturer will usually lack knowledge of Indian conditions; and there are likely to be difficulties in the payment of bills, shipping, and when delays arise. This mode of purchase offers no encouragement to local industrialists, though it might possibly suggest to the foreign manufacturers the desirability of opening a branch or agency in India.

Indian Stores Department not to be fettered by rules.

115. As the result of our review of the whole problem, we incline to the opinion that, though certain rules should continue to be laid down for the guidance of departmental purchasing officers, no hard and fast rules should be laid down to regulate the operations of the Indian Stores Department, which should be governed only by the general principles detailed above; but we think that the Director General of Stores, India, while exercising full discretion to purchase as seems best in the particular circumstances of each case, will rarely find it

desirable to adopt the course of direct purchase from foreign manufacturers. We consider that the services of Indian branches and agents of British manufacturers should freely be utilised for the purchase, at least, of particular articles in respect of which they are in a position to offer special facilities, and that the services of local merchants and traders should be utilised as far as can advantageously be done for the purchase of imported general stores. We anticipate that the effect of our recommendations as a whole will be a considerable reduction in the demands made on the Director General of Stores, India Office. Those demands will in fact be reduced in two distinct ways; by the immediate and final interception of demands for imported stores which can be replaced by stores of Indian origin; and by the increasing purchase in the country of English stores.

CHAPTER IX.

Inspection.

Importance of quality.

116. The suitability, in point of quality, of goods purchased is obviously a question of the first importance. We have alluded to the difficulty experienced at present by many departmental officers, owing to the lack of an organisation on which they can rely to inspect goods bought for them in India. This difficulty should disappear with the establishment of the Inspection Branch of the new department. In the special conditions of Indian industries it must be recognised that the duties of the inspection staff will by no means be confined to a mere examination of goods offered for acceptance. One of the main functions of the Indian Stores Department will be to raise the standard of Indian manufactures, and the inspection staff will be directly responsible for assisting indenting officers in the preparation of designs and specifications; for accepting and sealing patterns; and for urging, within reasonable limits, the standardization of the requirements of different services. It will be their duty, not merely to detect faults, but also to point out to suppliers the exact directions in which their products are defective, and can be remedied, so that steps may be taken to improve their manufacture. The superior staff will thus, to some extent, fill, in respect both of suppliers and customers, the position held at Home by the Consulting Engineers; routine inspection will generally be carried out by the less highly qualified staff.

Necessity for inspection.

117. The necessity, in the interests both of efficiency and of ultimate economy, for expert inspection of many stores is universally recognised, but where to draw the line as regards inspection is a matter on which opinions differ widely. We have carefully considered the question whether every description of stores requires expert inspection, either during manufacture or on delivery. Several witnesses expressed the opinion that, for what may be described as stores bought over the counter, and for articles of standard pattern, only common sense inspection, such as any one is qualified to make, is necessary, and that unnecessarily rigid inspection causes irritation and results in suppliers quoting higher prices. Others are emphatic in the opposite view, maintaining that, in all cases, only an expert can be trusted to ensure value for money paid. We are of opinion that the latter view is the more correct, and that, while it is possible to overdo inspection (a point against which it is necessary to guard), it is essential to bear in mind that an inspector's utility should not end with the rejection or acceptance of stores tendered. We consider therefore that inspectors should be provided for all classes of stores. Manufacturers should be required to supply up to standard; departments should not be forced to accept available goods of inferior quality. Standardization is a means to mass production making for economy, and, where military stores are involved, it is an insurance towards rapid supply and ability to meet the greatly increased

demands of war time. The reports of inspectors as to the capacity and reliability of contractors should greatly assist Controllers of Purchase in placing contracts. In purchasing stores the private individual has, no doubt, usually to rely on his own inspection, but his case is not similar to that of the purchaser of government stores. If the individual makes a mistake, or is defrauded, he retains a lively recollection of the fact, and is not likely to repeat the error. Provided, however, government stores are sufficiently near standard not to excite adverse comment on first issue, there is little real check on their subsequently lasting for a reasonable period. Assuming the cost of inspection does not exceed three per cent. (it will probably be considerably less), and bearing in mind the advantages enumerated above, which are incidental to the existence of inspectors, we have no hesitation in recommending inspection for all descriptions of stores on the score of economy as well as of efficiency.

Inspection depots.

118. The method of inspection must vary with the nature of stores; some require inspection during manufacture as well as on completion, while for many the latter alone suffices. For the former, inspection must be carried out in the maker's works; for the latter, either before despatch, or on receipt by the consumer, but, except for heavy or bulky articles, it can usually be best arranged for in special depots provided for the purpose. It will be necessary, therefore, in our opinion, to maintain inspection depots as well as a staff of travelling inspectors. After consideration of the advice we have received on this point, the stations we recommend for inspection depots are Calcutta, Bombay, Madras, Lahore, Cawnpore, and Rangoon. These combine the advantage of being large or growing manufacturing centres with proximity to military factories and arsenals and to central stores of other departments. These depots will receive all stores which are not inspected at the makers' works, or for which arrangements are not made for inspection at the consignee's receiving depot. After inspection at the depots, the stores will be packed and consigned to their respective destinations. The depots must be large enough to deal efficiently with the maximum volume of stores they will be called on to handle, with room for reasonable expansion, and with good road and railway communication. In the presidency towns, where rent will be very heavy, it is not essential to locate these depots in the business centres; the cheapest suitable site should be selected, and, if possible, existing inspection depots, or other available areas, should be utilised. We visited the Ordnance Inspection Depot at Hastings, and consider it convenient in respect of road, railway, and river communication, and also as regards proximity to the Clothing Factory, Alipore, which has been suggested as a probable suitable site for the headquarters office in Calcutta. In Bombay, we understand there is available a suitable site in the old Gun Carriage Factory, Colaba, lately occupied by the Clothing Department, which possesses some good buildings and sufficient space; a railway siding and a dock adjoin this site. While inspection will, as far as possible, be confined to manufacturers' works and inspection depots, it must on occasion

be carried out at destination. For example, tents, which are manufactured in great numbers at certain arsenal stations, will most conveniently be inspected in the arsenal itself since, on account of their bulk, it is impracticable to send them to an inspection depot in the first instance. Travelling inspectors will be utilised on these occasions.

Pattern rooms.

119. At each inspection depot a pattern room will be maintained, where standard specifications, and approved samples, of all articles likely to be procured within the commercial area served by that depot will be stored, and where firms wishing to tender for any article will obtain information as to its exact nature, etc. In a country of the size of India, it is clearly not possible for one such pattern room to suffice as is the case in England.

Absorption of existing inspection staff.

120. In recruiting the establishment of the inspection depots, we contemplate the absorption of a portion of the inspection staff at present employed by the Director-General of Ordnance. This staff is charged with the inspection of, and allied duties connected with, all stores manufactured in the Ordnance Factories, and a special branch, under a Chief Inspector-General of Stores, exists at Cawnpore for the inspection of all other ordnance stores purchased in the country. The responsibility for inspection of all stores manufactured in ordnance factories will remain with the Ordnance Branch, and no personnel or premises devoted to that purpose will be available for transfer. There is however a diversity of opinion regarding the responsibility for inspection of the stores purchased in India. A minority of military witnesses emphatically contend that this must remain with the military authorities. The majority however acquiesce in inspection, by the Indian Stores Department, of all such stores, subject to the condition, which is reasonable and to which effect can readily be given, that the inspectors should undergo training at an Ordnance Factory in regard to articles which, on account of their use under military conditions, require special experience. We find nothing to support the view of the minority, who admit that no fault can be found with the quality of the stores purchased through Director-General of Stores, India Office; and we contemplate an efficiency, equal in all respects, in the Indian Stores Department.

The Army.

121. We consider that, for the Army, liaison officers will be required in connection with inspection, the drawing up of specifications and sealing of patterns; since, though the stores dealt with by the Indian Stores Department would be confined to trade stores, there are often conditions, attaching to their use for military purposes, which require special attention. We understand that, as a result of the war, the work of drawing up specifications, sealing patterns, etc., has very considerably increased, and that the military authorities would prefer to retain the branch of their inspectorate at present located at Cawnpore. It is pointed out that their staff is experienced in these duties, and it is natural there should be reluctance to hand over work requiring special technical knowledge and experience until the new department has proved its efficiency. We however

see no reason why, when this has been attained, it should be necessary to retain a separate military inspectorate. The Army authorities will be able to appoint as many liaison officers as they consider necessary, and should thus be able to safeguard their interests in all essential matters; these liaison officers will be available to act as referees if any military stores are objected to by receiving, or consuming, officers. It appears to us that liaison officers in various parts of the country, at least one with each Command, would be both more convenient, and of more practical value, than a small inspectorate concentrated at Cawnpore; the cost would probably not differ much in either case, and we commend the matter to the consideration of the military authorities. Our view of the situation is, that, while the military inspectorate would survive as long as may be necessary, its eventual absorption should be contemplated at once, and wherever possible this should be given effect to from the commencement as regards both personnel and premises.

Railways, Public Works, etc.

122. In the case of other government departments, such as Railways, Public and Military Works, there are already officers qualified, in most cases, to draw up complete detailed specifications of what they actually require; this they should continue to do. The duty of the Inspection Branch of the Indian Stores Department, so far as such specifications are concerned, should be to give advice or assistance when approached, and to point out in what way these might be brought into accord with those accepted for similar articles by other departments, in the interest of standardization. The same procedure should apply to sealed patterns which, in most cases, represent stores for which there are no written specifications. Evidence has clearly indicated that different types of stores are used by various government departments to fulfil the same function, which results in much unnecessary expenditure; in such cases standardization, in consultation with consuming departments and manufacturers, should be the duty of the Inspection Branch. When departments are unable themselves to draw up working specifications, or to furnish patterns, of their requirements, it would be the duty of the Inspection Branch to act as consultants, or advisers, and to furnish them with information and advice.

Consulting engineers.

123. In paragraph 116, we stated that the superior staff will to some extent fill the position of Consulting Engineers. With the expansion of manufactures in India, and of purchases by the State and by the public, the time is no doubt approaching when individuals, or branches of established firms, may be expected to set up in practice as consulting engineers in India. Should this occur, we anticipate that it would be advantageous for Government to utilise the services of these firms for the purposes of advice and inspection, following the practice of the India Office and the Boards of Directors of Indian Railway Companies in London. It would encourage the substitution of private, for State, enterprise in this direction, a development as desirable on general grounds in this field as in others; and moreover it would enable a proportionate reduction to be made

in the cost of the organisation suggested by us for the inspection side of the Indian Stores Department, by the transfer of some of its functions to firms of consulting engineers. The representation in India of eminent British firms of consultants would also furnish a desirable measure of continuity in policy, and unity of standards.

Nucleus for inspection staff.

124. We anticipate no difficulty in the organisation of an inspection branch to carry out the duties of the initial scheme described in Chapter XII. The gradual absorption of the military inspectorate would afford a useful nucleus for textile and leather goods and their respective allied stores; and for timber, the necessary officers and staff should, we consider, be obtained as far as possible from the Forest Department; while for railway sleepers, one or more men with practical railway experience will be required. The organisation, for the inspection of engineering stores of practically every type, with the Test House and Laboratory for the inspection of such stores as cement, oils, paints, and varnishes, which exists in Calcutta under the Superintendent of Local Manufactures and Test House, Alipore, will also be absorbed.

Test houses.

125. We were impressed by the evidence offered by several witnesses regarding the important part which government test houses play in the industrial development of India, especially by helping to break down the prejudice, which is undoubtedly prevalent, against anything produced in India by the confidence inspired by an absolutely independent and disinterested certificate of quality. Several large manufacturing firms have facilities in their own works for the practical test of the materials they use; the tests thus carried out, though of great value, cannot be reckoned as guaranteeing a universally accepted standard. The Alipore Test House and Laboratory have supplied a long felt want in this direction, and should, we consider, not only be maintained, but be raised to such a state of efficiency as to provide for India an institution corresponding to the National Physical Laboratory at Kew, and to furnish tests which are universally accepted without question. The witnesses consulted on the matter were unanimous that a test house in Bombay would receive ample custom to justify its existence, and would be much appreciated by private manufacturers and firms. We therefore recommend that the establishment of a test house in Bombay should receive immediate consideration. It should be equipped on the same lines as the Test House at Alipore, and be developed in accordance with the needs of the locality. Some witnesses expressed the opinion that a test house in Madras also would prove useful, and might justify its existence; but the necessity was not so insistently pressed as in Bombay and we consider that the establishment of a test house in Madras may be left for later consideration.

Chemical laboratories.

126. We have provided, in our initial organisation, for the maintenance of the existing Chemical Laboratory at Alipore, and we consider that such laboratory, capable of carrying out reliable practical tests and analyses, will probably be always required allied to the mechanical test house. The facilities provided by the

proposed Chemical Department in this direction will, however, be a factor which will have to be taken into consideration.

Metallurgical.

127. On the establishment of works for the manufacture of steel sections and rails at Jamshedpur a highly qualified Metallurgical Inspector, with the necessary staff, was appointed to advise regarding specifications, and to carry out the physical and chemical tests essential to ensure that material of the requisite quality was produced. We desire to draw special attention to the results in this case as a definite proof of our contention of the advantages of really efficient and expert inspection. In Chapter XII, on the organisation of the Indian Stores Department, we recommend that the Metallurgical Inspector and his department should be absorbed in the Inspection Branch. That department is at present well staffed and organised, and in every way efficient for the work it is called on to perform. We cannot, however, exaggerate the importance of efficient inspection under this head, and, with the further development of the steel industry in India, the Metallurgical Branch will need such amplification as may be necessary to cope efficiently with the increased work.

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CHAPTER X.

SHIPBUILDING.

Its importance.

128. An important section of the government requirements, covered by our terms of reference but which requires separate treatment on account of its special character, is that of ships, and we have devoted consideration to it in consultation with representatives of the Royal Indian Marine and of shipbuilding firms. In view of the extent to which this industry has already been developed in the country, it is a subject to which the general considerations discussed in Chapter VII largely apply but, as the purchase of ships for government departments is governed by special rules, it will be more convenient to deal with the matter in a self-contained chapter of the report. The shipbuilding industry of India is centred chiefly in Calcutta, although shipbuilding yards also exist in Bombay, Karachi, Rangoon and Madras, and to a lesser extent at some of the smaller ports round the coast. The industry relies principally on private firms, companies, and *quasi*-public bodies for its support, as, hitherto, very few orders for river, or sea-going, craft have been placed by Government on private firms.

Present conditions.

129. The sections required for the framework of steel vessels can, for the most part, be obtained from indigenous sources of supply, but up to the present it has been necessary to import the materials for shell plating. It is anticipated, however, that within the next two years, plates will also be manufactured in India, thus rendering possible the building of the complete hull from Indian manufactured materials. Considerable progress has recently been made in engine manufacture, and plant is being laid down for the construction of marine boilers; it would appear then that, in the near future, it will be possible to build and equip ships entirely from locally manufactured materials. Firms in India are now engaged in building all classes of vessels required for river service, such as cargo boats, jute flats, motor boats and steam launches, also sea-going vessels, such as fishing boats, pilot vessels, and cargo ships; a sea-going passenger ship of over 200 feet in length has recently been launched. It has been contended that vessels designed and built in India might not embody the latest and most economical improvements introduced in shipbuilding in the United Kingdom; but witnesses from private firms have pointed out that, owing to the publicity given to any improvements in shipbuilding and in marine propulsion, through the medium of the technical and scientific press or by Home representatives of Indian firms, the designers and builders in this country are not likely to be behindhand in their knowledge of the latest improvements; moreover, it does not follow that the latest improvements necessarily emanate from the United Kingdom. In most cases, an expert knowledge of local conditions is necessary in designing craft for service in Indian waters, owing to the different nature of the rivers, and climatic conditions, as compared with those obtaining in non-tropical countries.

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Existing rules.

130. Shipbuilding firms in India claim that they are now capable of designing and building vessels, up to a certain limit of size, which are in every way satisfactory. The Director, Royal Indian Marine, our most qualified official witness, does not consider that the shipbuilding rules, as they stand, restrict private shipbuilding in India. He stated that he had never known of any department, or Local Government, requiring sea-going vessels of over 120 feet in length, and, therefore, that the rules applied only, in fact, to vessels for the Royal Indian Marine, and he had never suffered any inconvenience from them. In view, however, of the possibility of future development (which the Director recognised); of the fact that the rules do not apply exclusively to sea-going vessels; and of the desirability of throwing future requirements open to competition by private firms to a larger extent than hitherto, we think we are justified in proposing some modifications in the rules. The existing rules, which are reproduced as Appendix G, deal with two main subjects,—

(*i*) procedure governing the provision of new vessels;

(*ii*) financial powers of Local Governments, etc., in regard to the construction and repair of vessels.

The rules under (*i*) principally aim at securing that, before any sea-going vessel above a certain size is ordered, the designs should embody the latest and most economical improvements introduced in shipbuilding in the United Kingdom. Those under (*ii*) practically make the Director, Royal Indian Marine, the arbiter whether engine-driven vessels, required by Local Governments and Administrations for inland navigation and for use at ports, shall be built elsewhere than in a government dockyard; and they provide that his advice, as regards the type and cost of the vessel, shall invariably be obtained and adopted on all material points.

Competition with British firms.

131. We consider it important that, when a vessel of any considerable size is to be built, designs and specifications should be drawn up by a competent naval architect, so as to embody all the latest and most economical improvements as well as the special requirements of the department for which the vessel is to be built, and we think that in respect of such vessels the rules should still provide for the observance of this principle. If complete designs and specifications are not prepared beforehand, and tenderers are asked to submit their own, not only is much unnecessary work involved in the preparation of several sets, but it becomes exceedingly difficult to decide, with any certainty, which tender is the most advantageous. When, however, the designs and specifications have been prepared and accepted, it has been the almost invariable practice for the order for vessels of any considerable size to be placed in the United Kingdom, without giving shipbuilders in India an opportunity to quote. We consider that, for sea-going vessels up to 250 ft. in length, or to such greater length as firms in India may be able to build hereafter, opportunity should be afforded to local shipbuilders to tender in competition with firms in the United Kingdom, and that, if there is no material difference in favour of

a British tender, an Indian tender should be accepted. We think also that it will be advisable for the Government of India to consider whether, in order to assist in the development of local shipbuilding, some orders for seagoing vessels should not be placed in India from time to time, without competition with British firms, provided that it can be shown that the price asked is not unreasonable. We are of the opinion that such encouragement of the industry, in its early stages, will conduce to its eventual prosperity, and enable local builders, later on, to compete on equal terms with the rest of the world.

Consulting Naval Architect.

132. Procedure in regard to the comparison of Indian with British tenders would be greatly simplified if the Consulting Naval Architect to the India Office were represented in this country by officers qualified to prepare designs and specifications of vessels which can be built in India, and to inspect them during construction. The resulting co-ordination of procedure and practice in regard to the designing and building of vessels in the two countries would be advantageous to Government, who would also derive considerable benefit from the fact that the Naval Architect, through his branch office, would gain particular experience of Indian conditions and the capabilities of shipbuilders in the country, and from the assistance and advice, which this branch would be able to afford, in regard to the development of the shipbuilding industry in India. The fact, that the Consulting Naval Architect to the India Office was represented in India, would also go some way to remove the apprehension, which seems to exist among firms in India, that, if tenders for the construction of a vessel are invited both in Great Britain and India, there is not much likelihood, under present conditions, of the Indian tender being recommended for acceptance. We, therefore, strongly advise that the Consulting Naval Architect to the India Office be approached with a view to establishing a branch of his office in India.

Director, Royal Indian Marine.

133. With regard to vessels required by Local Governments and Administrations, and covered by the prescriptions of part (*ii*) of the shipbuilding rules, it appears that, in the past, application has usually been made to private firms for a design, specification and estimate. When these have been submitted to the Director, Royal Indian Marine, that officer has decided, in practically every case, that the vessel should be built in one of the Royal Indian Marine Dockyards, thus depriving private enterprise from building a vessel, for which it had prepared designs and specifications, and which the purchasing department desired it should build. In Chapter V we have expressed the opinion that the building of all craft required by government departments should, subject to the prescriptions of the shipbuilding rules amended as we propose, be placed with private firms rather than with government dockyards. We are also of opinion that, for the reasons given below, it is not now necessary, or even advisable, that the Director, Royal Indian Marine, should be the sole authority in India for approving the designs of the vessels, and for advising the Government of India whether, or not, they should be built in a government dockyard.

Marine Surveyors.

134. Although there are no consulting naval architects at present available in India, except those retained on the designing staff of private firms, the Marine Departments of the provinces of Bengal, Bombay, Madras and Burma have each a qualified Marine Surveyor, stationed in Calcutta, Bombay, Madras and Rangoon respectively. These officers are practical men with a good knowledge of shipbuilding and marine engineering, and we suggest that they might be entrusted with the duty of advising on the designs and types of vessels required by local Governments, Administrations and departments, and also on ship repair work, which has to be undertaken within their respective provinces. The Marine Surveyors at the different Indian ports, who correspond to the Board of Trade Surveyors in the United Kingdom, are already responsible for passing plans and granting certificates as required by the shipping laws. We suggest that, as soon as increase of work warrants it, or until such time as the Consulting Naval Architect to the India Office establishes a branch in India, a special assistant in naval architecture should be attached to the office of the Marine Department in Calcutta, or other port, to assist in the extra work involved. We, therefore, recommend that the Director-General of Stores in India, local Governments and Administrations, and the Railway Board should be authorised to avail themselves of the services of the Marine Surveyors for such advice as they may require regarding the building or repairing of vessels in India, and that, when the plans and specifications have been approved by the Surveyors, the placing of orders in India for such vessels, or repairs, as are permitted by the rules should be allowed. This provision should not of course preclude the officers concerned from referring, as heretofore, to the Director, Royal Indian Marine, for advice and assistance should they wish to do so.

Register of firms.

135. We assume that vessels will be constructed to conform with the classes laid down in accordance with the rules of one of the recognised British Registration Societies, *viz.*, Lloyds or the British Corporation. These Societies have qualified surveyors at Indian ports, and their certificate of classification is, in itself, sufficient guarantee of the strength and quality of the materials used in the construction of vessels and their machinery. As the capabilities of shipbuilding firms in India vary greatly, it would be advisable for all shipbuilding yards to be examined by the Chief Government Marine Surveyor as to their equipment, capability of staff, and their capacity for turning out work. These inspections should be made at least every two years, so that up-to-date knowledge may be available. Lists, as follows, might be prepared and furnished to the Director General of Stores in India, local Governments and Administrations and the Railway Board for information :—

(*i*) Firms capable of designing and building all types of river craft and vessels for use in ports.

(*ii*) Firms capable of designing and building sea-going crafts; the tonnage and size of ship that can be dealt with by each firm being recorded.

Draft rules.

136. We recommend the following draft rules for adoption in place of those at present in force. We have not suggested a limit to the financial powers of local Governments and Administrations [in lieu of existing rule 7 (a)], as we assume that this will be covered by the delegation of powers proposed under the Reforms Scheme. Apart from this point, we consider that sections (ii) and (iii) of the existing rules should no longer be continued, as the matters covered by them will be sufficiently dealt with in our revised draft rules.

Draft Shipbuilding Rules.

The following procedure has been laid down in order to ensure that the designs of vessels should embody the latest and most economical improvements introduced in shipbuilding, and in order, at the same time, to encourage the development of the shipbuilding industry in India:

1. *Rules relating to new sea-going vessels of 250 feet length and over.*

(*a*) When the Government of India, or a local Government or Administration, accepts the necessity for the purchase of a new vessel of this size, full particulars of the kind of vessel required, and of the service it is to fulfil, together with information regarding any special equipment or fittings needed, should be forwarded to the London Branch of the Indian Stores Department, through the Director, Royal Indian Marine, who will, if he thinks fit, prepare and send therewith a draft specification of the vessel. The head of the London Branch will consult the Naval Architect to the India Office (or to the Government of India in London), and will send to the Director, Royal Indian Marine, plans and full specifications of the proposed vessel with an estimate of its cost. After settling with the London Branch any points that may arise in respect thereof, the Director, Royal Indian Marine, will pass the plans and specifications and estimate to the officer, or department, concerned, and will, in the case of vessels required for the Royal Indian Marine, intimate whether the proposed vessel can be built in one of the government dockyards in India. Orders as to the construction of the vessel will then be issued by the Government of India, or the local Government or department concerned, after the necessary sanction to the expenditure has been accorded. These will either be acted upon by the Director, Royal Indian Marine, if the vessel is to be built at a government dockyard, or passed by him to the London Branch if the vessel is to be built in the United Kingdom.

(*b*) When time is of importance the London Branch should be requested, on receipt of the particulars referred to in Rule 1 (*a*), to

furnish an estimate of the cost of the vessel to the Director, Royal Indian Marine, who, if he considers that the work cannot be undertaken in one of the government dockyards, may recommend the officer, or department, concerned to issue instructions for the building of the vessel as soon as the necessary sanction to the expenditure has been obtained, without waiting for the plans and full specification, which, in such a case, should be sent to the indenting department through the Director, Royal Indian Marine, as soon as may be practicable.

2. *Rules relating to new sea-going vessels from 180 feet to 250 feet in length.*

The procedure to be followed shall be the same as in the case of the larger vessels provided for under Rule 1 (*a*) and (*b*) above, but in this case tenders shall be invited from firms in India, who are on the approved list of shipbuilders, capable of building vessels of the size required, as well as from firms in the United Kingdom.

3. *Rules relating to all power vessels under 180 feet in length whether for sea going or port work, and all vessels for inland water service and non-power vessels for sea or port work.*

(*a*) Vessels which come within this category should, whenever possible, be designed and built in India.

(*b*) When required for the Royal Indian Marine, the Director, Royal Indian Marine, should prepare designs and obtain tenders for a vessel of the description required from shipbuilders in India, who are on the approved list; and, provided that the necessary sanction to the expenditure has been given, the order should be placed by the Director, Royal Indian Marine, and the construction should be carried out under his supervision. He should be at liberty to decide whether the vessel should be built in one of the government dockyards.

(*c*) When required by any other department of Government, or by a local Government or Administration, particulars of the vessel should be sent to the Chief Marine Surveyor of the province in which it is required, and he should be requested to draw up such plans and specifications as he may consider necessary for the invitation of tenders. The department, or local Government or Administration concerned, will then invite tenders from firms on the approved list. These will be considered in consultation with the Chief Marine Surveyor, and, provided that the necessary sanction to the expenditure has been given, the order will be placed on the advice of that officer, and the construction should be carried out under his supervision.

CHAPTER XI.

Proposed alterations in Stores Rules.

Rules redrafted.

137. Our terms of reference require us to indicate the modifications of the Stores Rules which our scheme will necessitate. As these are considerable, we think that we can show them best by redrafting the rules, which we have accordingly recasted entirely in the form in which they are produced in paragraph 143 of this chapter. It will be observed that, in view of the altered conditions in which the rules will be applied, and in particular owing to the abandonment of arbitrary conditions regulating the purchase in India of imported stores, it has been possible considerably to simplify the rules as compared with their present form. We realise that the final shape to be assumed by these, or any other regulations, is largely determined by the criticisms to which they are subjected in the secretariat; we have therefore not gone into minor questions of detail, such as the exemption of the Burma Police in respect of articles of European manufacture, but submit the redraft as a concise expression of the practical effect of the policy envisaged by us in this report. It will be borne in mind that, while the rules would be applicable in their entirety to purchase by imperial departments and railways worked by the State, the extent of their application to local Governments must depend on the decisions reached on the questions discussed in Chapter VI. Before we proceed briefly to review their provisions, we may draw attention to certain general considerations which have influenced us in recasting the rules.

Defects of existing procedure.

138. The existing procedure is, we consider, defective in two respects: on the one hand, it entrusts the purchase of large quantities of stores to officers who are not expert purchasers, and who have very limited means of obtaining information in this respect; on the other, it makes no use of the technical knowledge which many officers possess, and which is essential to expert purchase of such stores as plant and machinery. This defect we contemplate remedying by concentrating in the expert purchasing branch of the Indian Stores Department all ordinary transactions at present carried out by non-experts, and by decentralising among expert officers such purchase as will benefit by the utilization of their technical knowledge. The only dealings then that will be left to non-experts are those of petty and urgent requirements within the limits of their financial powers, and even these we propose to curtail by confining them to supplementary demands. Bearing in mind the very large number of indenting officers who will patronize the Indian Stores Department, it is readily apparent that what may seem petty requirements, in the case of individual officers, may well, when co-ordinated from numerous sources, attain proportions that permit of bulk orders being placed with the attendant advantages of economy and improved quality.

Annual demands.

139. It may at first sight appear that this restriction on powers hitherto enjoyed constitutes a grievance, and may impose labour on the Indian Stores Department out

of proportion to the advantage to be secured. We have considered the point, and believe such an impression would be erroneous. The labour of obtaining a petty annual requirement comes under two heads, foreseeing the requirement, and procuring the stores. The former must fall on the indenting officer, and remains the same whether he arranges for its purchase or notifies the requirement to the Indian Stores Department. To notify is clearly less troublesome than to buy. The work involved in the office of the Indian Stores Department consists first of the clerical routine of co-ordinating the numerous demands, and secondly of arranging bulk purchase. We feel confident that our proposals make in the long run for reduced labour, as well as for economy and efficiency, and that indenting officers will soon realise this in practice even if at first they feel dubious of the result. We have in view the placing of large numbers of running contracts, and to this end we consider that all items, that can be, should be pooled. These running contracts will themselves become, in many instances, the source of supply of supplementary requirements, thus reducing the need for inexpert purchase to meet petty and urgent demands. We however do not anticipate that the Indian Stores Department will itself make petty purchases, except as a last resource on appeal by an indenting officer. When the Indian Stores Department has completed its review of annual demands, each indenting officer would receive a list of his petty requirements which it had been decided not to merge in bulk orders, and he would then make his own arrangements.

Financial powers of heads of departments.

140. Indenting officers may be grouped broadly in two classes, Railway and Army who stock in large quantities for retail issue to many dependent units ; and Military and Public Works whose demands are for their own consumption. The annual indents of the former are checked and compiled in headquarters offices, where purchase is also arranged. Now that, under our proposals, purchase will be made by the Indian Stores Department, it becomes a question whether heads of departments will still require financial powers. It is clearly undesirable that they should exercise such powers in ordinary cases, because, if purchase is, as a rule, to be done by others, their ability for purchase becomes even smaller than it is at present. We have weighed this matter, and we have decided that financial authority must be given, although in practice we contemplate that it will rarely be exercised. Occasions will arise, especially in regard to the Army, when executive officers are faced with a situation necessitating the purchase of stores beyond their financial power, and, at the same time, complicated by doubt as to the action necessary. In these cases two references are required, one to the administrative head for orders, and one to the Indian Stores Department for provision of stores. India is so large, and its communications are so indifferent, that, in such a contingency, considerable time may elapse before both parties can act. We consider that these are occasions when the ability to exercise financial power may be of great assistance to an administrative officer, and we have framed our recommendations accordingly.

The concentration of all power of purchase, during peace, in one central authority brings into existence an organisation, the need for which was very greatly felt during the Great War, both in the United Kingdom and in India; and this organisation, we contemplate, will expand to meet war requirements, rather than contract, owing to the exercise by the military authorities of their financial powers. At the same time, we feel that the need for such power may arise, and we have therefore suggested full powers for the heads of the large spending branches of the Army, in connection with naval and military operations.

Explanation of rules proposed.

141. The following synopsis of the new rules, together with the accompanying explanations, will, we hope, make clear their intention. They comprise:—

A preamble, clearly defining the policy of Government, as an ever present reminder to officers of the primary necessity of the development of Indian industries.

Rules I and II, designed to indicate the scope of the rules, and reserving to the head of the Indian Stores Department the wider discretion which we consider should be vested in him by Government. We do not consider that this officer should be fettered by the rules, which have been laid down for the guidance of officers of what we may term unorganised purchasing departments. The principles, which will guide him in conducting the business of his department, are referred to elsewhere in our report, and would not appropriately be included in these rules.

Rule III, dealing with the purchase of articles of Indian production or local manufacture, is designed to give practical force to the principle that reasonable preference must be given to stores falling in this category. The principle is already expressed in the existing stores rules, but, for reasons detailed in Chapter VII, is not effective in practice. We anticipate that it can now be made effective owing to the establishment of a central agency equipped with competent officers for purchase, inspection and intelligence duties, and represented adequately throughout the country.

Rule IV, dealing with the purchase of such goods of foreign origin as must still be bought in the absence of Indian goods that can compete with them, aims at throwing open the various channels of supply for such goods, instead of maintaining the arbitrary distinctions in favour of one particular channel as hitherto. The rule thus carries into effect the policy indicated in Chapter VIII. In view of the incidental advantages in local transactions, this rule gives preference to this method of purchase, provided prices are not unfavourable, and quality is safeguarded.

Rule V, regarding the purchase, outside of India, of certain special kinds of stores, corresponds to existing Rule No. 7.

Rule VI, relating to interdepartmental purchases, reproduces existing Rule No. 6.

Rue VII, regulating comparison of price, contemplates, it will be observed, a more rigid comparison

between the London and the Indian quotations in the case of imported stores, than between quotations for goods of Indian production and similar imported goods. In the former case, the relative economy of the different channels of supply is obviously an important consideration in ordinary cases. But, when the question involved is whether an Indian or an imported article shall be bought to meet requirements, we consider that a more liberal discretion may properly be exercised, since it is the expressed policy of Government to give preference to the former; moreover there are many other factors, such as rapidity of supply, encouragement of industry, national insurance, affecting the comparison, which cannot be measured in terms of money. Take, for instance, the case of Army reserves. War reserves must always be of a size proportionate to the forecast, and their source of supply is immaterial and does not affect the amounts to be held; but this is not the case with peace reserves, which in most cases vary directly with their source of supply. This peace reserve is intended to obviate the inconvenience that would attend complete depletion of stock due to abnormal demands, errors in calculation, etc. For Home Supply stores the reserve is usually calculated at one half the average annual issue, and in the case of Ordnance Factory, or Local Supply, the reserve is only one quarter of the average annual issue. There is thus an appreciable difference in the quantities of stores to be maintained as a peace reserve; in the storage accommodation required; in the capital locked up; and in the recurring charges for handling, preservation, etc. It is impracticable to calculate the extra cost to Government in this respect, consequent on whether an article is of Indian or Home Supply, but it is clear that such extra cost should be borne in mind when making a comparison between Indian and Home prices. This has not been done in the past, probably because it is impossible to express the advantages incidental to local supply, in terms of rupees, annas and pies. We have framed this rule on the assumption that the Director General of Stores in India, when issuing, for the guidance of indenting officers, price lists of articles imported through his agency, will quote the values at an Indian port, including all charges for interest, freight, insurance, landing and wharfage, and customs duty. Under the present rules, the onus of working out this complicated sum falls on indenting officers, whenever they consider local purchase of imported stores. We hold, however, that the Director General of Stores will be in a much better position to keep himself informed of the current rates of freight, insurance, etc., than individual officers. We would here remark that the practice of calculating only on the basis of the lowest freight paid by the India Office is unfair to the Indian manufacturer, and we consider that current commercial freights would be fairer. With the establishment of a freer competition, than at present exists, between different channels of supply, the question, whether it is possible to introduce a system of competitive simultaneous tendering between Indian and British firms, assumes special importance. It is a matter upon which opinions differ widely; we do not overlook the difficulties involved in the time taken in correspondence, and in intermediate fluctuations in

market prices and exchange, as well as in the chances of difference in the precise class of article tendered for, and in the conditions of contract. It is, however, generally recognised that it should be feasible to obtain simultaneous tenders so far, at least, as concerns large orders. For ordinary purchase, we recommend the adoption of the methods proposed by the Director General of Stores, India Office, that the Indian Stores Department should be furnished by the London Branch with copies of contracts placed in the United Kingdom. A study of these would enable the Director General of Stores, India, to form, in most cases, an opinion as to the trend of Home prices sufficiently reliable to enable him to decide where to place his orders. In cases of doubt, or of particular importance, he would communicate specially with the London Branch with a view to ascertaining actual current quotations. We contemplate the exercise of considerable discretion by the Director General of Stores in determining the procedure to be adopted in particular cases, where comparison of prices is necessary.

Rule VIII, regarding inspection, corresponds to the existing Rule No. 11.

Rule IX prescribes the financial powers of various authorities to act within the Stores Rules; it is based on No. 13 of the Rules of 1913, but the limits have been generally raised in view of altered values and, in some cases, to meet special requirements.

Appendix A, referred to in draft *Rule V*, is the same as the existing Appendix A, which is connected with the corresponding present Rule No. 7.

Appendix B, of the existing rules has been omitted as it is no longer necessary to prescribe in this matter the firms to be dealt with, owing to the altered arrangements for placing orders, and for ensuring the quality of articles supplied.

Alternative proposals.

142 Our colleague, Lieutenant Colonel Hogg, differs from us in a point of administrative detail. He considers that indenting officers should be permitted to purchase their annual requirements, when such purchases are within the financial powers assigned to them. In doing so they should make full use, whenever possible, of any running contracts entered into by the Director General of Stores. An alternative set of rules with an explanatory note is given in paragraph 144.

143. Draft Rules for the supply of Articles for the Public Service.

The Government of India are desirous of giving the utmost encouragement to every effort to substitute articles of indigenous origin, and of local manufacture, for articles now obtained from Europe and foreign countries, and desire that all officers of Government shall give preference to indigenous articles, provided the efficiency of the public service is not thereby impaired. The Government of India further consider that whenever stores of any description are procurable in the local market, of suitable quality and reasonable price, purchase should be made in India.

In accordance with this policy, and subject to any instructions regarding specific articles which have been, or may be, issued by the Government of India from time to time (*e.g.*, those relating to the supply of stationery), the following are the rules relating to the supply of articles required for the public service. These rules supersede all previous orders which are not explicitly continued.

Rule I.—Classification of stores.

The Director General of Stores, India, will specify the different classes of stores which must be obtained by indent on the Indian Stores Department only; and those which should be obtained by purchasing departments direct from local sources of supply, or by direct indent on the London Branch.

Rule II.—Applicability of Rules.

These rules have been framed for the guidance of officers of Government purchasing stores in India within the financial limits prescribed under *Rule IX*, but these financial powers shall not be exercised in the case of annual requirements. For annual requirements which are not urgent, the demands (other than such as are obtained direct by the purchasing department from local sources of supply, or are transmitted direct to the London Branch, in accordance with the classification of stores issued by the Director General of Stores) will be submitted to the Director General of Stores with the object of enabling him to secure economy by co-ordinating demands and obtaining the benefits of bulk orders.

Nothing in these rules shall be deemed to apply to purchases made by the Director General of Stores in India, who, subject only to the control of the Government of India, shall have complete freedom in the matter of purchase.

Rule III.—Articles produced in India.

(*a*) *Articles manufactured in India from Indian materials.*—All articles which are produced in India in the form of raw material, or are manufactured in India from materials produced in the country, must be purchased in India, provided the quality is sufficiently good for the purpose, and the price reasonable.

(*b*) *Articles manufactured in India wholly or partially from imported materials.*—All articles manufactured (and not merely assembled) in India, either wholly or partially from imported raw materials or component parts such as are not at the time of the order being produced or manufactured in India, must be purchased in India, provided that the quality is sufficiently good for the purpose, and the price reasonable.

Rule IV.—Articles which are not manufactured in India.

(*a*) *Plant and machinery and components thereof.*—Plant and machinery which is not manufactured in India, and component parts for repairs and

renewals thereof, may be purchased in India from branches, or duly accredited agents, of British manufacturing firms established in India and approved by the Director General of Stores in India, subject to the financial limits prescribed in *Rule IX*, and to the following conditions :—

(*i*) that the quality is suitable, and the price is not unfavourable ;

(*ii*) that branch firms shall be able not only to supply plant and machinery, but shall also be able to tender for the installation and guaranteed satisfactory working of the same ;

(*iii*) that an accredited agent shall be one who is already engaged in India in the manufacture and repair of plant and machinery, employs Indian workmen, and is able to tender not only for the supply of plant and machinery, but also for its installation and guaranteed satisfactory working.

Requirements, which are in excess of the financial powers of the officer concerned, shall be purchased :—

(*iv*) by direct indent on the London Branch, if the stores are of a class for which this procedure is prescribed by the Director General of Stores ;

(*v*) by indent on the Director General of Stores in other cases.

(*b*) *Other articles.*—All other articles, which are not manufactured in India, shall be obtained :—

(*i*) by direct indent on the London Branch, if they are stores of a class for which this procedure is prescribed by the Director General of Stores ;

(*ii*) by local purchase, if the cost of supply does not exceed the financial limit imposed on the indenting officer under *Rule IX*, and provided quality is suitable and the price is not unfavourable. In case of emergency, when inconvenience would be caused by waiting to obtain the stores through another agency, the comparison of price may be waived ;

(*iii*) by indent on the Director General of Stores, India, in cases not covered by (*i*) or (*ii*).

NOTE 1.—In the case of construction works let out on contract, articles required for the construction of such works may be supplied by the contracting firms, subject to the condition that the materials conform to the current specifications prescribed by the Director General of Stores.

NOTE 2.—Officers shall, at all times, have the right of indenting on the Director General of Stores, whenever they consider it necessary to do so in the interest of the public service.

Rule V.—Stores which may be purchased outside India.

Subject to the conditions of *Rules I* and *VIII*, the following articles may be purchased direct outside India, payment being made direct to the suppliers by the purchasing officers:—

(*i*) seeds and cinchona bark;

(*ii*) articles for experimental, or research, purposes by officers approved by the Government of India. A list of officers so approved is given in Appendix A;

(*iii*) excise instruments and apparatus required by Provincial Excise Departments for experimental, and research, purposes;

(*iv*) China, glass, cutlery, plant, crockery, and perishable fabrics, including linen, for residences furnished by Government;

(*v*) timber;

(*vi*) Australian lead;

(*vii*) articles required for the preparation of vaccine lymph;

(*viii*) chemicals and scientific apparatus required for use in government schools and colleges.

Rule VI—Inter-departmental purchases.

Nothing in these rules shall prohibit the purchase of stores, of whatever origin, by one department, or railway, from another.

Rule VII.—Method of comparing prices.

In comparing the cost of imported articles, purchased locally, with that of similar articles imported through the agency of the Director General of Stores in India, reference should be made to the price lists issued by that officer from time to time. These lists, which show the market value of articles at an Indian port, are based on the current price ruling in England, or country of origin, to which is added:—

(*a*) interest, insurance, freight, brokerage;

(*b*) landing, wharfage, and port charges;

(*c*) also the customs duty shown in the tariff as applicable to the article in question, calculated on its cost *plus* the additional charges as in (*a*) above.

It will be for the indenting officer to take into account the cost of carriage to destination from port of entry, or place of supply in India, as the case may be.

In the case of important contracts, specific reference should be made to the Director General of Stores in India.

NOTE.—As regards the determination, for the purpose of *Rule III*, of the 'reasonableness', or otherwise, of the price quotations for stores of local origin, it is not intended that the comparison with the cost of similar imported stores should be so precise as that indicated in this rule, though the method of comparison will be the same. A reasonable discretion must be exercised, with due regard to the manifold advantages of utilizing local manufactures.

Rule VIII.—Inspection.

All articles purchased in India are liable to the specifications laid down from time to time by the Director General of Stores in India, and to undergo such inspection and test, either in India or in England, as he may consider necessary.

Rule IX.—Financial limits on powers of officers to make purchases in India.

In the case of purchases made under *Rule III*, an officer's powers of purchase extend to the ordinary limits to which he is empowered to enter into contracts; but, in the case of purchases made in India under *Rule IV*, the limits for expenditure on any one article, or on any number of similar articles purchased at one time, are as follows :—

	Powers of purchase under *Rule*.	
	IV (a)	*IV (b)*
(a) *Civil Departments*—	Rs.	Rs.
(*i*) Heads of Departments; Commissioners of Divisions; other officers of, or above, the rank of Collector, whom the local Government may select; and Principals of Colleges and Inspectors of Schools in Bengal, Bihar and Orissa and Assam.	*Nil.*	500
(*ii*) Other officers authorised to incur expenditure	*Nil.*	100
(*iii*) Surveyor General of India; Director General, Posts and Telegraphs. ...	50,000	10,000
(*iv*) Controller of Printing, Stationery and Stamps.	50,000	Full powers
(*v*) Local Government or Administration ...	Full powers	Full powers
The powers of a local Government are also exercised by the following officers :—		
Agricultural Adviser to the Government of India; Director of the Agricultural Research Institute, Pusa; Director General of Observatories; Political Resident, Persian Gulf; Superintendent of Port Blair.		
(b) *Public Works Department*—		
(*i*) Executive or Assistant Engineer holding charge of a Division	5,000	1,000
(*ii*) Superintending Engineer or Superintendent of Works	25,000	5,000
(*iii*) Local Government or Administration.	Full powers	Full powers
(c) *Railway Department*—		
(*i*) Controller of Stores	*Nil.*	1,000
(*ii*) Executive or Assistant Engineer holding charge of a Division on a line under construction or survey	5,000	1,000
(*iii*) Engineer-in-Chief holding charge of a line under construction	50,000	5,000
(*iv*) Agent of an open line ...	50,000	10,000
(*v*) Railway Board	Full powers	Full powers

	Powers of purchase under *Rule*.	
	IV (*a*)	*IV* (*b*)
(*d*) *Army Department.*—	Rs.	Rs.
(*i*) Director General of Military Works; Director General of Ordnance; Director, Royal Indian Marine	Full powers	10,000*
Quartermaster General in India ...	Full powers (for Mechanical Transport Stores only).	10,000*
(*ii*) Divisional Commander	10,000	10,000
(*iii*) Director General, Indian Medical Service	*Nil.*	5,000
Directors of Quartermaster General's Branch.	5,000 (for Mechanical Transport Stores only).	5,000
(*iv*) Officer Commanding, Brigade; Director of Ordnance Factories; Deputy Director, Royal Indian Marine	5,000	5,000
(*v*) Supply and Transport Officer on special duty in Kashmir	*Nil.*	1,000
(*vi*) Chief of the General Staff; General Officer Commanding, Northern and Southern Armies; Adjutant General in India; Director, Medical Services, Military	*Nil.*	500
(*vii*) Officer Commanding a station; Superintendent, Army Remount Department; Government Inspector of Army Boot Factory, Cawnpore; Chief Ordnance Officer; Inspectors (Ordnance Department); the Assistant Inspector in charge of General Stores and Proof and Experimental Officer, Balasore; Medical Storekeeper; Commandant, Indian Staff College; Assistant Director of Supplies; Assistant Director of Transport; Superintendent, Army Clothing Factory ...	*Nil.*	500
(*viii*) (*a*); Superintendent, Ordnance Factories; Controller of Grass Farms ...	2,500	500
(*viii*) Officer Commanding a unit (including a hospital); Senior Medical Officer, Indian Medical Service, of a station; Recruiting Officer for Gurkhas at Gorakhpur; Officers (Ordnance or Departmental) in charge of Depots; Assistant Inspectors (Ordnance Department) with the exception of the Assistant Inspector in charge of General Stores; Officer in charge of Supply Reserve Depots; Commissioned officers Commanding Depot Transport Lines; Officer in charge of Supplies; Chief Chemical Examiner	*Nil.*	50

* These officers have full powers of purchase under *Rule IV*(*b*) when the purchases are required to meet the necessities of naval and military operations.

APPENDIX A.

List of Officers referred to in *Rule V*, who are authorised to obtain direct from manufacturers or dealers in England, America, Japan, or other foreign countries such articles as they may require for experimental or research purposes.

Superintendent, X-ray Institute.

Chemical Examiners.

Superintendents of Vaccine Depots.

Principals of Medical Colleges.

Superintendents of Medical Schools.

Directors of Bacteriological, Pathological or Research Laboratories, including officers in charge of Divisional and Brigade Laboratories.

Principals of Arts Colleges.

Principals of Technical and Industrial Institutes.

Directors of Industries.

Directors of Fisheries.

Sanitary Commissioners.

Director, Madras Cinchona Department.

Principals of Training Colleges.

Principals of Veterinary Colleges.

Officer in charge of the Experimental Sewage Installation at Poona.

Surveyor General of India.

Inspector General of Forests.

Director General of Observatories.

Director of Botanical Survey.

Agricultural Adviser to the Government of India and Director, Agricultural Research Institute, Pusa.

Imperial Bacteriologist, Civil Veterinary Department.

Imperial Agricultural Chemist.

Imperial Mycologist.

Imperial Entomologist.

Directors of Agriculture.

President of the Imperial Forest Research Institute.

Principal of the Imperial Forest College.

Director, Geological Survey of India.

Railway Board.

Directors of Public Instruction.

Chief Malaria Medical Officer, Punjab.

Chief Conservator of Forests, Burma.

Director of Zoological Survey of India.

Inspector of Science and European Schools, Central Provinces.

Metallurgical Inspector, Jamshedpur.

Conservator of Research and Working Plans, Burma.

Superintendent, Government Acetone Factory, Nasik.

Superintendent, Local Manufactures and Government Test House, Alipore.

Conservator of Forests, Western Circle, Punjab.

Commissioner, Northern India Salt Revenue.

144. The draft rules below are proposed by Lieutenant Colonel Hogg as being less complex and simpler to apply in practice than those agreed to by the majority. The principal points in which the rules recommended by the majority differ from those below are :— Alternative Rules.

(*i*) prescription by the Director General of Stores of the source of supply of various classes of articles ;

(*ii*) distinction between articles wholly manufactured from indigenous material and those manufactured partly from imported material ;

(*iii*) that officers shall not exercise financial powers in respect of annual requirements and that all demands of this nature must be preferred on the Stores Department.

In his opinion these changes tend towards unnecessary detail, to fetter the discretion of local officers, and to burden the Indian Stores Department with petty indents, and he considers that, though they may prove acceptable to departments like the Ordnance, who procure stores for the purpose of issue to others, the rules which follow will be perhaps found more generally suitable to the engineering services, *viz.*, Railway, Military and Public Works.

ALTERNATIVE RULES FOR THE SUPPLY OF ARTICLES FOR THE PUBLIC SERVICE (REFERRED TO IN PARAGRAPH 142).

The Government of India are desirous of giving the utmost encouragement to every effort to substitute, for articles now obtained from Europe and foreign countries, articles of indigenous origin and of local manufacture. The Governor General in Council desires that all offices of Government shall give preference to the Indian article, provided that the efficiency of the public service is not thereby impaired. The Government of India direct that, whenever stores of any sort are procurable in the local market, of suitable quality and reasonable price, purchase shall be made in India.

In accordance with this policy and subject to the provisions of the general rules specified below, and to any instructions regarding specific articles which have been, or may be, issued by the Government of India from time to time (*e.g.*, those relating to the supply of stationery), the following are the rules relating to the supply of articles required for the public service. These rules supersede all previous orders which are not explicitly continued.

Rule I.—Articles produced or manufactured in India.

All articles which are produced in India in the form of raw material, or are manufactured in India,

either from materials produced in India, or from imported material, must be purchased locally provided that the quality is sufficiently good for the purpose, and the price reasonable, subject to the condition that a substantial part of the process of manufacture has been performed in India.

NOTE.—The term "a substantial part of the process of manufacture" means that a substantial part of the preparation of the finished article must be performed in India, whether from raw materials or from component parts obtained in a finished state from other sources.

Rule II.—Plant and Machinery.

Plant and machinery, and component parts for repairs and renewals of such plant and machinery, may be purchased in India by duly qualified officers from branches, or duly accredited agents, of British manufacturing firms established in India, and approved by the Director General of Stores in India, subject to the following conditions:—

(*i*) that the plant and machinery are of the type ordinarily manufactured by the firm;

(*ii*) that the branch, or agent, entertains a staff of expert mechanics capable, when so required, of erecting and repairing the plant and machinery in question;

(*iii*) that the price is reasonable;

(*iv*) that the cost of supply under any one order, or in respect of any one type of plant or machinery, does not exceed Rs. 25,000.

NOTE.—It must be clearly understood that this rule is subject to the preference which is to be given under *Rule I* to articles of Indian manufacture.

Rule III.—Stores which may be purchased outside India.

The following articles may be purchased direct outside India, payment being made direct to the suppliers by the purchasing officers:—

(*i*) seeds and cinchona bark;

(*ii*) articles for experimental or research purposes by officers approved by the Government of India. A list of officers so approved is given in Appendix A*;

(*iii*) excise instruments and apparatus required by Provincial Excise Departments for experimental or research purposes;

(*iv*) China, glass, cutlery, plant, crockery, and perishable fabrics, including linen, for residences furnished by Government;

(*v*) timber

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* As in Stores Rules of 1913.

(*vi*) Australian lead;

(*vii*) articles required for the preparation of vaccine lymph;

(*viii*) chemicals and scientific apparatus required for use in government schools and colleges;

(*ix*) articles for Viceregal residences and for the residences of provincial Governors.

Rule IV.—Articles which] are not manufactured in India.

Subject to the provisions of *Rules II* and *III*, all other articles not manufactured in India shall be obtained by indent upon the Director General of Stores in India, except in the following cases :—

(*a*) when the cost of supply does not exceed the financial limits imposed on indenting officers under *Rule IX*;

(*b*) in the case of construction works let out on contract, articles required for the construction of such works may be supplied by the contracting firms subject to the condition that the materials conform to the current specifications prescribed by the Director General of Stores.

Provided that officers shall have the right of indenting on the Director General of Stores when they consider it necessary.

NOTE.—Indents should not ordinarily be submitted to the Director General of Stores when the value of the stores demanded is less than Rs. 1,000.

Rule V.—Inter-departmental purchases.

Nothing in these rules shall prohibit the purchase of stores, of whatever origin, by one department, or railway, from another.

GENERAL RULES.

Rule VI.—Method of comparing prices.

In comparing the cost of articles purchased locally with that of similar articles imported through the agency of the Director General of Stores in India, reference shall be made to the price lists issued by that officer from time to time. These lists, which show the market value of articles at an Indian port, are based on the current price ruling in England, or country of origin, to which is added :—

(*a*) interest, insurance, freight, brokerage;

(*b*) landing, wharfage and port charges;

(*c*) the customs duty shewn in the tariff as applicable to the article in question calculated on its cost *plus* the additional charges as in (*a*) above.

It will be for the indenting officer to take into account the cost of carriage to destination from port of entry, or place of supply in India, as the case may be.

In the case of important contracts specific reference may be made to the Director General of Stores in India.

Rule VII.—Tests.

Any articles purchased in India which require to be tested are liable to the specifications laid down from time to time by the Director General of Stores in India, and may be required to pass the tests prescribed for such articles.

Rule VIII.—Applicability of rules.

These rules have been framed for the guidance of officers of Government purchasing stores in India within the financial limits prescribed under *Rule IX.* The Director General of Stores in India, however, under the orders of the Government of India, shall have complete freedom in the matter of purchase.

Rule IX.—Financial limits on powers of officers to make purchases in India.

In the case of purchases made under *Rule I*, an officer's power of purchase extends to the ordinary limits to which he is empowered to enter into contracts.

In respect of all other ordinary purchases, the powers of local Governments or Administrations, the Army Department, and the Railway Board, are limited to an expenditure of Rs. 50,000 on any one article, or on any number of similar articles purchased at one time; provided that full powers may be exercised in cases of emergency, a report of the transaction being made at the same time to the Director General of Stores in India.

Financial limits on the powers of subordinate officers shall be laid down by local Governments or Administrations, Army Department, and Railway Board.

The powers of a local Government are also exercised by the following officers:—

(1) Surveyor General of India;

(2) Agricultural Adviser to the Government of India;

(3) Director of the Agricultural Research Institute, Pusa;

(4) Director General of Observatories;

(5) Director General, Posts and Telegraphs;

(6) Director General, Military Works Services;

(7) Political Resident, Persian Gulf;

(8) Controller, Printing, Stationery and Stamps.

Rule X.—Power to sanction departures from these rules.

The Government of India have power to sanction departures from these rules in cases where such departure is absolutely necessary.

CHAPTER XII.

THE PROPOSED INDIAN STORES DEPARTMENT; ITS FUNCTIONS AND ORGANISATION.

Introductory.

145. In the preceding chapters, an attempt has been made to set out the problem before us, and the various considerations which must be kept in view in devising a solution. We have discussed the question of stores policy, and indicated the alterations which we consider should be made in the Stores Rules, in which that policy is laid down. We now have to give shape to the opinions we have formed as to the nature of the organization which it is necessary to establish in India, with a comprehensive indication of the work for which it must provide and the staff to be employed. Our recommendations will be most readily understood if we treat the matter first in a summary form, and proceed later to the more detailed discussion of the organization initially proposed, and its subsequent development. This chapter will therefore be divided into the following sections:—

A—Summary of work to be done.

B—Outline of organisation.

C—Headquarters, provincial agents, inspection depots, liaison officers.

D—Absorption of existing organisations.

E—Details of organisation—Initial stage.

F—Development of organisation—Ultimate stage.

A—Summary of work to be done.

Two main groups of departments.

146. From the particulars given in Chapter II, paragraph 10, it will be seen that the Indian Stores Department will not be concerned with food and fodder for the Army, nor with such ordinary classes of indigenous materials and stores as are generally obtainable anywhere in India, and which are never imported from abroad. Apart from these, there are certain wide categories of stores in use by various departments which we must consider. It has been brought prominently to our notice that the departments using such stores fall into two distinct classes; those so equipped with expert officers, and with organised purchasing systems of their own, that they can be trusted to act for themselves, at least in regard to certain classes of the stores they require. These departments can still be helped materially, if relieved of responsibility for the purchase of other descriptions of stores requiring peculiar knowledge, and given the assistance of an organised inspection staff, the need of which is very generally felt, provided there is available for their use reliable intelligence regarding sources of supply and prices. The other class of department is that in which the stores are purchased by, and for the use of, officers who do not usually claim any technical knowledge of stores; for these it is desirable to furnish a wider measure of assistance, and to purchase not only the special kinds of goods alluded to above, but also their miscellaneous requirements. For all departments we have to provide a machinery

to carry into effect the changed policy of stores purchase and inspection, which has formed the subject of the preceding chapters of this report.

Functions.

147. We are thus led to propose that the Indian Stores Department :—

(*a*) Should act on behalf of all imperial departments of the Government of India (including the Army, Marine and Civil Departments and State-worked railways); and for such provincial Governments, company worked railways, corporations, port trusts, municipalities and similar *quasi*-public bodies, and such Indian Native States, as may desire to avail themselves of the department's assistance.

(*b*) Should so conduct its operations as to prevent the purchase of imported goods so long as goods of indigenous production, of suitable quality and price, can be procured instead, thus making effective the prescriptions of the stores rules.

(*c*) Should purchase and inspect in India :—

- (*i*) oils, paints and chemicals, and miscellaneous stores of an allied nature;
- (*ii*) leather goods and miscellaneous stores of an allied nature;
- (*iii*) textile goods and miscellaneous stores of an allied nature;
- (*iv*) timber, including railway sleepers;

} For all authorities.

- (*v*) all engineering manufactures, including plant and machinery; and miscellaneous hardware stores of an allied nature.

} For all authorities except the Marine, Railways, Ordnance Factories, Military and Public Works, and Telegraph Departments.

(*d*) Should inspect stores of the above categories, which may still be purchased direct by officers of the various government departments.

(*e*) Should absorb, as a branch, the existing organisation of the Director General of Stores, India Office, and should utilise this branch to purchase, in the United Kingdom, goods which, under the operations of (*b*) and (*c*) above, are not purchased in India.

(*f*) Should act as a central bureau of information on all matters affecting the purchase of stores, and their price, particularly with reference to the extent of Indian manufacturers and their capacity for production from time to time.

In indicating this wide range of duties, and in detailing hereafter the size of the necessary organisation, we desire to lay particular emphasis on the point that the organisation must always be thoroughly efficient. We do not advise, therefore, that the whole of the duties indicated should be undertaken at the outset, but that the full measure of activity should be attained by progressive steps.

Authority paramount in stores matters.

148. We consider that the Indian Stores Department should be the sole authority in India for the provision of all government stores, but we contemplate that it will not exercise its complete executive functions in respect to two categories of stores. The first comprises coal and stationery, for the provision of which organisations exist at present which are suitable and self-contained. No advantage will be gained, while clerical labour must be increased, if the work at present done by these organisations is transferred to the Indian Stores Department; this arrangement we regard as permanent in respect of coal. In the case of these organisations, however, the Director General of Stores would have full authority to scrutinise their Home indents with a view to ensure attention to the encouragement of Indian industries.

Medical, aviation, and mechanical transport stores.

149. The second category comprises certain medical stores, and technical stores of the Royal Air Force. As regards medical stores, in the absence of a Drugs Act in India, we feel that it would be injudicious to transfer an experienced well-equipped purchasing agency from the direction of the Director General, Indian Medical Service, to the administration of the Indian Stores Department, although we contemplate that eventually, when conditions are more suitable, the provision of medical stores might well come within the scope of the department. Technical stores of the Royal Air Force are similarly situated; for the time being they are in a class by themselves, and should be specially catered for by the existing experienced staff; but as civil aviation grows, and industries connected therewith are established in India, provision of these stores would also pass to the Indian Stores Department. We consider that demands for mechanical transport should at once pass through the Indian Stores Department. The use of motor vehicles for commercial purposes is rapidly growing in India, and all departments demand these in greater, or less, numbers. The Indian Stores Department should therefore undertake responsibility for provision in this respect from the beginning.

Stationery and stamps.

150. In respect of printing, stationery and stamps, we were faced with a peculiar difficulty. The Controller exercises three distinct functions, *viz.*, control of printing, purchase of stationery, and distribution of stationery; we are only concerned with the second of these functions, and we have found that the latter two are very closely connected. We have decided, therefore, not to recommend the absorption of this organisation into that of the Stores Department for the present, although, should printing be divorced from stationery, the latter could be taken over. We realise that the volume of stationery supplies is steadily increasing, and we note that the percentage of stores procured by this

department from England is diminishing. While, therefore, the Controller of Printing, Stationery and Stamps will submit his indents for English stores to the Indian Stores Department, we propose that he should be given full discretion in the matter of local purchase, and for this reason we have recommended in our new Stores Rules (Chapter XI) that he should exercise extensive powers.

B—Outline of organisation.

Organisation.

151. To carry out the duties indicated above we consider it necessary to set up :—

A headquarters office which shall comprise four principal sections, namely :—

Purchase Branch ;

Intelligence Branch ;

General Branch, including the superior direction, accounts and miscellaneous correspondence ;

Inspection Branch.

Provincial agencies at the principal provincial headquarters and trade centres :—

(*i*) to receive local demands and dispose of them either by local purchase, or by passing to the headquarters office ;

(*ii*) to act as representatives of the head office ; to collect in collaboration with the provincial Directors of Industries, intelligence regarding the productive capacity of provinces ; to disseminate locally similar information regarding other provinces, and, so far as available, information regarding prices prevailing in India and in the United Kingdom ; and, in special cases, to make local purchases on behalf of headquarters ;

(*iii*) to have administrative charge of such inspection depots and pattern rooms as may be established at provincial headquarters.

The provincial agents will be in personal touch with the local officers of consuming departments, for instance in Calcutta with the neighbouring officers of the Ordnance Factory staff, and they should be in a position to afford them material assistance and advice in making purchases.

An inspection staff, subordinate to the headquarters inspection organisation, moveable in accordance with the demands for their services from time to time, their headquarters being usually at inspection depots.

The London Branch being the existing organisation of the Director General of Stores, India Office, when it becomes a branch of the Indian Stores Department.

C—Headquarters, Provincial Agents, Inspection Depots, Liaison Officers.

Alternatives.

152. The Committee are almost equally divided in opinion on the question of the location of the headquarters of the Indian Stores Department. Various alternatives have been discussed, but it appears that the final choice may be limited to one of three situations, namely :—

(*i*) with the headquarters of the Government of India ;

(*ii*) at one of the chief ports, naturally either Calcutta or Bombay.

(*iii*) at an important up-country commercial centre, in which case Cawnpore suggests itself.

With the Government of India.

153. The Committee are in general agreement in rejecting the first alternative. There certainly would be some administrative convenience in having the Director General, with his office, in close proximity to the department of Government to which he will be subordinate and to at least one—the Army Department—with the officers of which a considerable part of his work will lie. But so complete a removal, not alone of the head of a commercial department, but also of his principal officers, from a commercial atmosphere, would be a serious objection ; while the great congestion already apparent, at least in Simla, renders it most undesirable to propose a further increase in the number of offices there. The objections, taken by some of us to the Director General of Stores being located at Cawnpore, would apply still more forcibly in the case of Simla, or Delhi. We contemplate that, in any event, the Director General of Stores will tour extensively, and that he will be able to visit the headquarters of the Government of India whenever occasion arises for personal discussions. The objections to either Simla, or Delhi, as the headquarters station thus appear to us greatly to outweigh the advantages, and we think that one of the other alternatives must be chosen.

Calcutta or Bombay.

154. It is clear that the choice of a port must lie between Bombay and Calcutta. Our colleague, Mr. Lalji Naranji, in the event of the rejection of the proposal to locate the headquarters at those of the Government of India, which he would prefer, is strongly in favour of Bombay. He observes that, if a trade centre is preferred, Bombay would be the most suitable, as it is the home of Indian commerce, and its atmosphere, as one European witness has pointed out, is more liberal than that of Calcutta. Our colleague contends that geographically, too, Bombay is the most desirable centre, being the largest Indian maritime port, and also the main gateway of Indian trade and commerce. The majority of the Committee, however, consider that Calcutta has the advantage, and incline to the opinion that it is the proper place for the Director General of Stores to be stationed, as contemplated also by the Indian Industrial Commission (*vide* paragraph 197 of their report). In favour of this view, the majority lay

stress on the pre-eminence of Calcutta as a centre of commerce and industry, and its proximity to the localities in which some of the principal industries of the country exist, and are being developed. They are impressed by the importance attached to close touch between the staff and representatives of industrial enterprise, and consider that this will have a real influence in reducing the tendency of officials to the creation of too bureaucratic an atmosphere. Calcutta, too, will be able to offer a more tangible advantage, in that the assistance of the members of the inspection staff, skilled in a wide variety of manufactures, who must in any case be employed locally, will be available to assist the headquarters staff in dealing with technicalities in contracts and specifications. Without such expert assistance, it would frequently be difficult for the headquarters administrative staff to draw up specifications. The administrative staff will also have the advantage of being in close touch with the most important of the provincial agencies, and with the Test House staff at Alipore. On the other hand, there is a clear objection to the headquarters being located in Calcutta on the score of congestion and greater expense; this has not been overlooked. It is considered that this disadvantage can be minimised by choosing a suitable locality for the office; but, in any case, it does not appeal to the members of the Committee, who favour this alternative, as being sufficiently important to outweigh the advantages.

Cawnpore.

155. Some members of the Committee, however, are more strongly impressed by the arguments in favour of locating the headquarters of the Indian Stores Department at a conveniently central up-country station, preferably one which also is an important business centre: it is this last consideration which has finally determined their choice of Cawnpore rather than Delhi. They consider that the advantages of freedom from local prejudice in favour of trade interests at either of the larger ports is important, and that, in so far as business 'atmosphere' may be desirable, it can be sufficiently secured in Cawnpore, which is a rapidly growing industrial centre. Cawnpore also has the decided attraction of being a cheaper place, in which to live and to carry on business, than Calcutta. Those of the Committee, who favour the second alternative, recognise the force in these arguments, but lay particular stress on the availability in Calcutta of a wider variety of inspection experts than in Cawnpore, where the manufactures, though important, are less diverse and call for a smaller inspection staff with less extensive qualifications.

Majority favour Calcutta.

156. To sum up then, the Committee by a majority favour the location of the Director General of Stores, and his headquarters staff, at Calcutta; but some of the members think Cawnpore preferable.

Provincial Agents.

157. It is evident from the indication already given of the work to be done, that the Indian Stores Department must be adequately represented by agents at the principal provincial headquarters, and at trade centres. It will be remembered that the Indian Industrial Com-

mission, who, however, did not examine the matter in detail, inclined (*vide* paragraphs 196-197 of their report) to the opinion that, for such services as they anticipated a Central Stores Department would require in the provinces, use should be made of the personnel of the several provincial Directorates of Industries. This is a question which we have had the advantage of discussing fully at a recent conference of the several Directors, and representatives of local Governments, with the Board of Industries and Munitions. The conclusion arrived at was that it would be impracticable for the Directors of Industries themselves, or their staff, to act as local representatives of the Stores Department, and that special local agents should be appointed. These would be subordinate to the Director General of Stores, but we are assured that they could rely on receiving the fullest measure of assistance and co-operation from the Directors of Industries. This is essential, and will be of mutual advantage, as the Indian Stores Department will be the agency for introducing provincial products, when of suitable quality and price, to government departments, as well as for supplying provincial Governments with any requirements they wish to obtain through it; while the Indian Stores Department must always look to the Directors of Industries for advice, as to local sources of supply and for co-operation in facilitating their utilisation and development. We anticipate that the provincial agents will be in such intimate touch with the Directors of Industries, and other officials of the local Governments, that they will be in a most favourable position to give effect to the wishes of the provincial authorities as to the steps to be taken in dealing with their demands. At the outset, we consider that provincial agents will be necessary at Calcutta, Bombay, Madras, Rangoon, Cawnpore and Lahore; at Karachi probably a branch of the Lahore agency would suffice.

Inspection Depots.

158. Reference is invited to the observations made in Chapter IX regarding the extent to which inspection of stores is necessary; the provision of inspection depots; and assistance to be obtained from liaison officers in dealing with Army requirements.

D—Absorption of existing organisations.

Metallurgical Inspector and Superintendent of Local Manufactures.

159. There are already in existence two organisations which it will be convenient to incorporate in the Indian Stores Department, because the work they are doing will, in future, form part of the duties to be undertaken by it. These are the organisations of the Metallurgical Inspector at Jamshedpur, and of the Superintendent of Local Manufactures and Test House at Calcutta. The Metallurgical Inspector is responsible for the examination and passing of all products of the Tata Iron and Steel Works bought for government use, and the services of his staff are also at the disposal of railway companies and other public and private bodies, who wish to take advantage of them, on payment of certain fees. With the extension of existing iron and steel works and the establishment of new undertakings now in progress it seems probable that the Inspector's establishment will need expansion. The Superintendent of Local Manufactures at Calcutta controls the Test House at Alipore which is equipped for the chemical

and physical tests of practically all classes of stores and materials. He is also the head of the inspection of local manufactures which includes the examination, during manufacture by local firms, of structural and engineering stores for railways and other government departments. The Test House at Alipore is an important institution and affords at least the nucleus for an organisation with the same objects but with the enlarged sphere of operations which will be necessary under our other proposals.

Mining Engineer and Controller of Stationery.

160. We do not recommend the absorption in the Indian Stores Department of the existing organisations of the Mining Engineer to the Railway Board, nor, for the present, of the Controller of Printing, Stationery and Stamps; as, though their functions are similar to those of the new department, their spheres are well defined and self-contained. We consider, however, that there is much force in the observations recorded by Mr. Cogswell, Controller of Printing, Stationery and Stamps, in his note (Appendix F), in favour of merging the existing stationery offices in Madras and Bombay, together with any others that may be established in other provinces, in the central stationery department; and we commend Mr. Cogswell's note to the consideration of Government.

Ordnance inspection staff.

161. We also invite attention to the suggestions made in Chapter IX, paragraph 120, regarding the absorption of some of the inspection staff employed at present under the Director General of Ordnance in India.

E—Details of organisation—Initial stage.

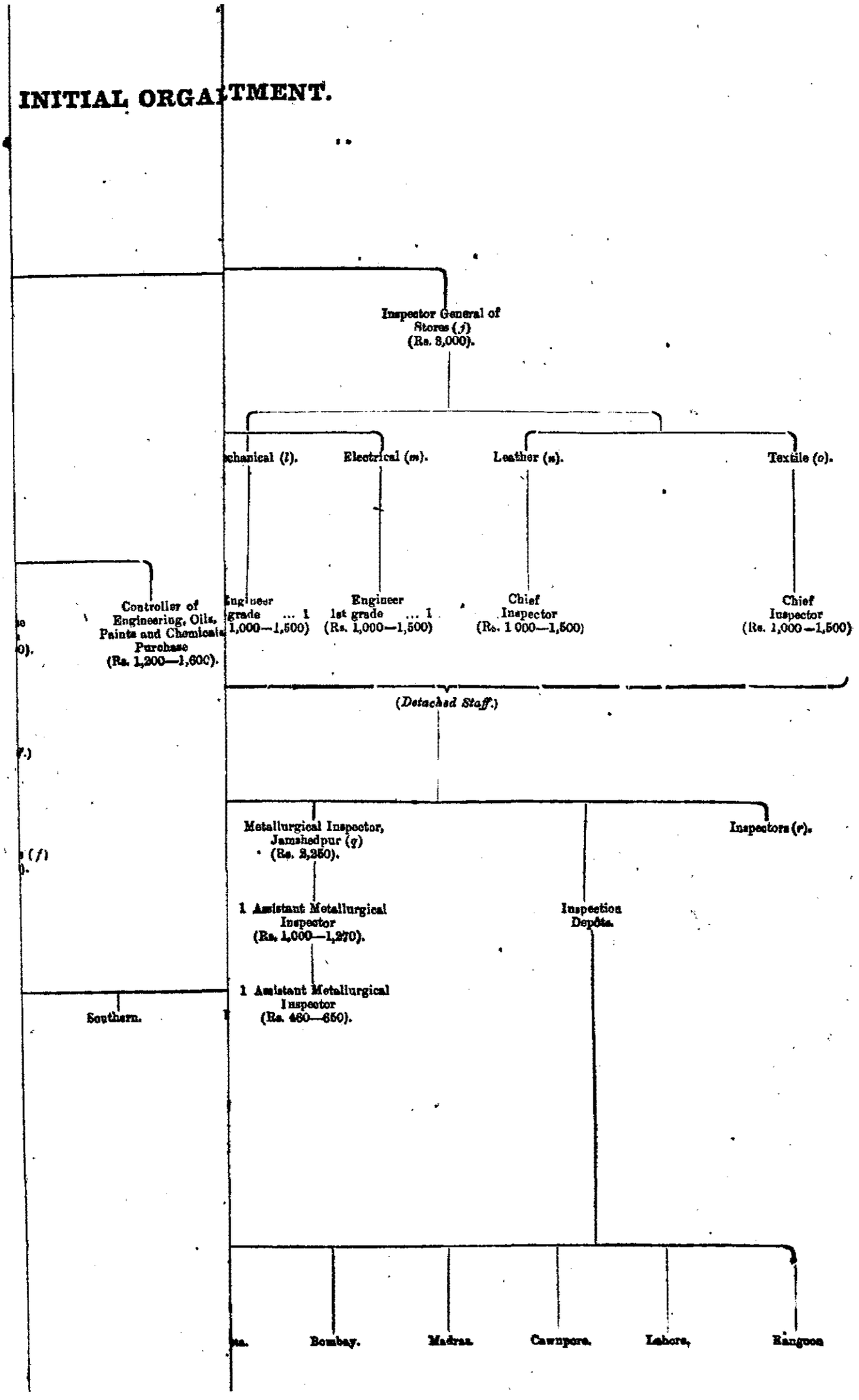
Diagram.

162. The form of the organisation described in the preceding sections is shewn in a diagram on the page opposite. For particulars of the professional and other qualifications desirable in, and the methods of recruitment proposed for, the various members of the staff, the reader is referred to Chapter XIV. The reference letters, entered in brackets in various parts of the diagram, refer to the following explanations. Figures are entered in the diagram to indicate the salaries which we consider appropriate for the superior appointments, in order to indicate more clearly the nature of the organisation proposed, but it is impracticable to work out reliable estimates of cost in detail, and for further particulars of probable cost, including that of the subordinate staff and contingencies, we refer to the comprehensive estimate given in Chapter XVI.

Director General of Stores. (a)

163. The department will be in charge of one high official at headquarters, the *Director General of Stores*, who will be directly responsible to the Government of India in the Department of Industries. The post is a very important one, the holder of which will exercise wide powers, and for it we consider that a lower salary than Rs. 3,500 per mensem would be unsuitable. His duties will comprise the general supervision of the whole of the work dealt with in the department, both in regard to purchase and inspection, and he will be responsible for ensuring that it is efficiently carried out in accordance with the approved policy of the Government of India.

INITIAL ORGA[illegible]TMENT.



Director of Intelligence and Contracts. (b)

164. *The Intelligence and Purchase Branches* at headquarters will both be in charge of the *Director of Intelligence and Contracts*, an officer for whom we propose a salary of Rs. 2,000—2,500, and who will be vested by the Director General of Stores with general responsibility for the efficient working of the entire purchase side of the organisation, together with the arrangements for publicity and intelligence. The branch for the latter should include a special section, which would be in touch with the military authorities with a view to perfecting, during peace, any arrangements necessary to meet the needs of any eventualities likely to arise. The Director will also be responsible for supervising the work of the provincial agents in respect of purchase and intelligence.

Controller of Provincial Agents and Intelligence.

165. Working directly under the Director of Intelligence and Contracts will be a *Controller of Provincial Agents and Intelligence*, an officer on a salary of Rs. 1,750—2,000 with an office divided into the following sections :—

Publicity, the functions of which will be to publish quarterly a bulletin showing value and quantity of individual classes of stores ordered, or obtained, from other than indigenous sources of manufacture. (This bulletin should be sold to the public at a price which will defray cost of paper, printing and postage).

Home prices, which will maintain records of current prices of imported stores for the information of purchasing officers to enable comparisons to be made with local quotations. This section will also furnish all necessary information in respect of steamer and railway freights.

These important sections will be in the immediate charge of a *Superintendent of Statistics*, a capable official of subordinate rank, on a salary of Rs. 400—600.

Provincial Agents. (d)

166. The several *Provincial Agents*, whose functions are described in paragraph 157 and for whom we consider salaries of Rs. 1,200—1,600 will be suitable, will be stationed at Calcutta, Bombay, Madras, Rangoon, Cawnpore and Lahore; while at Karachi there would be, if required, an *Assistant Provincial Agent*, on Rs. 800—1,000, subordinate to the Provincial Agent at Lahore. The Provincial Agents will ordinarily correspond on all general matters with, and will receive their instructions from, the Controller of Provincial Agents and Intelligence at headquarters, to whom they will be directly subordinate. In special cases, however, they may also correspond direct with the specialised controllers of purchase at headquarters; this would usually be done when they are called upon to make enquiries, or have suggestions to offer, regarding matters peculiar to those purchasing officers. They will be in administrative and disciplinary charge of the local inspection depôts, and be responsible for the despatch from those depôts of all goods consigned to indentors. It will be noticed that the Indian Stores Department is not represented by provincial agents in the Central Provinces, Bihar and Orissa, and Assam.

Until such time as these provinces are sufficiently developed, from an industrial and commercial point of view, to render necessary the appointment of provincial agents, we would suggest that they should make their purchases, when desired, through the most convenient Provincial Agent, and that their Directors of Industries should correspond direct with the Director General of Stores with reference to questions of industrial intelligence.

Controllers of Purchase. (e)

167. The specialised purchasing branches at headquarters will be constituted as self-contained units in charge of responsible officers: these being the *Controller of Leather and Textile Purchase* on a salary of Rs. 1,200—1,600, the *Controller of Timber Purchase and Inspection* on Rs. 1,400—1,800, and the *Controller of Engineering, Oils, Paints and Chemicals Purchase* on Rs. 1,200—1,600. Each of these officers will be directly responsible to the Director of Intelligence and Contracts. Their operations will be conducted from headquarters and, with the exception noted under head (*f*) below, they will have no provincial representatives though they will utilise the several provincial agents as their local representatives in special cases. They will adopt a procedure, similar to that in force in the India Office Store Department, for splitting up demands into suitable orders, attaching specifications, and calling for tenders. They will watch the progress of contracts, and conduct all miscellaneous correspondence connected with the disposal of particular orders, other than those relating to technical points which can be dealt with direct in certain cases by the Inspection Branch. They will maintain lists of approved contractors, and all records that may be required for future guidance as to the reliability of particular firms. The Controllers of Purchase will also scrutinise duplicates of such Home indents as, under the established procedure, will be sent direct to London by indentors, and will take up with the officers concerned demands unnecessarily sent to the London Branch which either require cancellation, goods of local origin being substituted, or call for a caution to the indenting officers that similar demands should not be repeated.

Conditions peculiar to timber purchase.

168. *The Controller of Timber Purchase and Inspection* to whom, with other purchasing controllers, the preceding remarks apply so far as regards the arrangements at headquarters, will occupy a somewhat different position, in that he will also be responsible for inspection, on which account we have recommended an increased salary. This difference in organisation is occasioned by the special nature of the material in question, as it is difficult, or impossible, adequately to define by specification the quality of timber required; and timber, which may conform to a written specification, may vary widely in quality. Timber, moreover, may frequently be chosen in the log. Notwithstanding the admitted objection to combining purchase and inspection in one individual, we consider it desirable in respect of timber to entrust both these duties to one officer. The duties of this Controller will include the purchase of sleepers for Indian railways. This matter is dealt with at present under an agreement between the principal railway administrations, whereby the railway which

is most conveniently situated in respect of particular sources of supply, buys sleepers from that source for others as well as for itself; thus the North Western Railway makes all purchases of deodar sleepers in Northern India. This arrangement is said to work fairly well but we think that it will be better to include these operations in the functions of the Indian Stores Department, mainly with a view of achieving the important object of increasing the total supply of sleepers. The purchase of Burma teak for miscellaneous purposes is not at present properly organised, and we anticipate decided advantages, to the departments concerned, from the introduction of a convenient system which will free them from dependence on casual purchase and inspection.

Assistant Controller of Timber Purchase and Inspection. (f)

169. To enable the Controller of Timber Purchase and Inspection to carry on his work he must be represented by expert assistants in the principal timber supplying districts; we, therefore, provide for the appointment of four *Assistant Controllers of Timber Purchase and Inspection*, each on a salary of Rs. 800—1,000. These will be stationed in Burma and in the principal timber growing districts of the Northern, Central and Southern parts of India.

Assistant Director-General of Stores. (g)

170. *The Assistant Director-General of Stores* will be an official, on a salary of Rs. 1,000—1,250, directly responsible to the Director General for the working of the general office at headquarters, and in intimate touch with the finance officer in charge of audit and accounts. He will relieve the Director General of all routine work connected with the general administration of the department, and will act as a correlating agent, on behalf of the Director General, in dealing with business affecting more than one branch. He must, however, be regarded strictly as an assistant, and not as a deputy, and no orders of importance will be issued by him on his own authority.

General office. (h)

171. *The General office*, under the Assistant Director General, will be divided into three sections :—

The Indents Section.

The Correspondence Section.

The Establishment Section.

The Indents Section will be responsible for the initial receipt of indents; for splitting them up into separate portions, when they relate to the work of different purchase branches; and for distributing the demands to the proper Controllers of Purchase. Duplicates of indents, which have been sent direct to the United Kingdom, will also be received in this section, and will similarly be transmitted to the Controllers of Purchase, who ordinarily deal with goods of the classes included in the indents, for the purpose of scrutiny and appropriate action.

The Correspondence Section will deal with all correspondence conducted in the name of the Director General, which cannot appropriately be dealt with by any of the specialised officers.

The Establishment Section will be responsible for all matters affecting the personnel of the entire department, and will maintain such personal records of indivi-

duals as are necessary. All appointments, leave, promotion and similar matters will be administered in this section.

Accounts Section. (i)

172. *The Accounts Section*, in charge of an officer of the Finance Department, will deal with all audit and accounts matters immediately concerning the Indian Stores Department. It will receive and pay bills, and will raise debits against the various departments to which services are rendered. For a fuller account of the duties of this section reference may be made to Chapter XV.

The Inspector General of Stores. (j)

173. *The Inspector General of Stores*, on a salary of Rs. 3,000, will be the most important member of the staff under the Director General. The *Inspection Branch*, for the control of which he will be responsible to the Director General, will consist of two divisions, the headquarters and the detached staff. It is explained in paragraph 198, Chapter XIV, that the qualifications for, and the functions of, this post will differ somewhat in the initial and in the ultimate stage of organisation. In the initial stage, with which we are here concerned, he will be in personal charge of the three engineering sections of the headquarters office, described under heads (*k*), (*l*) and (*m*) below, as well as being in administrative charge of the remainder of the inspection staff.

Structural and Railway Section. (k)

174. *The Structural and Railway Section* will be directly controlled, as stated above, by the Inspector General who will need the assistance of two *Engineers*, one 1st and one 2nd grade on Rs. 1,000—1,500 and Rs. 800—1,000 respectively. Where necessary this section will advise on technical points, and will draw up, or assist in the preparation of, specifications of all classes of structural and railway work, and also furnish designs and drawings to enable the purchase branch to call for tenders. After contracts have been placed, it will, through its detached staff in the different places of manufacture, be responsible for carrying out inspection in accordance with the approved specifications and terms of contract. It will also undertake the inspection of structural and railway work, the contracts for which have been placed by the consuming departments themselves.

Mechanical Section. (l)

175. *The Mechanical Section* will similarly be in the personal charge of the Inspector General, who will be assisted by one *Engineer*, 1st grade, on Rs. 1,000—1,500. The functions of this section will be generally similar to those described under head (*k*), but will relate to all mechanical stores, machinery and plant, dealt with by the Department.

Electrical Section. (m)

176. *The Electrical Section* will also be in charge of the Inspector General, who will be assisted by one *Engineer*, 1st grade, on Rs. 1,000—1,500. Its functions will be similar to those of the Mechanical Section, but in respect of electrical stores and equipment.

Leather Section. (n)

177. *The Leather Section* will be in the immediate charge of a *Chief Inspector*, on a salary of Rs. 1,000—1,500, who will be directly responsible to the Inspector General, and will give advice, where desired by purchasing departments, and will draw up specifications for all leather articles and those of an allied nature. He will

also be responsible, through his detached staff of inspectors, for the inspection of all stores falling under this head, and that these comply with specifications and terms of contract before acceptance by indenting departments.

Textile Section. (o)

178. *The Textile Section* will be in charge of a *Chief Inspector* on Rs. 1,000—1,500 whose relations to the Inspector General and duties will be similar to those of the Chief Inspector of Leather; he will deal with all textile materials and goods of an allied nature.

Superintendent of Test Houses. (p)

179. *The Superintendent of Test Houses*, on a salary of Rs. 1,500—2,000, will be in general charge of the test houses. One already exists in Calcutta (Alipore) and we propose that another should be established in Bombay. He will be responsible for all analytical and physical tests required by the inspection staff, and for all chemical analysis carried out in test houses, *i.e.*, that of oils, soaps, etc. He will be directly responsible to the Inspector General of Stores, and will work in close collaboration with the superior officers of the inspection staff in all matters appertaining to current work. He will have no control over members of the inspection staff apart from those employed in the test houses.

Metallurgical Inspector. (q)

180. *The Metallurgical Inspector*, whom we consider should be paid at a fixed salary of Rs. 2,250 instead of as at present a salary of Rs. 1,750 *plus* a share of certain fees limited to a maximum of Rs. 500, will, with his staff, remain for the present at Jamshedpur at the works of Messrs. the Tata Iron and Steel Company. He will be the technical adviser of the Director General of Stores in all questions relating to the metallurgy and specifications of iron and steel; and will continue to be responsible for ensuring that all materials manufactured by the above-named company on behalf of government departments, and by any other companies which may hereafter undertake the manufacture of iron and steel, are in every way up to the prescribed specifications.

Detached Inspection Staff. (r)

181. *The Detached Inspection Staff* will be located in the different industrial centres according to requirements. In Calcutta and the neighbourhood the majority of the inspectors will be required for the inspection of engineering manufactures and stores, whereas in Bombay they will mostly be engaged on the inspection of textiles, leather and similar goods. Where inspection depôts are established, and where the work warrants it, a permanent staff of inspectors will be necessary in these depôts. In large manufacturing centres a permanent staff of inspectors will also be required to carry out inspection during course of manufacture at makers' works. Occasions will, however, arise in which it is inconvenient, or uneconomical, to send stores for inspection to places where inspectors are normally employed, and when it will be desirable to inspect at outlying places of manufacture or at the store depot, an arsenal for instance, of one of the consuming departments. In such cases, it should usually be arranged to depute a member of the inspection staff from a neighbouring centre to carry out the work; since it may not always be feasible to spare the services of one of the ordinary staff for the purpose, we contemplate that it

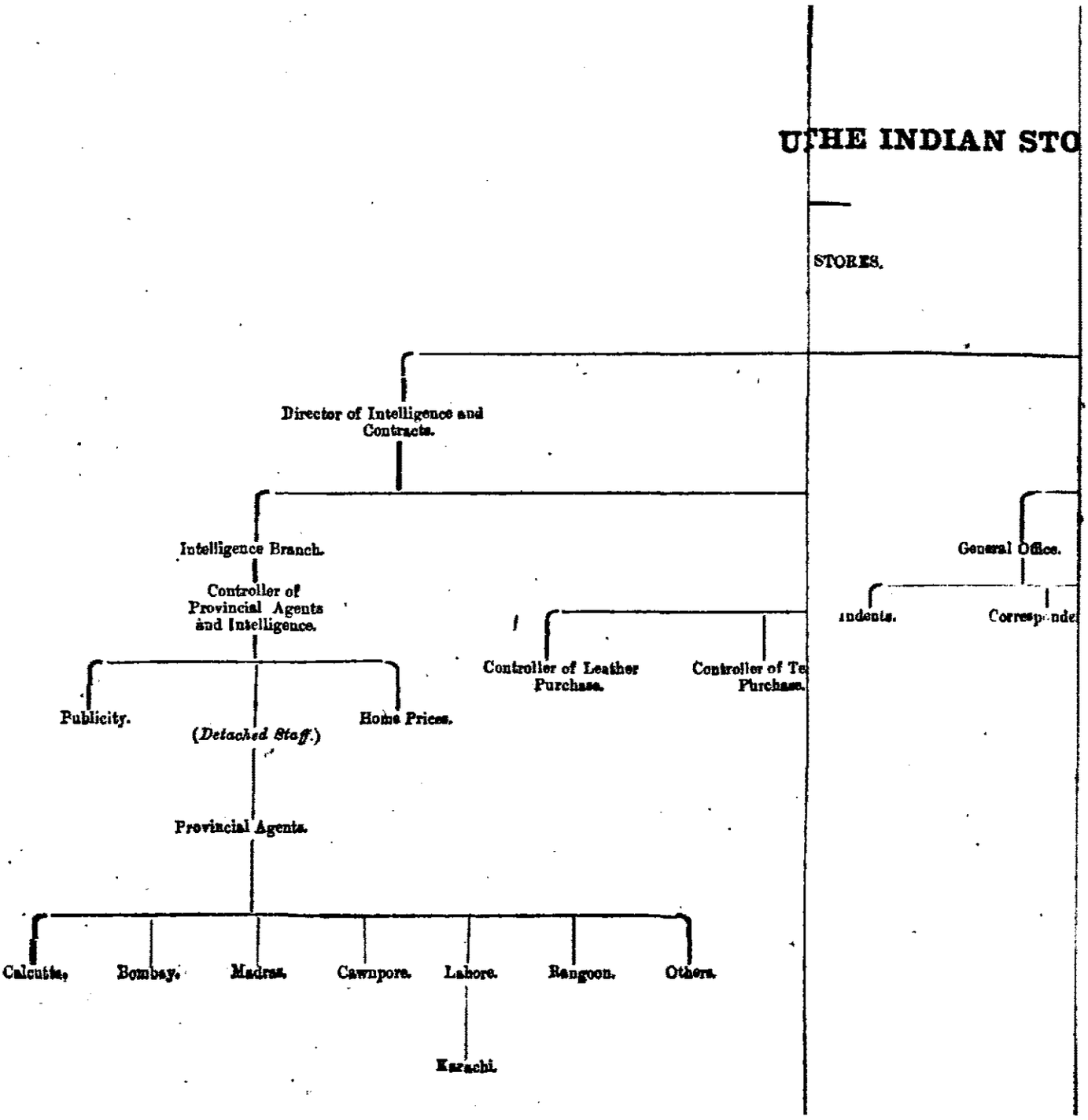
will be found necessary to supplement the stationary inspection staff by the employment of a number of travelling inspectors, whose duty it will be to visit depôts or factories in outlying districts as circumstances require. An estimate of the numbers and cost of the inspection staff initially necessary at the various centres, on a scale sufficiently ample to allow for travelling inspectors, is given in the following statement :—

		Rs.	
Calcutta—			
1 Engineer, with :—	1st grade	1,000—1,500	Engineering and Hardware.
1 Examiner,	1st grade	700—900	
3 Examiners,	2nd grade	550—650	
1 Examiner, for castings	2nd grade	550—650	
1 Assistant Chief Inspector with :—		800—1,000	Textiles.
1 Examiner,	2nd grade	550—650	Textiles.
1 Examiner,	2nd grade	550—650	Miscellaneous.
Madras—			
1 Assistant Chief Inspector with :—		800—1,000	Textiles and Miscellaneous
1 Examiner,	2nd grade	550—600	Leather
Bombay—			
1 Engineer, with :—	1st grade	1,000—1,500	Engineering and Hardware.
1 Examiner,	1st grade	700—900	
1 Examiner,	2nd grade	550—650	
1 Assistant Chief Inspector with :—		800—1,000	Textiles.
2 Examiners,	2nd grade	550—650	Textiles.
1 Examiner,	2nd grade	550—650	Leather.
1 Examiner,	2nd grade	550—650	Miscellaneous.
Cawnpore—			
1 Assistant Chief Inspector with :—		800—1,000	Textiles and Leather and Miscellaneous.
1 Examiner,	1st grade	700—900	Leather
2 Examiners,	2nd grade	550—650	Textiles
Lahore—			
1 Assistant Chief Inspector with :—		800—1,000	Textiles and Leather and Miscellaneous.
1 Examiner,	2nd grade	550—650	Textiles
1 Examiner,	2nd grade	550—650	Leather
Rangoon—			
1 Examiner,	2nd grade	550—650	Miscellaneous.

F—Development of organisation—Ultimate stage.

Future expansion. (s)

182. The organisation described above should, in our opinion, be adequate to undertake the work likely to fall to the lot of the Indian Stores Department in the earlier stages of its existence. It is based on a consideration, both of the volume of work anticipated and of the fact that, whatever the volume of work, there is an irreducible minimum in the numbers and composition of the staff necessary. The latter is an


THE INDIAN STO
STORES.
Director of Intelligence and Contracts.
Intelligence Branch.
Controller of Provincial Agents and Intelligence.
Publicity.
(Detached Staff.)
Home Prices.
Provincial Agents.
Calcutta.
Bombay.
Madras.
Cawnpore.
Lahore.
Rangoon.
Others.
Karachi.
Controller of Leather Purchase.
Controller of Te Purchase.
General Office.
ndents.
Corresp nde

important consideration as the case is affected by so many indeterminate factors, such as the uncertainty as to how far local Governments and company-worked railways will make use of the department, and the impossibility of forecasting the extent of requirements after the war. When so many conditions differ from those prevailing in the past, a reliable quantitative estimate of the work to be provided for is impossible, but it is obvious that, if it is decided to undertake any particular kind of work, for instance the inspection of textiles, this, in itself, sets a minimum limit to the staff required, as at least one expert in this particular line will be necessary. This has been the governing factor in determining the form of our proposals. If the department fulfils expectations, it seems certain that the demands made upon it must increase and its operations expand. The extent of such expansion, and the point at which it will involve a corresponding increase of establishment in the various branches, must be left to the test of time; but we think that it can be forecasted, at least in part, and, in another diagram, (on the preceding page), we show the form that we anticipate the expanded department will ultimately assume.

Increase in staff.

183. It will be seen that, in our opinion, both the purchase and inspection branches will ultimately have to be enlarged, and we believe the principal increases found necessary will be as follows:—

On the purchase side.—Instead of one Controller for leather and textile purchase, it will probably be necessary to appoint a separate Controller for each; similarly for engineering, oils, paints and chemicals it will be necessary to appoint one Controller for engineering stores, and another for oils, paints and chemicals. Additional provincial agents will also be required, both for the convenience of local Governments, and to strengthen the Indian Stores Department.

On the inspection side.—We anticipate that the increasing volume of administrative work imposed upon the Inspector General, and the growing importance of the three sections concerned, will alike render it impossible for this officer to exercise any further, direct executive control over the structural and railway, the mechanical and the electrical branches, each of which will require the undivided attention of a highly qualified engineer. We have indeed entertained some doubt as to whether we should not provide this staff from the outset, but we have decided in favour of the less expensive arrangement, indicated in the preceding section (*E*), which we think should be able to meet initial requirements.

CHAPTER XIII.

PROCEDURE.

Difficulties to be contended with.

184. Before describing the procedure for the submission of indents by consuming officers, and their disposal by the Indian Stores Department, it is necessary to allude briefly to some of the difficulties which are likely to attend the initiation of the department. Judging from recent indents which have been examined, purchase will have to be arranged by the Indian Stores Department from the beginning for many hundreds of items, most of the requirements being notified in the annual indents of the departments concerned. In addition, all departments will submit supplementary indents at irregular intervals for unforseen or abnormal requirements while the Military Works Services and the Public Works Department, on account of the nature of their work, are likely to submit indents at any time. No agency could undertake the work of provision with any prospect of success, until it is in possession of certain data regarding sources of supply, capacity of contractors, previous rates and so on. It will be seen from Chapter IV that the annual indents for any year are prepared in the previous year; those for Home Supply are generally completed by the autumn, the contracts for Local Supply stores being usually settled later in the year. Assuming the Indian Stores Department to come into being at the beginning of a financial year, *i.e.*, from 1st April, it would not be called upon to scrutinze the Home Supply indents until the autumn, and to take up contract work in connection with Local Supply stores until later; while, in the absence of the necessary data referred to above, it would be totally unequipped at first to undertake purchase on indents of the current year.

Necessity for time to organise.

185. We cannot too strongly emphasize the necessity for allowing the new department sufficient time to organise before requiring it to commence the actual work of provision of stores. Most of the witnesses who appeared before us recognised the advantages of a central purchasing agency, but not a few considered that the departments, notably railways, expected to make use of it, were themselves large enough to secure these advantages, and many considered that an agency destined to deal with so many departments could not fail to be unwieldy. This opinion was based on their experience of the Indian Munitions Board. There is no doubt that, among many who were supplied with stores by the Indian Munitions Board, a strong feeling of disappointment exists. They have failed to appreciate the size of the task set the Board, and the great handicap under which it worked from the outset in the matter of lack of personnel, especially of trained inspectors, and in the abnormal market conditions occasioned by the war; nor have they any means of knowing how great was the result achieved. The points that bulk large in their view are the individual instances of failure known to them, both as regards purchase and inspection, and, in ignorance of how small that percentage of failure actually was, they are inclined to predict similar failure on the part of any department that takes up work of a corresponding nature. From

the returns studied and the figures recorded in Appendix D, we fully appreciate this task, and we have been advised by competent witnesses of the difficulty to be expected, even under peace conditions, in recruiting men of the requisite stamp. As explained in Chapter XIV on the subject of recruitment, we anticipate that some departments, which are to deal with the Indian Stores Department, will make available staff and data connected with purchase and inspection. Time must be taken in co-ordinating data from several sources, in welding such staff as can be obtained into a first class working machine, and in arranging for office and depôt accommodation. We anticipate that some eight or nine months must elapse from the date of its inauguration before the Indian Stores Department will be ready to take up the actual provision of stores. As regards inspection, the need for time in which to organise is, in some respects, equally essential. At present the Army alone possesses a separate inspection branch ; other departments utilise for this purpose experts whose main duties lie in other directions. There are, however, exceptions in regard to articles manufactured in Bengal, which are inspected by the Superintendent of Local Manufactures, Alipore, and in the products of the steel works at Jamshedpur, which are inspected by the Metallurgical Inspector at that place. It will be necessary for the Indian Stores Department to recruit, and train, its inspection establishment, a matter which will require time.

Procedure of Indenting Departments.

Preparation and submission of indents.

186. The method of calculating annual and periodical requirements will remain as at present, unless altered for reasons of their own, in all branches and departments which will look in future to the Indian Stores Department for the provision of their stores. Indents will continue to be prepared in printed lists, where such are already in use, under the three headings of supply, Home ; Local ; Government Factory or Departmental Central Workshop. Departments not at present using such lists will continue their present procedure but from paragraph 191 below it will be seen that it is contemplated that ultimately all departments should be provided with such lists. At first, at least, the dates for submission of indents will be those at present laid down ; experience may show the need for alteration when indents from many departments have to be co-ordinated in one office. The advisability of purchasing when the market is favourable has been emphasised ; this refers specially to items connected with seasonal crops, *e.g.*, jute, cotton, etc., and at times to other commodities. Purchasing officers may be expert in this from the beginning; in any case they will become so with experience, and can then arrange for any alteration of date of submission of indents which may be necessary.

Home Supply and Factory indents.

187. In the case of Home Supply indents, both annual and supplementary, beyond the submission of duplicate copies to the Director General of Stores, India, there will, to begin with, be no change in the existing procedure. The indents, after check, compilation, and printing in a headquarters office, or, when this is not the existing procedure after preparation in the authorised

form in the local office, will be submitted direct to the London Branch, duplicate copies being sent at the same time to the Director General of Stores, India, for scrutiny. This scrutiny is intended to detect any entry in a Home Supply indent of articles which can be purchased in India of suitable quality and at a favourable price. In some instances it may be possible to suspend by cablegram the supply of such stores, but, as a rule, it will be preferable to let the demand stand, and to point out to the indenting officer that the article can be obtained in India, and should be so obtained on future occasions. By adopting this course all possibility of inconvenience will be obviated; but the Director General of Stores, India, will, in any case, advise indenting departments of stores, which, in future indents, must be transferred from the Home Supply to the Local Supply category. Similar procedure would be adopted as regards annual and supplementary indents on Government factories and dockyards, and departmental and railway central workshops. In these cases also the object is the same, namely to divert to private firms work orders which are within their scope at reasonable rates. Duplicates of indents for lethal weapons and ammunition, whether on the London Branch, or on government factories in India, need not be submitted to the Director General of Stores, India.

Local Supply stores.

188. For Local Supply stores the procedure will differ depending upon the nature of the stores. Stores coming under the following heads:—

(*i*) textiles and miscellaneous stores allied to textile manufactures;

(*ii*) leather and miscellaneous stores allied to leather manufactures;

(*iii*) cement, oils, paints, varnishes and chemicals, and stores allied to these;

(*iv*) timber in the log or in scantling, sleepers and all miscellaneous stores the basis of which is timber;

will be included in the Local Supply indent to be preferred on the Indian Stores Department, and this will be submitted direct by the indenting officer, or through the head of the department, according to existing practice. For plant and machinery, including electrical material, for all iron and steel structural work, railway material and appliances, and for miscellaneous allied stores not included under the sub-heads above, we consider that the technical officers of the Railways, Military Works Services, Public Works Department, Ordnance Factories, Government Dockyards and Telegraph Department have sufficient expert knowledge and experience to enable them to carry out, or supervise, their own purchases, subject to such scrutiny of the transactions by the Director General of Stores as he considers necessary. The demands of each indenting officer under these heads usually differ, and orders cannot be bulked; no advantage would, as a rule, be obtained by the submission of indents of this nature to a central authority. The procedure recommended is that the indenting officer should issue specifications, call for tenders, and

exercise his judgment in placing the contract. The powers of purchase of officers in this respect are, in the case of structural work, machinery, etc., manufactured in India, limited only by their powers of acceptance of contracts, and in the case of imported machinery, etc., the limits of purchase are those recommended by us in Rule IX of the revised Stores Rules given in Chapter XI. A copy of the specification, and a request to inspect, should be sent to the inspecting officer of the locality where the stores are being procured. The purchasing officer should furnish the Director General of Stores monthly with lists of articles exceeding Rs. 5,000 in value, purchased under this head, showing the price paid, and the firms from which obtained.

Annual and Supplementary demands.

189. When care and intelligence are displayed in the preparation of the annual demand, the number of items in supplementary demands do not, as a rule, exceed ten per cent of those in the annual demand. This refers to the Army, Railways, and other departments, whose requirements are recurring and can be foreseen. The Military Works Services and the Public Works Department, are frequently called upon, without notice, to undertake new work, and supplementary demands must be expected from them at any period of the year. The amounts of stores to be purchased on the annual indents will be very large, and for these running contracts will be the rule. These running contracts will frequently, we believe, provide also the means of purchase of items required on supplementary demands, including those of the Military Works Services and Public Works Department. It will be convenient therefore to keep indenting officers of all departments advised of all running contracts likely to be of use to them, irrespective of whether these officers have demanded any of the stores in question. Annual requirements of Local Supply stores, of the descriptions enumerated in heads (*i*) to (*iv*) in paragraph 188 for all departments, and of all kinds for the Army, other than for Ordnance Factories and for the Military Works Services, will be notified to the Indian Stores Department in an Annual Indent. However small those of any one department may be, the advantage of bulk supply will probably be secured by co-ordination with the requirements of other departments. When in practice this is found not to be the case, indenting officers will be instructed to purchase petty requirements locally. In the case of supplementary requirements, the action of the indenting officers will depend on whether a running contract exists or not for the stores in question. If one exists, he need only apply to the firm concerned for the additional amounts required by him, sending to the Controller of Purchase concerned a copy of his request. In the absence of a running contract, he will, if the amount involved is within his financial powers, arrange purchase himself; if beyond his powers, he will submit a supplementary demand to the Indian Stores Department. Every indent, whether for Home, Local or Government Factory and Central Workshop Supply, should be accompanied by a programme for supply and an estimate of the cost involved. We have not considered what the procedure within a department should be, whereby an administrative officer will be kept acquainted by his executive officers

of indents preferred by them on the Indian Stores Department; conditions vary, and it is best left to departments to detail their own procedure.

Procedure in the Indian Stores Department.

Receipt of indents.

190. Indents, whether for actual purchase or for scrutiny only, will, on receipt, be dealt with first in the Indents Section of the General Branch. It will be the duty of this section to watch the receipt of indents, to ensure the arrival of annual indents by due date, and to see that all indents are in correct form, so that the work of scrutinising, abstracting, etc., may proceed without delay. This section will be responsible for all action required on indents up to the stage at which they are handed over to the Purchase Branch.

Elimination of items.

191. Duplicate indents of Home, Government Factory, or Central Workshop Supply will be similarly dealt with in the Purchase Branch; that is a careful scrutiny will be made of the items to ascertain whether any of the articles can preferably be produced in India, either by manufacture or by local purchase. For the first year at least, before the Purchase Branch is in possession of up-to-date figures, it will be advisable to allow any such items to remain in the Home or Government Factory indent, but to communicate with the indenting officer concerned, to prevent similar entries in subsequent indents. When the Intelligence Branch is fully organised, and the printed lists of Home Supply, Local Supply, and Government Factory or departmental Central Workshop stores are up-to-date for all departments, there should be few instances of articles being demanded from other sources which can be procured in the Indian market. Throughout the year Directors of Industries will be in touch with the Director General of Stores, usually through the provincial agents, advising him of new products locally manufactured; whenever possible, the Director General of Stores will place trial orders for such products. On the results of the reports of the inspection staff and of consuming departments will depend whether such items are transferred from the Home Supply, or Government Factory or Central Workshop Supply lists to the Local Supply list. From the bulletins and other information published from time to time, branches, agents of firms, and merchants will become familiar with government requirements, and will, no doubt, make enquiries with a view to tendering at rates lower than those quoted by the London Branch; and it may be anticipated that this also will lead, from time to time, to the amplification of the Local Supply list.

Preparation of draft orders.

192. In the case of Local Supply indents, the first duty, after receipt by the Indent Section, will be to abstract the items into forms suitable for distribution to the several sections of the Purchase Branch. We would here invite attention to the procedure in force in the office of the Director General of Stores, India Office, detailed in Appendix E, which we recommend for adoption in India to the extent suitable. The forms when ready will be passed to the respective Controllers of Purchase who, in considering tenders, will be guided by the programmes and estimates submitted with the indents; when these cannot be complied with, the indenting officers will be consulted and arrangements made which suit them best.

Invitations to tender.

193. Controllers of Purchase will usually call for tenders only from suitable firms; a list of these will be maintained in each branch, and will be supplemented from time to time according to information received from the Intelligence Branch as to the capabilities of firms entering the field of supply. Invitations to tender will be accompanied by references to specifications, patterns, etc., as is the custom with the Store Department, India Office (see Appendix E, paragraph 3). It will not be necessary or desirable, as a general rule, to call for public tenders owing to the fact that the provincial Directors of Industries, through the Intelligence Branch, will ensure that all capable firms are on the list of approved contractors. The responsibility for acceptance of tenders will rest with the Director General of Stores, who will delegate his authority to such extent as he may consider desirable. On acceptance of tenders, the Controllers of Purchase will notify indenting officers. Whenever the Director General of Stores is unable to arrange for the provision from indigenous sources of supply of the entire amount of any stores under heads (*i*) to (*iv*) in paragraph 188 he will arrange for the purchase of the balance through the London Branch. It has been represented to us that, before Army contracts are placed in England, tenders are submitted to the consuming departments for acquiescence as to the tenderers recommended, and we have been urged to adopt this procedure in India; in this respect however conditions in India will differ. In the United Kingdom, inspection of miscellaneous stores is, we understand, under the control of the Director of Equipment and Ordnance Stores, and that officer is consequently able to report on the competency and reliability of contractors tendering; moreover, the officers concerned are in closer touch in England than is possible in India. In this country inspection will be under the Director General of Stores, India, and, as the bulk of the stores will pass direct from the workshops of firms, or through inspection depôts, to the consuming departments, the latter will have no knowledge of the contractors in question. In the event of a mistake being made by inspectors, the consuming departments will always be in a position to detect it, and bring it to the notice of the Director General of Stores, and this would appear to suffice in this respect. In cases of dispute as to any stores being fully up to specification or standard, and the manufacturer not accepting the decision of the inspector, appeal will be made to the Inspector General of Stores, whose decision will be final.

Watching contracts.

194. Notifications of all contracts made, specifications concerned, dates and places of delivery, with any details concerning inspection will be made to the Inspection Branch, which will arrange for such inspection as may be necessary, either during, or after, manufacture at the makers' works, at inspection depôts, or, when necessity demands, at the final place of delivery, *i.e.*, consumers' store depôt. The progress of supply on every contract made will be watched by the Controller of Purchase concerned, progress being marked up from certificates submitted by inspectors. Where the programme is being departed from, the Controller of Purchase will be responsible for taking action to expedite the supply, or to supplement it from other sources, so as to obviate inconvenience to the indenting officer.

CHAPTER XIV.

RECRUITMENT.

Conditions of service.

195. The establishment of the Indian Stores Department, detailed in the preceding chapter, may be divided for purposes of recruitment into two main categories :—

Administrative and Business ; and

Professional.

The latter may conveniently be sub-divided into :—

Engineering ; structural, mechanical and electrical ;

Chemical ;

Leather, Textiles and Miscellaneous.

We have, in our proposals, indicated two stages of development ; the smaller is the least which it appears desirable to adopt as the first working organisation, the larger is that which we think should eventually be worked up to. The expansion to the larger scheme must depend mainly on the result of experience gained, and we therefore confine our consideration at present to the initial scheme. We have to consider the qualifications required for the superior, and upper subordinate, establishments ; the sources from which the personnel can be most suitably recruited ; and the conditions of service, in each case. Once the department is fairly established it will generally be advisable, at least on the administrative side, to engage only junior men in each branch or grade, and to fill up vacancies by promotion. We anticipate that it will be possible, as the result of the developments of technical education, and the inauguration, of the Chemical, and Industrial, Services recommended by the Industrial Commission, eventually to obtain nearly all recruits in India, though how far it will be found practicable to affiliate the staff of the Indian Stores Department to these services, experience alone will show. At the present time we can only consider the department as a separate new self-contained organisation for which an entire staff has to be obtained, and it will be necessary to recruit from those employed in government departments, railways or elsewhere in India. It may, however, be found advisable at the commencement temporarily to borrow the services of certain officers from established departments, and it seems probable that some of the necessary staff might in the first instance be obtainable from the Board of Industries and Munitions, which at present employs a considerable establishment, on a temporary footing, in duties necessitating qualifications similar to those required by the members of the Indian Stores Department. As a general principle we consider both officers and subordinates should be engaged on a five years' agreement, under the usual conditions of government service including provident fund. On the termination of that period, they should, if satisfactory, be eligible for permanent re-engagement on a provident fund basis.

of India.

196. We recommend that, whenever suitable qualified men can be recruited in India, preference shall be given to statutory "natives of India", defined in

Section 6 of the Government of India Act, 1870 (33 Vict. Cap. 3) as including "any person born and domiciled within the Dominions of Her Majesty in India of parents habitually resident in India and not established there for temporary purposes only". By the term 'Indian' we include, therefore, not only inhabitants of India and Burma of unmixed Asiatic descent, but members of the Domiciled Community whether Europeans, or Anglo-Indians.

197. The administrative and business establishments may first be considered.

Qualifications—Administrative and Business.

The Director General of Stores should be an officer with wide Indian administrative and business experience, and also possess a general knowledge of stores, including plant and machinery, and business transactions connected therewith. He should be selected, or appointed, by the Secretary of State on the recommendation of the Government of India. The appointment should usually be for five years. Opinions differ as to whether a suitable commercial man could be obtained, or would remain in the post, at a salary acceptable by Government; if such a man can be found we would recommend that source of recruitment, otherwise we would suggest a man with experience similar to that of an Agent of a railway or of a Chief Engineer in the Public Works Department as suitable for the appointment.

The Director of Intelligence and Purchase should be an officer with qualifications differing but little from those of the Director General; he must, however, possess practical experience in making contracts. The most suitable man should be selected, and be appointed by the Government of India from whatever source he can be obtained. A man with wide commercial experience, gained either in a business undertaking or in one of the commercially-managed departments of Government, would, we consider, be suitable for this appointment.

The Assistant Director General of Stores will be in charge of the General Office, and should be an officer with sound practical experience in office routine, including a knowledge of stores transactions; we would suggest recruitment from an existing government department or from a railway.

Controllers of Purchase and Provincial Agents must be officers with general business experience and capacity and each should preferably possess some practical knowledge of the class of commodities with which he will have to deal; since, however, they will be assisted by the advice of technical experts of the inspection branch, specialised technical knowledge is not essential, as each will usually deal with several different classes of stores, knowledge of all of which would be usually impracticable; they should be selected from government departments, or from railways, or from commercial sources. *The Controller of Timber Purchase and Inspection* must have technical knowledge, and should preferably be recruited from the Imperial Forest Service. Men of considerable tact will be required for the posts of *Provincial Agents* as they

will have to act as liaison officers between local Governments and the Director General of Stores. *The Provincial Agent, Rangoon*, must, for the present, possess engineering qualifications, since he will not, at the outset, have the assistance of expert advice in this direction.

The Finance Officer will be appointed, and his duties, defined by the Finance Department in consultation with the Director General of Stores.

Qualifications—Professional.

198. In considering the qualifications required for the professional establishments, it is important to bear in mind that it will be the duty of the Indian Stores Department not only to meet requirements to the satisfaction of the consumers, but also to help and assist the development of Indian industries, especially in the much needed direction of raising the standard of manufacture and finish to that of articles made in Europe. The general policy of giving preference to statutory natives of India possessing suitable qualifications should be adhered to; but to attain the objects in view it will, we consider, be necessary at the commencement to introduce in this branch at least a proportion of men possessing practical knowledge and experience in the latest European practice, and we would suggest the desirability of obtaining some men from the inspection branch of the Store Department, India Office.

The Inspector General of Stores will be an officer whose qualifications in the initial scheme will differ somewhat from those that will be required eventually. As already stated, one of the main functions of the Indian Stores Department will be to raise standards of quality, and to give expert advice as regards specifications, designs and technical plant, thus to some extent fulfilling the functions of consulting engineers. To carry out these duties efficiently expert knowledge of the highest calibre is essential. In the fully developed scheme we have accordingly provided for three highly qualified expert engineers, namely, structural, mechanical and electrical, to advise and assist the Inspector General, who obviously cannot possess complete knowledge in all three branches. We anticipate, however, that the amount of work to be done in this direction will be comparatively small at first, and, though we consider the complete organisation should be adopted as early as possible, we have, in the initial scheme, omitted these three experts, mainly to keep down the initial cost. At the commencement therefore it is essential that the Inspector General should possess wide general engineering qualifications and experience: in the fully developed scheme he should possess high engineering qualifications combined with practical engineering and, if possible, Indian experience. The Inspector General's appointment should be for a period of five years.

Engineers, once the department is in working order, should be recruited on the principles advocated by the Industrial Commission, and their age on entering the department should not exceed 25 years. To commence with, staff for each of the three branches, structural, mechanical and electrical, must be recruited from whatever source suitable men can best be obtained; they should by preference possess a recognised diploma,

each in their own profession. We recommend advertising for candidates, and the creation of a Selection Board in India with an Indian member. If sufficient fully qualified men cannot be obtained by this means, the remainder should be selected by a Board in England.

Chief and Assistant Inspectors must have a thorough technical knowledge in their respective branches; appointments should be made from candidates who possess a first rate character and record. They should have passed, with credit, through a suitable course of training in India, or be students of Indian technical colleges, and have obtained a full diploma in their respective subjects. For the first staffing of the department, we recommend advertising and the use of Selection Boards as in the case of engineers.

Examiners will be of subordinate rank, and must have expert technical knowledge of textiles, hardware, oils, paints, and chemicals, or miscellaneous stores, respectively; expert knowledge of trades and a first rate character and record are the essential qualifications. Normally they will be recruited from industrial schools or colleges in India; but, in the first instance, they should be selected by the Director General of Stores by advertisement in India, and should include a good proportion of men with practical up-to-date British experience. We recommend that a certain number of men from the inspection branch of the India Office Store Department should be engaged if possible. The Inspectors of the Superintendent of Local Manufactures will be absorbed.

The Test House Staff at the Alipore Test House should be taken over, and any further chemists, or staff, required, either for the Alipore or for the proposed Bombay Test House, should be obtained by the methods proposed by the Chemical Services Committee of 1920. Should a Chemical Service be established, it will be for further consideration whether the chemists of the Indian Stores Department should not be affiliated with that service. As, however, the number of chemists required will be few, and their duties confined mainly to analytical work, it will probably be found desirable for the chemists of the Indian Stores Department to belong to that department permanently.

The Metallurgical Staff at Jamshedpur will be taken over, and any further appointments will be a matter for special recruitment.

Interchange of staff.

109. In the Despatch, No. 86-Revenue, dated the 25th September 1919, in which the Secretary of State for India communicated his approval of the general principle of an agency for the purchase and inspection of stores in India, he alluded to the suggestion that had been made that, with a view to keeping the Indian and Home Store Departments up-to-date and co-ordinating their methods, interchanges of personnel should take place. Should our recommendations as regards stores purchase policy and the future relations of the two departments be adopted, it will follow that the objects indicated will largely be attained, as the control will be unified, and the staff in India would to some extent be drawn from the surplus staff in London.

Speaking in his capacity as Director General of Stores, India Office, our colleague Mr. Collier, agrees that advantage should be taken of the existence in England of a considerable body of trained officials, and thinks it might be possible, and would afford valuable assistance in organising the Indian Stores Department to fill some of the new appointments by men transferred from the Home establishment. For most of the appointments on the purchase side of the department we think Indian experience almost essential, but it might be advantageous to appoint at least the Controller of Purchase who will deal with engineering stores, from the source indicated. On the inspection side, staff of the necessary qualifications, might more freely be obtained from the Store Department, India Office, or from the inspection staff of the Consulting Engineers associated with it; and we think that applications should be invited through the Director General of Stores, India Office, to fill a number of the proposed appointments of mechanical engineers, and examiners of machinery and hardware, oils, paints, etc., and textiles. These remarks relate to the initial organisation, but, apart from this, we should be in favour of as free an interchange of personnel as may be feasible, and recommend that advantage should be taken of opportunities, that may present themselves, to fill vacancies in India and in London by suitable officers, who may be willing to accept transfer. It is possible, for various reasons, that such interchange of staff may frequently prove not to be possible, and, should this be the case, we think that it should be supplemented by the temporary deputation of officers from either side, so that, both in India and in London, the procedure in force, and the difficulties experienced, may be fully appreciated, and that the advantages of local experience in each country may be gained. Men thus temporarily deputed, either to the United Kingdom or India, should be treated as supernumerary to the regular establishment, and be regarded as employed on a 'study course.'

CHAPTER XV.

FINANCIAL ARRANGEMENTS.

Account Section.

200. We contemplate that an Accounts Section will be responsible for making payment, from headquarters, of bills for stores supplied under the orders of the Director-General of Stores; for transferring debits to the departments concerned; for payment of all departmental salary bills and incidental charges; and for assisting the Director General in the preparation of his annual budget estimate. Doubtless, following the usual practice, this section will be in charge of an officer of, and directly responsible to, the Finance Department. We see no objection to such an arrangement provided the section is located in the same office as, and works in close co-operation with, the Director General of Stores and his staff. We consider this condition essential, as, where the executive and financial officers are not in close contact, there will inevitably arise delays in payment, accompanied possibly by misunderstanding and friction. It is for this reason that, in the preceding detail of the organisation, we have shown the Accounts Section as a part of the General Branch of the headquarters office, our object being to emphasise the association without necessarily implying subordination.

Provision of funds.

201. It will be unnecessary for provision to be made, in the budget estimates of the Indian Stores Department, for funds to cover purchase, as these will be provided for in the estimates of the departments for whom the stores are bought, and to which the debits will be transmitted by the Accounts Section. Cash assignments for the funds required at treasuries to meet payments will be granted by the provincial Accountants General concerned, in accordance with cash requirement forecasts prepared by the head of the Accounts Section, in consultation with the departments concerned and with the Controllers of Purchase; the forecasts will be modified from time to time as occasion demands. Payments in the United Kingdom to, and at the instance of, the London Branch would, we assume, still be made by the Accountant General at the India Office, and be audited by the Auditor for Indian Home Accounts, as is the practice at present in the case of the Director General of Stores, India Office.

Pricing of indents.

202. It has been mentioned that indents sent to the Director General of Stores, India Office, under the existing system, show the estimated cost of each item, and thus give an indication as to the extent to which funds have been earmarked to cover the purchase of the stores asked for; and that, when the expenditure is likely considerably to exceed the estimate, reference is made to the indenting officer before the order is placed. Similarly, if purchase is made at a price much below the estimated cost, the indenting officer is advised of the saving effected. The need for a similar procedure in respect of purchases in India has not hitherto arisen, as such purchases are under the direct control of the department against whose budget allotment the cost falls. But when departments of Government have to place their orders, as we now propose, to a large extent on an independent agency, such as the Indian Stores

Department, it is clear that the Indian procedure must be assimilated to that in force at the India Office; failing this there would be great danger that, after stores for a department had been purchased and debits raised, the budget funds, which should have been reserved to meet the charges, had been expended in other directions. Even apart from the inconvenience caused by the consequent excesses over grants, there would be a wide field for complaint on the part of indentors if they were to remain in darkness, until debits were actually raised, as to the cost of stores demanded by them. We advise, therefore, that it be made the rule that all demands placed on the Indian Stores Department should indicate that budget funds to a specific extent have been reserved to meet the anticipated expenditure. The Director General of Stores should be held responsible for keeping the indentor advised of any material departures from the estimate, and for not entering into commitments likely to cause an appreciable excess over the amount reserved by the indentor, until the latter has been consulted and has agreed in the action proposed.

Interest on delayed payments.

203. Here may be mentioned a point to which our attention has been invited, namely the occurrence of delays in payment to firms for goods supplied by them, and the question whether interest should be allowed, as a matter of course, in cases of undue delay. We do not think that the case is one for which it should be necessary specially to legislate. It should be possible, ordinarily, to ensure that bills are not unreasonably delayed, and if the Accounts Section, as we have urged, is closely associated with the executive branches, this should present no difficulty. We understand that delays in payments have sometimes been due to the failure on the part of officers, to whom goods have been despatched, to acknowledge their receipt within a reasonable time. Such delays are often due to the slow transit of goods by rail, or to other irremediable causes, and we think that a system of payment for goods on proof of despatch, rather than on proof of receipt, should be introduced. We desire to emphasise the point as this question of prompt payment is one to which commercial firms naturally attach great importance. We have been advised that the introduction of such a system of payment, as we advocate, is attended by serious drawbacks in connection with the closing of the government departmental accounts, but, as between Government and the suppliers, we can see no other preventative for the occurrence of delays, and we think that the possibility of inter-departmental difficulties is not a sufficient reason for its rejection. When a department is known to be generally dilatory in making payments, suppliers naturally protect themselves by making an allowance for interest in their charges; the direct remedy lies, as we have said, in having a business-like system for the prompt payment of accounts. In exceptional cases, claims for interest, when they arise, should be considered on their merits; it being understood that, if interest is paid in exceptional cases, this charge will be debited to the department to which the payment relates.

CHAPTER XVI.

Cost of the Department.

Basis of estimate.

204. The particulars of the proposed organisation given in Chapter XII enable a fairly approximate estimate to be framed of the annual cost of the Indian Stores Department. The figures will be reliable for the superior staff, whose numbers and pay have been prescribed, and to the total cost of which we propose to add 20 per cent. to cover leave allowances. It is more difficult to arrive at trustworthy figures in regard to subordinate staff, travelling allowances, rent and contingencies; but we believe that the subjoined estimate is as accurate as is practicable in the circumstances. The actual expenditure will be influenced to some extent by the decision whether the headquarters of the department are to be located at Calcutta, or at a cheaper up-country station, but the aggregate cost will be so slightly affected that we do not think it necessary to attempt to estimate the difference due to this cause. As regards subordinate staff, we have adopted a figure of 60 per cent of the cost of the superior appointments; we should explain in this connection that we were at first disposed to estimate this at a lower percentage, but enquiries as to the prevailing ratio in certain offices, suggested that the figure should be even higher. We have allowed, however, for the fact that a considerable part of the proposed superior establishment, especially on the inspection side, will be technical, and will not necessitate such a large proportion of subordinates. As a check on the percentage adopted, a rough estimate has also been made of the actual numbers of subordinates likely to be required in the several offices, and of their cost at an average of Rs. 100 per man (a rate which we believe closely approximates to the current cost of clerical establishments), and of the menial staff at an average rate of Rs. 17. The result, reproduced in paragraph 207, supports the estimate made on a 60 per cent basis.

Anticipated savings.

205 Departments, which purchase for themselves at present, express inability to give up any appreciable staff on account of being relieved of the work of purchasing; the heavier connected work of preparation of demands and budgets still remains both in administrative and executive offices. The latter will retain purchasing powers within their financial limits, and the former must be kept acquainted with the particulars of supplementary indents for administrative and budget purposes. We therefore accept their views with regard to the impracticability of making any reduction in staff. On the inspection side, the Director General of Ordnance assesses the saving in his inspectorate branch, due to transfer of work to the Indian Stores Department, at Rs. 13,000 per mensem or Rs. 1,56,000 per annum. It is not possible to calculate the saving that may accrue in this respect from Railways, Posts and Telegraphs, Military Works Services, Public Works Department, etc., who have not hitherto adopted a specialised

system of inspection of stores. Nevertheless we consider the saving will be considerable, and therefore have assumed, as a safe estimate, that the total reduction on account of all other departments will be equal to that of the Army, *viz.*, Rs. 1,56,000 per annum.

Accommodation.

206. It is impossible to give details concerning rent, for which we have provided a provisional sum of Rs. 2,00,000, until the headquarters of the new department are definitely decided; the following figures have been taken :—

Calcutta	...	Rs. 85,000 per annum.
Bombay	...	„ 65,000 „ „
Lahore	...	„ 15,000 „ „
Cawnpore	...	„ 15,000 „ „
Madras	...	„ 10,000 „ „
Rangoon	...	„ 10,000 „ „

This is inclusive of rent for test houses and inspection depots. In Chapter V we have recommended the abolition of the Clothing Factory at Alipore, and, assuming this proposal to be accepted, the premises vacated would be very suitable for the headquarters of the Indian Stores Department. They are within convenient distance of its two proposed subordinate establishments in Calcutta, the Test House at Alipore and the Inspection Depot at Hastings. It is presumed the latter depot will be available for this purpose, as the reason for its existence will disappear when the Indian Stores Department takes over the purchase and inspection of ordnance stores. The situation of the Hastings Depot, close to rail and river, is most convenient, but considerable extensions will be required within the depot to make it really suitable as an inspection depot for the supply of stores to so many departments. Similarly, we have suggested the transfer to the Indian Stores Department of the old Gun Carriage Factory site at Colaba, Bombay, where, also, the hire of other premises would be very expensive. At Madras, Lahore, Cawnpore and Rangoon, we anticipate no difficulty in acquiring suitable premises at reasonable rents.

Estimate of cost.

207. The estimate of cost therefore is made up as follows :—

		Rs.
(*a*) Superior establishment (as below) ...	...	8,10,460 per annum.
(*b*) Twenty per cent. for leave allowances	...	1,61,829 „ „
(*c*) Subordinate establishment at 60 per cent. on (*a*)...		4,86,288 „ „
(*d*) Twenty per cent. for leave allowances	...	97,092 „ „
(*e*) Rents ...	...	2,00,000 „ „
(*f*) Travelling allowances	...	1,20,000* „ „
(*g*) Contingencies	...	50,000* „ „
GRAND TOTAL	...	19,25,680 „ „

*The figures for travelling allowances (Rs. 1,20,000) and contingencies (Rs. 50,000) are conjectured only, no data for their calculation being available.

Less—

(*h*) Present cost of Alipore Test House and the Metallurgical Inspector and staff	... 1,50,000	per annum
(*i*) Anticipated saving on Army, and other, Inspectorates	... 3,12,000	,, ,,
Total saving	... 4,62,000	,, ,,
Net annual cost	Rs. 14,63,680	,, ,,

Detail of superior establishment.

	Rs.
Director General of Stores	3,500
Inspector General of Stores	3,000
Director of Contracts and Intelligence...	2,250
Controller of Provincial Agents and Intelligence	1,875
Controller of Timber Purchase and Inspection	1,600
Controllers of Purchase (2)	2,800
Assistant Director General of Stores ...	1,125
Accounts Officer	900
Engineers, 1st grade (3)	3,750
Engineers, 2nd grade (1)	900
Chief Inspectors (2)	2,500
Provincial Agents (6)	8,400
Superintendent of Test Houses ...	1,750
Test House, Alipore	3,550
Test House, Bombay	2,650
Metallurgical Inspector	3,940
Inspection Depot, Calcutta	6,500
,, ,, Madras	1,500
,, ,, Bombay	5,900
,, ,, Cawnpore... ...	2,850
,, ,, Lahore	2,100
,, ,, Rangoon	600
Assistant Controllers of Timber (4) ...	3,600
Total	Rs. 67,540 per mensem, or
	Rs. 8,10,480 per annum

The rough estimate of numbers and cost of subordinate staff, alluded to in paragraph 204 is reproduced, but with the *proviso* that it should be looked on as an approximation only and unlikely to represent the precise requirements of any one of the offices in question.

Rough estimate of numbers and cost of subordinate staff.

Assistant Director General.

Indents	...	...	...	16
Correspondence	...	...	...	10
Establishment	...	...	...	4
Accounts, Audit, Bills	...	...	...	20

Director of Contracts and Intelligence.

Bulletin, Home prices	...	...	...	24

Purchase.

Leather, Textiles	...	8	...	32
Timber	...	8		
Engineering, etc.	...	16		

Provincial Agents.

Calcutta	...	...	...	10
Bombay	...	...	...	6
Madras	...	...	...	4
Cawnpore	...	...	...	6
Lahore	...	...	...	6
Rangoon	...	...	...	5
		Total	...	144

Inspector General.

Structural, Mechanical, Electrical	...	...	...	20
Leather	...	...	...	4
Textiles	...	...	...	6
Test House, Calcutta		...	...	12
Test House, Bombay		...	...	8
Metallurgical	...	...	...	5

Inspection Depots.

Calcutta	...	...	...	30
Bombay	...	...	...	25
Madras	...	...	...	20
Cawnpore	...	...	...	20
Lahore	...	...	...	20
Rangoon	...	...	...	12

Attached to Inspectors and Examiners.

Timber	...	...	...	12
Others	...	...	...	25
		Total	...	219

Abstract.

Purchase side	... 144	at Rs. 100 (average)	
Inspection side	... 219	= Rs. 36,300 per mensem	
Total	... 363	or Rs. 4,35,600 per annum.	
Menial staff including duftrys, chaprassies, khalasis, durwans etc.	335	at Rs. 17 (average) = Rs. 5,695 per mensem or Rs. 68,340 per annum.	

Grand total Rs. 5,03,940 per annum.

This figure closely approximates to that (Rs. 4,86,288) adopted under heading (*c*) of the estimate.

208. It will be convenient for reference, to reproduce in one paragraph the scale of salaries proposed for the principal members of the staff :— Scale of salaries.

	Rs.
Director General of Stores ...	3,500
Inspector General of Stores ...	3,000
Director of Intelligence and Contracts ...	2,000—2,500
Controller of Provincial Agents and Intelligence	1,750—2,000
Controller of Timber Purchase and Inspection	1,400—1,800
Controllers of Purchase	1,200—1,600
Assistant Director General of Stores ...	1,000—1,250
Accounts Officer	800—1,000
Office Superintendents	350—450*
Engineers, 1st Grade	1,000—1,500
Engineers, 2nd grade	800—1,000
Engineers 3rd grade (if required) ...	600—800
Chief Inspectors	1,000—1,500
Assistant Chief Inspectors	800—1,000
Examiners, 1st grade	700—800
Examiners, 2nd grade	550—650
Provincial Agents	1,200—1,600
Superintendent of Test Houses ...	1,500—2,000
Chemists, 1st grade	1,000—1,500
Chemists, 2nd grade	800—1,000
Chemists, 3rd grade	600—800
Laboratory Officers	600—800
Metallurgical Inspector	2,250 inclu
Assistant Metallurgical Inspector ...	1,000—1,270 ding
2nd Assistant Metallurgical Inspector...	460—650 fees.

NOTE.—The Office Superintendent in charge of the Bulletin and Home Prices Section of the Intelligence Branch at headquarters will draw Rs. 400—600.

Value of Stores Handled.

209. Owing chiefly to the abnormal conditions set up by the war, and still prevailing, we have experienced great difficulty in arriving at any reliable figures for the value of stores likely to be handled at the commencement by the Indian Stores Department. The price of most articles, a chief factor in such a calculation, continues to be very high, and, notwithstanding the expectation of a drop in the not distant future, we feel it necessary to place it, on the average, at 100 per cent above pre-war rates. Another important factor is the quantity of stores; as regards railways a large and steady increase in demands can safely be relied upon; the question of equipment and scales for the Army is still under consideration. The war necessitated not only the introduction of many improved types of existing armaments and equipments, but also of entirely new ones; while, in some instances, the necessity of increasing scales previously considered adequate has now been accepted. The extent to which these increases can be financed is a matter on which we can form no opinion. The present era undoubtedly foreshadows large increases in expenditure by the Public Works, and the Posts and Telegrahps Departments. While, therefore, we have been unable to make any detailed calculation, we have no hesitation in anticipating a very great increase on the pre-war figures given in Table I (Appendix D). In the following estimates we have made allowance, by omission or deduction, for expenditure on account of coal, stationery, and medical stores, since the Indian Stores Department will not be concerned in purchasing the first, and, in the first instance, will deal with the two latter to a limited extent only. We have assumed that it will deal with one quarter of the stores purchased by local Governments, either in respect of inspection or purchase. With the above exceptions, the Indian Stores Department will inspect all stores, and, in addition to exercising a scrutiny over the decentralised purchases made by experts, will also furnish these experts with the data necessary for economical purchase, we have, therefore, taken the figures of expenditure in full, as follows:—

Produce of India obtained from private dealers.

	Rs.	Rs.
Government of India ...	5,64,000	
Local Governments ...	15,55,000	
State-worked railways ...	1,61,83,000	
Army Department ...	52,71,000	
Total		2,35,73,000
Deduct on account of coal (Table III, Appendix D) allowing for Ordnance Factories, and the Eastern Bengal Railway, whose consumption is not shown in the above Table ...		10,00,000
Total		2,25,73,000

Imorted stores purchased in India.

		Rs.	Rs.
Government of India	...	4,22,000	
Local Governments	...	12,50,000	
State-worked railways	...	19,68,000	
Army Department	...	6,49,000	
Total	...	...	... 42,89,000
Pre-war total	...	...	...2,68,62,000
Allow 50 per cent. for increase in demands on the average, in all departments ...	...	...	...1,34,31,000
Total	...	...	4,02,93,000
Add 100 per cent. for increased cost.		...	4,02,93,000
Final total	...	...	Rs. 8,05,86,000

As pointed out in Chapter II, paragraph 11, the figures in Table I err on the low side, and we have added nothing on account of increase under imported stores purchased in India, which for the reasons given in Chapter III, paragraphs 40 and 44, we anticipate will take place at once. In the matter of sleepers alone, taking into consideration the requirements of company-worked railways and the possibility that, in the hands of an efficient organisation, the supply of wooden sleepers may overtake the demand, we believe that an addition of possibly a crore of rupees may be made to our estimate. The organised purchase of the teak supply would probably attract the company-worked railways, and add largely to the business of the department. We have, therefore, confidence in believing that we have not overstated the volume of work.

Ratio of cost.

210. Thus the cost of the Indian Stores Department works out to 1·8 per cent on the value of the stores handled, a figure which approximates very closely to that arrived at by the Industrial Commission in paragraph 351 of their report, although their totals, both for cost of the department and value of stores handled, are much below those arrived at by us. These differences are due partly to decentralisation, the necessity for which was foreseen by the Industrial Commission, and partly to change in conditions since their report was written.

CHAPTER XVII.

SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS.

Introductory.

211. The following summary of our principal conclusions and recommendations is intended to provide a birds-eye view of the contents of the preceding report; we do not attempt here to review points of detail, or to recapitulate the reasons which have led up to the judgments formed, but refer the reader to the appropriate chapters and paragraphs.

CHAPTER I.

Terms of reference.

212. The Committee was appointed, in view of the necessity of encouraging Indian industries while at the same time securing economy and efficiency, to enquire and report on the measures required to enable government departments to obtain their requirements as far as possible in India; to devise the necessary organisation; to suggest the nature of its internal and external relations; and to indicate the modifications necessary in the stores purchase rules.

CHAPTER II.

Scope of enquiry.

213. In the course of our enquiries, we have considered it necessary to make a comprehensive survey of the subject matter, and our investigations have, therefore, had reference to the general question of the supply of stores of all sorts for government departments, railways and *quasi*-public bodies; and have comprised a review of the conditions governing the purchase both of indigenous and of imported stores, as well as of ships.

Relative importance of imported stores.

214. Under peace conditions, imported stores form a preponderating part of the purchases, which we have reviewed. Under war conditions, the ratio between such stores and those of local origin was modified in favour of the latter, but imported stores still represented one-half of the total.

Stock depots not justified.

215. In suggesting the details of the proposed Indian Stores Department, we have decided that, in view of the great expense which would be involved without corresponding advantage, the establishment of central stock depots would not be justified.

CHAPTER III.

Lessons from history.

216. A review of the stores purchase policy of the Government of India from the year 1862 onwards leads to two prominent conclusions:—

(*i*) that the Government of India have not been generally successful in the efforts made by them, from time to time, to procure relaxations of the Stores Rules, in respect of the encouragement of local industries and of the local purchase of imported stores;

(*ii*) that this failure has been contributed to largely by the influence of the Store Department of, and the Consulting Engineers to, the India Office.

Stores policy recommended.

217. With the establishment of an efficient department in India for the purchase and inspection of stores the time has, we consider, now come when the Secretary of State should delegate to the Government of India full control over the details of the Stores Rules. Complete freedom should be granted to India in this matter; and it should be accepted as a policy, not only in theory but also in practice, that all stores required for the public service shall be obtained in India whenever they are procurable in the local market of suitable quality and reasonable price, preference being given to articles of Indian origin.

Reconstitution of Store Department, India Office.

218. We anticipate that the work devolving upon the Director General of Stores, India Office, will be reduced, and consider that his department should, in due course, be reconstituted as the London Branch of the Indian Stores Department, the status of the officer in charge becoming that of a Director, immediately subordinate to the Director General of Stores in India. As an interim measure, and pending the above development, we recommend the transfer of the existing organisation of the Director General of Stores, India Office, from the immediate control of the Secretary of State to the charge of a High Commissioner for India.

Chapter IV.

Need for an organisation.

219. A review of the existing methods of purchase in the several departments of the public service shows that local officials are, at present, greatly handicapped for want of information regarding, and facilities for using, existing Indian resources, owing to the absence of any central authority possessed of comprehensive knowledge, and of an organisation capable of not only placing orders but also seeing that they are properly met.

Chapter V.

Government factories.

220. A consideration of the existing practice of Government with regard to the maintenance of factories and departmental workshops indicates the necessity for the adoption of a more consistent policy of reliance, in ordinary cases, upon private enterprise, although we recognise that government factories may properly be retained in some cases on grounds of convenience, and, in others, of expediency. We question the validity of the argument sometimes advanced as to the relative economy of government factories; but, even if this could be substantiated, we do not think that it should determine the decision of Government. Some of the existing factories could, in pursuance of the above policy, be either reduced in scope, or altogether abolished.

Chapter VI.

Position of local Governments.

221. In view of the tenor of the Reforms Act, we consider that local Governments should, in future, be free to deal, as they wish, with purchases of stores, of indigenous origin or local manufacture, for their own requirements. Having regard however to the influence which the adoption of a sound policy, in respect of the methods by which imported stores are procured, may be

expected to have upon the industrial development of India, we consider that the purchase of imported stores should continue to be controlled by the Government of India, so far as regards policy though not as regards the precise mechanism utilised. Local Governments should not be bound to utilise the agency of the Indian Stores Department, though they would be free to use it if they so desire; and we have provided special facilities to enable them to do so.

Position of company-worked railways and other bodies.

222. Companies, which work government railways, are free agents as regards purchase of stores. Under their existing contracts, they could not be compelled to conform to the policy approved by Government, nor to utilise the Indian Stores Department, though it is hoped that they will generally do so. We suggest that, when new working contracts are framed, opportunity should be taken to require the railway companies to conform to the Government of India system and procedure. Indian Native States and *quasi*-public bodies, such as municipalities, should be free to utilise the services of the new department subject to a reasonable payment.

Chapter VII.

Present policy barren of result.

223. As regards stores of Indian origin, the principal ground for complaint at present is, that the expressed policy of Government in favour of the purchase, by preference, of such stores, rather than of imported articles, is defeated by the prevailing lack of information, amongst government officers, of the available resources of the country; by the difficulty they experience in making the close comparison of price now required; and by their defective equipment for making use even of such resources as are within their knowledge. The result is that officers are induced to adopt the line of least resistance, and to obtain stores of extraneous origin when, with better facilities, they might obtain instead suitable goods of Indian manufacture. This reacts prejudicially on the development of Indian industries, and on the economy and convenience of the public service.

The remedy an Indian Stores Department.

224. The remedy is to be found in the establishment of an expert purchasing agency in India, equipped with facilities for knowing the manufacturing resources throughout the country; able to purchase efficiently in the various markets of India; and competent to carry out such inspection as may be necessary. The Indian Stores Department, the establishment of which is thus indicated, must have authority and facilities to ensure that orders shall, in accordance with the accepted policy of Government, be placed in India for goods of local production whenever possible, and that imported stores shall only be purchased when suitable Indian goods are not procurable.

Assistance for Indian industries.

225. We consider that, in addition to providing in this manner for the full utilisation of existing industries in India, Government must further give them practical encouragement, especially in the initial stages of their enterprise, and must assure them of a reasonable measure of protection against outside competition. The measures advocated by us, subject to appropriate

restrictions and safeguards, are:—

(*i*) guarantee of orders for a limited period;

(*ii*) placing of orders at favourable rates for a limited period;

(*iii*) favourable railway rates;

(*iv*) revision of the fiscal policy of Government, with a view to the protection of local industries;

(*v*) adoption of a conventional rate of exchange in effecting comparisons between prices quoted for indigenous and imported goods of the same class.

We consider that the conditions under which contracts are placed in India should be assimilated to those attaching to contracts entered into by the Director General of Stores, India Office, which at present are in some respects more favourable to the British manufacturer.

Chapter VIII.

Imported stores—removal of restrictions.

226. The purchase of such stores as are not procurable of local manufacture is, at present, regulated artificially by rules, the effect of which is practically to prevent, in ordinary cases, such stores being purchased in India from dealers or others. We agree that the time has come when such artificial restrictions should be abolished, and that it should be open to officers responsible for the purchase of imported stores to take advantage of the cheapest available market in which suitable articles can be obtained, having due regard to the convenience of rapid supply and other special advantages. The several channels through which these stores might be purchased should thus be free to compete with each other on their merits. We anticipate that, in practice, it will be found advantageous to procure certain classes of imported stores considerably more freely than hitherto through the agency of branches, agents and dealers in India. The demands placed on London will thus be reduced in two distinct ways:—

(*i*) by the interception of demands for imported stores for which articles of Indian manufacture can be substituted, and

(*ii*) by the increasing purchase of imported stores in India instead of in the United Kingdom.

Chapter IX.

Importance of inspection.

227. Efficient arrangements for inspection are of great importance; it is on the distinct understanding that all stores purchased will be subject to examination, either during manufacture or before acceptance, that our main recommendations are based. In view of the intention that the Indian Stores Department should act as an instrument for the development of Indian industries, its inspection staff will be responsible, not merely for the detection of faults but also

for indicating to suppliers the steps necessary to improve the standard of their manufactures, and for the introduction of standardization of all articles in general use.

Inspection Depots.

228. We recommend the institution of inspection depots at suitable centres to facilitate the examination of certain classes of goods. At each depot a pattern room should be maintained.

Absorption of existing staffs.

229. A portion of the existing ordnance inspection staff should ultimately be absorbed, and, because of the conditions attaching to the use of military stores, certain military officers should be deputed from the Army for employment as liaison officers with the Indian Stores Department. The inspection branch of the department should absorb the existing staff of the Metallurgical Inspector, Jamshedpur, and the Inspection and Test House staff at Alipore. A test house should also be established in Bombay.

Chapter X.

Shipbuilding.

230. For the encouraging of shipbuilding, we recommend the liberalisation of the existing rules governing the supply of ships for the public service, with a view of utilising the capacity of Indian shipyards, and of promoting their development.

Chapter XI.

Stores Rules revised.

231. Having regard to the relaxations which will be desirable with the alteration in conditions in India in future, and to the complicated nature of the existing rules governing the purchase of stores for the public service, we have recast the rules with special attention to the provision of a clear enunciation of the policy of Government; to making effective the intention of giving all reasonable preference to the products of Indian industry; to the substitution, for existing arbitrary restrictions, of a more businesslike latitude in regard to the channel of supply of goods of foreign origin; and to the exercise of judgment in the comparison of competitive tenders.

Chapter XII.

Organisation.

232. We have set out the details of the organisation which we propose for the Indian Stores Department, both in its initial and ultimate form, and have indicated the range and nature of the duties of the staff to be employed in the several sections on both the purchase and inspection sides. The organisation set forth provides for a headquarters staff, divided into purchase and intelligence and inspection branches and a general office, assisted by provincial agents and inspectors at the chief centres of industry. The provincial agents will provide special facilities for meeting the wishes of local Governments in regard to supply of stores, and will act as intelligence agents of the Indian Stores Department in close collaboration with the provincial Directors of Industries. We have laid down the extent to which the use of the Indian Stores Department should be compulsory, and that to which it should be

optional for the several departments of Government and others concerned.

Chapter XIII.

Procedure.

233. For the convenience of the various authorities interested, we have set forth in some detail the procedure, which we contemplate should be adopted, both by the departments which utilize the Indian Stores Department, and by the department itself in dealing with the demands preferred upon it.

Chapter XIV.

Recruitment.

234. In the important matter of recruitment we have indicated the qualifications to be looked for in the several members of the staff whose employment we think necessary, and the sources from which they should be obtained. While indicating that, at the commencement, expediency must be the principal guide in selecting officials of suitable experience to fill the various posts, we make it clear that, once the department is fairly established, it will generally be advisable, at least on the administrative side, to engage only junior men in each branch, and to fill vacancies by promotion. We recommend that, whenever suitably qualified men can be obtained in India to fill vacancies, preference shall be given to statutory natives of India.

Interchange of staff.

235. The question of interchange of staff between the Indian and English establishments is specially dealt with, and, in this connection, we have drawn attention to the advantage to be expected from the transfer of some of the experienced establishment of the India Office Store Department to fill some of the new appointments in India.

Chapter XV.

Financial arrangements.

236. We contemplate close association between the officer of the Finance Department in charge of the Accounts Section and the headquarters officers, and branches of the Indian Stores Department; and we lay stress upon the importance of this connection, with a view to the prevention of delays in payments of bills for stores supplied, and to the avoidance of friction. We contemplate that bills shall be paid from headquarters, and that debits shall be transmitted by the Accounts Section to the departments concerned. Particular attention is invited to the necessity for the observance of ordinary commercial practice in respect of the prompt settlement of accounts.

Chapter XVI.

Cost of the scheme.

237. The details set out by us show that the additional net annual cost of the Indian Stores Department may be estimated at Rs. 14,60,000, a figure which, though considerable in itself, is relatively small, and represents only about two per cent. of the value of the stores, which we anticipate will be handled each year. The estimates, particularly of the volume of stores to

be dealt with, are unavoidably speculative; but even if the ratio of the cost of the department to the value of stores handled should prove to be appreciably higher than we anticipate, it is still very unlikely that it will reach an unreasonable figure.

(Signed) F. D. COUCHMAN,
President.

" A. W. DODS.

" C. C. H. HOGG.

" H. A. K. JENNINGS.

" LALJÌ NARANJI.

" MILKI RAM.

" T. RYAN.*

(Signed) J. C. HIGHET,
Secretary.

Simla, the 19th July 1920.

* Subject to the contents of the attached memorandum.

JOINT MEMORANDUM BY MESSRS. COLLIER AND RYAN.

SECTION I.

Introductory.

Though we are in full agreement with some of the most important recommendations which are being submitted to Government by the Stores Purchase Committee, we find ourselves at variance with them on certain matters which are also of considerable moment; and, as the influence of this permeates the main report, we have decided, rather than ask our colleagues to confuse the thread of their argument by introducing our divergent opinions from place to place, to embody our views in this self-contained statement. This has become in fact necessary owing to the circumstance that one of us (Mr. Collier) finds himself constrained by his other duties to leave the Committee a short time before the main report will be fully drafted. The questions involved in the work of the Committee have, however, been fully discussed and arrangements have been made to ensure that the scope of this memorandum, as finally printed, will be limited to those points on which our views differ in important respects from those recorded by the majority of the Committee.

2. Mr. Collier has been associated with the Committee practically throughout its proceedings; Mr. Ryan was appointed to it at a late stage of its discussions in response to a request for Mr. Heseltine's replacement.

SECTION II.

Extent of our agreement and disagreement with the majority.

3. We desire in the first place to make clear the extent to which we are able to endorse the views of our colleagues; the respects in which, differing from them, we think they have strayed from the matters in issue; and the subjects in regard to which we have not been able fully to agree with them.

4. We observe that the Committee's report contains in sequence the following matter; (the figures in brackets correspond to the chapters of the Committee's report) :—

(I) An introductory chapter.—We have no comments to make on this.

(II) A review of the subject matter and scope of the enquiry.—It will be evident from our later remarks that in our opinion the main purpose for which the Committee was appointed is to work out a detailed scheme for an expert purchasing and inspecting agency in India for the purchase of supplies for the public services, in order not only to ensure that such purchases shall be made with economy and efficiency but also to carry out effectually the principle already embodied in the Stores Rules that articles should not be imported which can be supplied by manufacturers in India equally well both in respect of price and quality. Thus we should regard

it as of essential importance to secure that, for instance, imported glassware should not be purchased through any channel while glassware made in India might equally well be bought instead. We do not, however, consider that the establishment of an expert purchasing and inspecting agency in India would necessitate or justify any fundamental change in the policy laid down in the Stores Rules regarding the purchase of imported stores, which is founded on well-considered principles of economy and efficiency. Nevertheless we do not feel ourselves to be debarred from making such recommendations as we think suitable regarding the methods of purchase of imported stores, and the consequent alterations in the Stores Rules, so long as these are likely to advance the purpose which the Committee was appointed to develop, and are treated as supplementary to the principal questions before us.

(*III*) *A history of stores policy.*—It follows from our preceding remarks that we regard the labour and research expended by our colleagues on this subject as being largely misdirected in the circumstances of this Committee's appointment. We have not made an independent review of the subject matter dealt with in this historical retrospect and cannot therefore either criticise it in detail or indicate any actual omissions; but we feel bound to say that the impression left by it upon our minds is that it presents the case, if not in a wrong light, at least in misleading perspective. In particular we consider it obvious that if a more progressive stores purchase policy has not hitherto been pursued by Government the defect is due as much, or more, to the non-existence in India of any organisation suitable for carrying such a policy into practice, as to any undue conservatism on the part of the technical advisers of the Secretary of State for India. Our colleagues have indeed alluded to this factor, but in our estimation they have assigned to it much less than its due weight, both in the portion of their report now specially mentioned, and in their anxiety to subordinate the stores agency in London to the proposed Stores Department in India.

(*IV*) *A review of the existing methods of purchase in the several departments.*—No remarks.

(*V*) *A discussion of the policy underlying the maintenance of government factories and railway workshops.*—We are in agreement with the observations of our colleagues.

(*VI*) *A note on the relations of the proposed Stores Department with local Governments and* quasi-*public bodies.*—We agree with the observations of the majority.

(*VII*) *A note regarding the purchase of such indigenous stores as can fairly compete with imported goods.*—We are in general agreement with the conclusions of our colleagues, and go farther than we understand some of them do in that we definitely regard this portion of the report, together with the concrete recommendations subsequently made for carrying into effect the policy advocated, as the essential and most important part of the Committee's work.

(*VIII*) *A note on the purchase of imported stores.*—For the reasons already indicated, and developed more fully in Section III of this memorandum, we cannot agree with the conclusions arrived at by our colleagues. We are, on the contrary, of the opinion recorded by the Indian Industrial Commission, in paragraph 194 of their report, that: "the prescriptions of the Stores Rules regarding the classes of articles that may be bought in India are suitable, subject to the addition of a provision * * * regarding purchases from Indian branches of British manufacturing firms."

(*IX*) *A note on the question of inspection.*—We are in general agreement with the Committee.

(*X*) *A chapter regarding shipbuilding.*—We agree with the Committee.

(*XI*) *Proposed alterations in the Stores Rules.*—It follows from our remarks under sub-heads (*II*), (*III*) and (*VIII*) above, and the fuller discussion in Section III below, that we must regard as uncalled for the extensive changes in the Stores Rules, proposed by our colleagues. We agree that minor changes are desirable and have embodied these in the redraft of the existing rules which appears in Section IV of this memorandum.

(*XII*)-(*XV*) *Detailed proposals for the organisation of the India Store Department and its functions.*—We are in general agreement with the recommendations made as to the organisation of the Department and (except in regard to the handling of imported stores) as regards its functions.

5. We proceed in the following sections to explain more fully our views in regard to the points in which we have expressed disagreement with the Committee. We may observe here that in these draft rules and in the following portion of this memorandum we have retained the designation "Director General of Stores" for the head of the Store Department in London, as at present, and have used the designation "Controller General of Stores, India" for the head of the proposed new organisation in India. We think that this would be less likely to cause confusion than to designate the latter officer "Director General of Stores" as proposed by our colleagues: their objection to the title Controller General is, we understand, based on the fear that Army officers in particular might confuse the two "C. G. Ss." (since officials are commonly referred to by their initials). We think that the functions of the Chief of the General Staff and of the Controller General of Stores are so different that confusion is unlikely to occur in practice. In any case it will make the intention of our present remarks clearer if in this note we maintain the designation preferred by us.

SECTION III.

PURCHASE OF IMPORTED STORES.

6. We have very carefully considered the recommendations of our colleagues in regard to the methods to

be adopted in future for the purchase of imported stores. Their proposals involve the entire remodelling of the Stores Rules, the prescriptions of which the Industrial Commission considered to be suitable subject to the addition of a provision regarding purchases from Indian branches of British manufacturing firms. We do not believe that the radical changes in those Rules which are recommended by our colleagues are needed to secure the objects aimed at by the Industrial Commission, namely the establishment of an expert purchasing and inspecting organisation in India for procuring supplies required for the public service, and for preventing demands being sent to England which might be satisfactorily met by articles of Indian manufacture. We go further and are strongly of opinion that to invest the head of the new Stores Department in India, as proposed by our colleagues, with power to purchase through his subordinates imported stores from merchants or middlemen at his discretion, would certainly not be productive of economy, might be liable to serious abuse, and would lead to a great increase of work and delay in dealing with demands. At best it could hardly fail that vain endeavours would be made to obtain quotation in India for imported stores which it would be found after all, for the reasons stated below, could be obtained more cheaply and probably of better quality through the Home agency. We therefore consider that unless demands for imported stores can be satisfactorily met by the substitution of articles of local manufacture, or by purchase from Indian branches of British manufacturing firms, or otherwise subject to the prescriptions of the amended Stores Rules which we recommend (see Section IV following) the demand should at once be passed to the Home agency for compliance.

7. In connection with this question of buying imported stores, we have carefully considered the terms of reference to the Committee. It is reasonable to assume that these terms must be read in conjunction with, and be interpreted in the light of, the Resolution of Government with which they are promulgated; as well as with the principles which were set forth by the Indian Industrial Commission, accepted by the Government of India, and approved by the Secretary of State: it must be remembered in this connection that our Committee was appointed strictly in pursuance of the recommendations of the Industrial Commission, the views of which are thus of peculiar relevance. After carefully weighing these considerations we are satisfied that there can be no reasonable doubt that any general discussion of the stores policy of Government is not within the scope of the terms of reference and indeed is expressly excluded therefrom. Assuming, however, that this were not the case we observe from the History of the Stores Rules attached to the report (Appendix B) that the Rules themselves have received most careful consideration from the Government of India, and various Secretaries of State from time to time over a long course of years. One of the guiding principles which has been continually kept in mind in their preparation and development has been that Indian products and manufactured articles should be utilised to meet the requirements of

the public services in so far as such products and manufactured articles can be obtained of suitable quality and at a reasonable price. It is this principle which the establishment of the stores purchasing agency in India is designed to make more effective and to safeguard, and it is this principle which has been brought specially to the notice of the Committee. It is in our opinion unreasonable to suppose that, in the absence of any instructions to that effect, the Stores Purchase Committee should take upon itself to recommend radical changes in rules which have been deliberately adopted by the highest authorities after full and careful consideration. Nevertheless while holding this opinion we have considered it proper to deal specifically with the one point mentioned by the Industrial Commission (purchase through branch firms) as requiring an amendment of the Stores Rules, and to suggest such minor alterations therein as seem to be desirable under present conditions, and to be necessary in view of the proposed establishment of a Stores Department in India. Our recommendations will be found in Section IV of this memorandum dealing with the Stores Rules.

8. In spite of what we have said above to the effect that no radical alteration of the Stores Rules is called for, we think it well to offer some further remarks on this question of purchasing imported stores because some witnesses, particularly representatives of Chambers of Commerce and merchants, have advocated that all imported stores should be purchased in India, either through branches or agents of the manufacturers or through merchants; and because some witnesses have also recommended that the Stores Agency at Home for the supply of imported stores (which has hitherto been the Store Department of the India Office) should be abolished. If all, or the bulk of, imported stores were to be purchased in India it is evident that the Stores Agency at Home would no longer be required, or at least that it might be very greatly reduced in size. The India Office Store Department Office was initiated nearly 60 years ago. Its organisation has been built up as the result of an accumulated experience of many years and it is equipped with a well trained purchasing and inspecting staff. In regard to some, and particularly to railway engineering, stores it is advised by an eminent firm of Consulting Engineers and as regards shipbuilding, etc., by a Naval Architect of high repute. There is, therefore, a strong '*a priori*' argument against abolishing the Department and losing the services of the experienced staff employed therein or connected therewith.

9. It has also been maintained by some witnesses that the local purchase of imported articles through merchants would tend to the industrial development of India on the ground that trade precedes industry and we believe that this view has greatly influenced several of our colleagues. We are not impressed with this argument and some at least both of the European and Indian witnesses have questioned its soundness. The stores will be imported into this country whether purchased from merchants or through the Home agency and the volume of trade is not affected whichever method is adopted. The manufacturers at Home are already

aware that the supplies ordered by the Store Department of the India Office are destined for India, and if they think it worth while will arrange to establish branches of their manufactures in the country. The merchant on the contrary, in so far as he is an importer and not a manufacturer, will not be interested in promoting manufacture in India; indeed his interests will be decidedly opposed to this seeing that he would thereby be liable to lose his business as an importer and the profits attaching thereto. It will be for the Directors of Industries, assisted by the Stores Department in India, to bring the requirements of Government to the notice of actual or potential manufacturers in the country.

10. The cost of imported stores purchased through merchants in India must include the profits of the middleman in addition to the actual expense of handling the order. The latter may be taken to correspond with the departmental cost of the India Store Department in London, but seeing that the Department deals almost entirely with actual manufacturers the profit must become an extra charge on the revenues of India. The freight rates and conditions obtained by the Department are, we understand, owing to its large business, much more favourable than can be obtained by the trade. Private firms also insure their consignments whereas the India Office does not but is its own insurer and thus saves the profits of the insurance companies on its consignments. The tonnage shipped by the Department averaged in pre-war years about 250,000 to 300,000 tons a year, and the value of the stores then supplied was roughly about £4,000,000 to £5,000,000 a year, so that the savings under both these heads may be taken to represent a considerable sum of money. On general grounds therefore it may reasonably be presumed that to procure imported stores through merchants in India must be more expensive than obtaining them through the Store Department in England.

11. Apart, however, from considerations of economy a very serious objection to placing orders for imported stores with merchants in India lies in the fact that generally speaking inspection can only be carried out after the articles have arrived in the country. This may not be till several months after the order has been placed and it is then a great temptation to the indenting officer to accept the stores, even if not up to standard, rather than incur the delay involved in their rejection, and it is also a great temptation to the contractor to endeavour by any means in his power to get the stores passed rather than have them left on his hands after incurring the expense of getting them out. This objection does not apply to stores already in the country, for the indenting officer is free to accept them or not as he pleases and no time has been lost; nor does it apply to any great extent in the case of many items of standard plant and machinery supplied by branches of British manufacturing firms of repute, especially in view of the fact that inspection of the stores by the Home agency during manufacture or before shipment could in such a case generally be provided for. It applies in a less degree to articles which are already on their way out to India, for in that case the importer has evidently thought it worth while to import the goods

as an ordinary commercial venture and will not therefore be much worse off even if the indenting officer rejects them, and not so much time will have been lost.

12. We therefore consider that from the point of view of efficiency as well as of economy it is not as a general rule desirable to purchase imported stores in the country, but cases will arise when exception should be made to this general rule and particularly in regard to stores actually in the country and to plant and machinery supplied by branches of British manufacturing firms. This opinion accords with the recommendation of the Public Works Department Reorganisation Committee; and in confirmation of it, it may also be well to quote from paragraph 3 of Despatch from the Government of India (Commerce and Industry Department) to the Secretary of State, No. 50, dated 28th August 1913, urging that the Stores Rules should be amended to allow of the purchase of plant and machinery under certain conditions from Indian branches of British manufacturing firms. The passage referred to is as follows :—

> "We believe, however, that sufficient emphasis was not laid upon a condition to which the Committee* referred in paragraphs 47 and 48 of their report, namely, that such purchases should be permitted, not from agents or middlemen, but only from Indian branches of the best English firms. This is a condition of primary importance and is one on which we desire to lay considerable stress. We admit that, had draft rule No. 5 been accepted as it stood the purchase of imported articles through agents might have been encouraged with harmful results. It is obvious that all possible steps should be taken to discourage the purchase of imported stores the price of which includes middlemen's profits but the purchase of imported stores through or from Indian branches of recognised manufacturing firms stands upon an entirely different footing."

13. On the other hand, we hold the opinion that when imported stores are actually in the country (and not merely said to be here), purchase should be made locally when their price and quality compares not unfavourably with that at which similar stores can be obtained through the Home agency after making the necessary allowances for transit charges, etc.; and in cases of urgency we see no serious objection to local purchase when the stores are already on their way out, if the same conditions as to price and quality can be satisfied. But in all such cases unless accurate comparison of quality and price is made before purchase is effected in India it is obvious that much money might be unconsciously wasted because even a trifling difference in the quality or cost of each article may mean a large extra expenditure in the aggregate.

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* Stores Committee Report, dated 2nd July 1902.

14. The majority of government officers qualified to give an authoritative opinion state that the articles obtained through the India Office can be safely depended on for quality, and there is much evidence to show that generally they cost less than similar articles bought in the country. On the other hand, complaints of the time taken in obtaining requirements by indent from Home are numerous. That delay should have occurred during and since the war is not surprising. In normal times we understand that delays are mainly attributable to the failure of contractors to carry out their promises of delivery. A good deal of time is sometimes occupied in India between the date when the indent is made out by the indenting officer and the date when it is actually sent Home. But whatever may be the explanation we do not disguise from ourselves the fact that the delay involved, and also the difficulty which is sometimes felt in explaining the requirements to an organisation some 6,000 miles away, may sometimes cause inconvenience which will tend to diminish or even counterbalance in some cases the advantage obtained in price. Nevertheless, the views obtained from the largest government purchasers of imported articles such as the State-worked Railways, Army Department, Royal Indian Marine, Posts and Telegraphs, Stationery and Printing, although in favour of giving greater discretionary powers than are at present allowed to purchasing officers, do not indicate a desire for any drastic change in the existing system.

15. On the grounds, therefore, of economy and efficiency, we have no hesitation in saying that in our opinion it would be a mistake to attempt to do without the Store Department in England, as the main agency for the supply of imported stores. We anticipate that the decision to place the Department under the control of the Government of India (whether through a High Commissioner responsible to, and under the orders of, the Government of India, or through some other administration), should remove the political objections which are held against the present system.

SECTION IV.

Alterations to the Stores Rules.

16. The Stores Rules, as they at present stand, are reproduced in Appendix C to the Committee's report. We have stated that in our opinion it is not necessary, and would be dangerous, to alter these rules so radically as has been proposed by our colleagues in Chapter XI of the main report; but we have explained in the preceding section that we are in favour of making provision for purchases of certain kinds from Indian branches of British manufacturers, as well as of making certain minor alterations in the rules. We now reproduce the rules as a whole in the form in which we recommend they should be re-issued. The places in which they

differ from the existing rules are indicated in the following table :—

Existing rule.	Proposed rule.	Nature of alteration, etc.
Preamble	Preamble	Redrafted so as to express the policy more clearly.
No. 1	No. 1	Unchanged.
„ 2	„ 2	Slight modifications only.
„ 3	„ 3	Subhead (*a*) expanded. „ (*c*) provides for purchases from branch firms.
„ 4	„ 4	Unchanged.
„ 5	„ 5	Slightly relaxed. *N. B.*—The Controller General of Stores, India, will have full powers under Rule 11.
„ 6	„ 6	Unchanged.
„ 7	„ 7	Slight modification only.
„ 8	...	Dropped.
„ 9	...	Dropped.
„ 10	„ 8	Slight changes in sub-rules (*i*), (*iii*) and (*iv*) (*a*).
„ 11	„ 9	Unchanged.
„ 12	„ 10	Slight modification only.
„ 13	„ 11	Provision is made for the Controller General of Stores, India, with full powers. The list of powers generally has been simplified by substituting one for two sets of limits, and made more liberal by considerably increasing the existing figures.
„ 14	„ 12	The limit is raised.
Appendices	Appendices	Unchanged.

Proposed Rules for the Supply of Articles for the Public Service.

General Note.

Endeavour should be made to meet all requirements by supplies of indigenous products or local manufacture so far as this can be done consistently with economy and efficiency. Subject to this provision and to any instructions regarding specific articles which have been, or may be, issued by the Government of India from time to time (*e.g.*, those relating

to the supply of stationery) the following are the rules relating to the supply of articles for the public service. These rules supersede all previous orders which are not explicitly continued.

Rule 1.—*Articles manufactured in India from Indian materials*—

All articles which are produced in India in the form of raw material, or are manufactured in India from materials produced in India, should, by preference, be purchased locally, provided that the quality is sufficiently good for the purpose, and the price not unfavourable.

Rule 2.—*Articles manufactured in India from imported materials*—

All articles wholly or partly manufactured in India from imported materials should, by preference, be purchased in India subject, however, to the following conditions:—

(*a*) That a substantial part of the process of manufacture of the articles purchased has been performed in India.

(*b*) That the price is as low as that at which articles of similar quality can be obtained through the Store Department, London.

(*c*) That the materials employed are subjected to such inspection and tests as may be prescribed by the Government of India.

NOTE.—The term "a substantial part of the process of manufacture" in clause (*a*) means that a substantial part of the preparation of the finished article must be performed in India, whether from raw materials or from component parts obtained in a finished state from other sources.

Rule 3.—*Articles which are not manufactured in India*—

Articles which are not manufactured in India should be obtained by indent upon the Store Department, London, except in the following cases:—

(*a*) When the articles are already in India at the time of order, and their price and quality are not unfavourable as compared with those at which similar articles could be obtained through the Store Department, London, and the cost of the supply does not exceed the limits prescribed in Rule 11. When the articles are required in trifling quantities it may generally be considered more economical to purchase them locally, if practicable, than to indent for them.

NOTE.—Articles of clothing and equipment of European manufacture required for the Burma Police Department may be procured for the present without the intervention of the India Office.

(*b*) In the case of important construction works let out on contract, articles not manufactured in India required for the construction of such works may be supplied by the contracting firm subject to the following conditions :—

(*i*) That the firm is approved by the Government of India and is included in the list of firms so approved.

(*ii*) That the materials are subject to the current specifications and tests prescribed by the Government of India.

(*c*) Plant and machinery and component parts thereof may be purchased from branches* established in India of British manufacturing firms borne on the list of the Store Department, London, and approved by the Controller General of Stores, India, provided that the following conditions are observed :—

(*i*) That the purchase is made by the Controller General of Stores, India, or by a highly qualified engineer directly responsible to the Government of India or the local Government concerned for the order so placed.

(*ii*) That the plant and machinery are of standard patterns such as are ordinarily and actually manufactured by the firm.

(*iii*) That the branch firm entertains a staff of expert mechanics capable when so required of erecting and repairing the plant and machinery which it supplies.

(*iv*) That the actual price of the articles (exclusive of any expenditure representing cost of erection) is as low as that at which articles of the same make can be supplied by the Store Department, London.

(*v*) That the cost of supply under any one order or detailed estimate, in respect of any one type of standard plant or machinery, does not exceed Rs. 20,000.

(*N. B.*—Care must be taken to prevent orders being split up in such a way as to evade the intention of this condition.)

(*vi*) That when test or inspection of the plant or machinery during manufacture or before shipment is necessary or desirable arrangements should be made for such test and inspection to be carried out by the Store Department, London.

* Branches may be held to cover approved technical agents of British manufacturers which do not merely act as selling agents but are also in a position to render the same kind of technical assistance in India, as actual branches of the firms.

Rule 4.—*Articles which should be purchased in India.*—

The following articles, whether manufactured or produced in India or not, should be purchased in India, provided that they comply with the current specifications, are of the requisite quality, and can be obtained at a not unfavourable price:—

(*a*) Those of a perishable nature.

(*b*) Explosives.

(*c*) Block tin.

(*d*) Wines and spirits and English bottled beer for the use of government hospitals in India.

(*e*) Kerosine oil.

(*f*) Plant and materials for electric installations intended to take current from existing centres; and small electrical power and lighting plants of not more than 25 kilowatt capacity, which involve the provision of generators and cables for distribution, provided they comply with the current specifications and tests prescribed by the Store Department of the India Office.

(*g*) Australian timber

(*h*) Australian copper.

(*i*) Italian marble.

(*j*) British Columbian timber.

(*k*) Plant and materials for small gas installations the cost of which does not exceed Rs. 15,000.

(*l*) Cheap articles of common use required in small quantities only.

(*m*) Such other classes of articles as may from time to time be prescribed by the Government of India.

All such cases should be reported to the Secretary of State for his information.

Rule 5.—*Special purchases in India*—

In cases of urgency or when inconvenience to the public service would be caused by waiting to obtain an article from England through the Director General of Stores, or when, owing to the greater promptitude of supply, an economy can be effected by purchasing in India articles which, under the foregoing rules, should be obtained through that officer, the purchase may be made in India, subject to the limits prescribed in Rule 11, provided that the articles are in India at the time of order or are already on their way out. In such cases, if the value of the articles exceeds Rs. 1,500 the sanctioning officer should place

on record the reasons which make the local purchase desirable. This record shall be available for the inspection of the Examiner of Accounts or the supervising officer when required.

Rule 6.—*Inter-departmental purchases.*—

Nothing in the rules is to be deemed to prohibit the purchase of stores of European manufacture by one department or railway from another.

Rule 7.—*Method of obtaining stores not purchased in India.*—

All articles which, under the foregoing rules, are not to be bought in India, should be obtained by indent on the Store Department, London, except any which the Secretary of State may have specially authorised the Government of India or its officers to purchase direct outside India. Such purchase is at present permissible in the case of the following articles :—

(*i*) Seeds.

(*ii*) Cinchona bark.

(*iii*) Articles for experimental or research purposes required by officers approved by the Government of India from time to time. A list of the officers thus approved is given in Appendix A.

(*iv*) Excise instruments and apparatus required by provincial Excise Departments for experimental or research purposes.

(*v*) China, glass, cutlery, plate, crockery and perishable fabrics, including linen for residences which are furnished by Government.

(*vi*) Australian timber.

(*vii*) British Columbian timber.

(*viii*) Australian lead.

(*ix*) Such articles as Superintendents of Vaccine Depots may require for the preparation of vaccine lymph (*e. g.* lanoline and glycerine).

(*x*) Chemicals and scientific instruments which do not require careful inspection and testing or which are of standard description usually quoted by well-known firms, provided that the articles cannot be procured from the Medical Store Depots.

(*xi*) Articles required for Viceregal residences in special and urgent cases.

NOTE.—Payments for stores purchased under this rule should be made direct to the suppliers by the purchasing officers.

Rule 8.—*Method of comparing prices.*—

In all cases in which the selection of source of supply depends upon comparison of prices, the procedure to be adopted for such a comparison is as follows:—

(*i*) A reference should be made to Home prices notified continually by the Director General of Stores, London, to the Controller General of Stores, India, or as otherwise ascertained, and freight should be added at the current rates paid by the Store Department, London, together with 13*s.* 4*d.* per 100*l.* for interest, 2*s.* 2*d.* per 100*l.* for insurance, and 3*d.* per ton for freight brokerage.

(*ii*) In cases of important contracts, the prices ruling in the English market should be ascertained by telegraphic reference to the Director General of Stores.

(*iii*) In cases where the necessary information as to Home prices is not available the purchase in India shall be subject to the condition that the price is not unfavourable.

(*iv*) In order to arrive at the market value at an Indian port of the article imported from England the following charges shall be included:—

(*a*) Landing, wharfage, and port charges.

(*b*) Customs duty, as shown in the tariff to be applicable to the article in question, to be calculated on its cost *plus* the additional charges mentioned in the earlier part of this rule.

(*v*) The cost of carriage to site from port or place of manufacture, as the case may be, shall be taken into account.

Rule 9.—*Tests.*—

Any articles purchased in India which should be tested are liable to the specifications laid down from time to time by competent authority, with the approval of the Government of India, and should be required to pass the tests prescribed for such articles.

Rule 10.—*Firms from which iron and steel may be bought in India.*—

Important iron and steel work, if purchased in India, should only be obtained from firms approved by the Controller General of Stores and entered in a Schedule as corrected from time to time by that officer. A list of approved firms is given in Appendix B.

NOTE.—By "important iron or steel work" are meant articles of iron or steel which form important components of the project in hand, *e.g.*, bridge girders and roof trusses, built up in the firm's workshops and supplied, ready for erection, in such sections as may be convenient, and rolled steel beams, rails or other sections cut to length or otherwise prepared at the firm's workshops to suit the indenting officer's requirements. The intention of the rule is to ensure that part, the accurate preparation of which is essential to the security of a project, shall be obtained only from firms which possess workshops and appliances capable of turning out work of the desired standard. The raw materials used may be either imported or of Indian manufacture, subject to the usual specifications.

Rule 11.—*Financial limits on powers of officers to make purchases in India.*—

In the case of purchases made under Rules 1, 2 and 4, an officer's powers of purchase extend to the ordinary limits to which he is empowered to enter into contracts: but in the case of purchases made in India under Rules 3(*a*) and 5, the limits for expenditure on any one article or on any number of similar articles purchased at one time are as follows:—

(*a*) *Civil Departments.*

	Rs.
(*i*) Heads of Departments, Commissioners of Divisions, other officers of or above the rank of Collector whom the Local Government may select, and Principals of Colleges and Inspectors of Schools in Bengal, Bihar and Orissa and Assam	500
(*ii*) Other officers authorised to incur expenditure	100
(*iii*) Controller of Printing, Stationery and Stamps	2,000
(*iv*) Local Government or Administration ...	Full powers.

The powers of a Local Government are also exercised by the following officers:—

Surveyor General of India.

Agricultural Adviser to the Government of India and Director of the Agricultural Research Institute, Pusa.

Director-General of Observatories.

Director-General, Posts and Telegraphs.

Political Resident, Persian Gulf.

Superintendent of Port Blair.

(*b*) *Public Works Department.*

	Rs.
(*i*) Executive or Assistant Engineer holding charge of a Division	1,000
(*ii*) Superintending Engineer or Superintendent of Works	5,000
(*iii*) Local Government or Administration ...	Full powers.

(*c*) *Railway Department.*

(*i*) Executive or Assistant Engineer holding charge of a Division on a line under construction or survey ...	1,000
(*ii*) Engineer-in-Chief holding charge of a line under construction or survey ...	5,000
(*iii*) Agent of an open line	10,000
(*iv*) Railway Board	Full powers.

NOTE.—Agents of open lines may delegate to their Engineers-in-Chief, Executive Engineers, or Assistant Engineers holding charge of a division, such power of purchase as they deem fit up to the limits specified for lines under construction, and to their Chief Storekeepers up to the limits specified for Executive Engineers.

(*d*) *Army Department.*

(*i*) Director-General of Military Works ...	Full powers.
	Rs.
(*ii*) Divisional Commander	10,000
(*iii*) Officer Commanding an independent brigade; Director-General of Ordnance*; Director, Royal Indian Marine; Director-General, Indian Medical Service (for medical store depots); Director, Army Clothing; Director-General, Army Remount Department; and Controller of Contracts attached to the Quartermaster General, Army Headquarters	5,000
(*iv*) Officer Commanding a brigade, other than those included in (*iii*); Director of Ordnance Factories; Director of Ordnance Inspection and Director of Ordnance Stores	2,000
(*v*) Superintendent, Army Clothing Factory; Supply and Transport Officer on special duty in Kashmir; and Deputy Director, Royal Indian Marine	1,000
(*vi*) Chief of the General Staff; General Officers Commanding, Northern and Southern Armies; Adjutant General in India; Quartermaster General in India; Director, Medical Services, Army Headquarters, India; Military Secretary to His Excellency the Commander-in-Chief; Military Accountant General; Controllers of Military Accounts and Controller of Military Supply Accounts	500
(*vii*) Officer Commanding a station; Superintendent, Army Remount Department; Superintendent, Ordnance Factory; Government Inspector of Army Boots Factory, Cawnpore; Assistant Directors of Ordnance Stores; Inspectors (Ordnance Department); the Assistant Inspector in-charge of General Stores and the Proof and Experimental Officer, Balasore; Medical Storekeeper; Commandant, Indian Staff College; Assistant Director of Supplies; Assistant Director of Transport; and Assistant Director of Grass Farms ...	400
(*viii*) Officer Commanding a unit (including a hospital); Senior Medical Officer, Indian Medical Service, of a station; Recruiting Officer for Gurkhas at Gorakhpur; Officers (Ordnance or Departmental) in charge of depots; Assistant Inspectors (Ordnance Department) with the exception of the Assistant Inspector in charge of General Stores; Officer in charge of Supply Reserve Depots; Commissioned Officers Commanding Depot Transport Lines; Officer in charge of Supplies and Chief Chemical Examiner	40

* The Director-General of Ordnance has full powers of local purchase under Rule 5 in cases where the purchases are required to meet urgent field service requirements or to replace issue from mobilization reserves for the equipment of troops suddenly ordered on field service.

(e) Stores Department, India.

(*e*) Controller General of Stores		Full powers.
		Rs.
(*ii*) Metallurgical Inspector, Jamshedpur ...		500

NOTE 1.—The financial limits imposed under this rule in respect of purchases made under rule 3 (*a*) and 5 do not apply to the purchase of articles required on mobilisation or during the continuance of military operations.

NOTE 2.—These powers are subject to the rules of the budget system No sanction may be given which will involve expenditure from the budget grant of any future year. The powers extending to each sanction, whether against Army, Military Works or Marine funds. In the case of the Ordnance, Medical Store, and Remount Departments, the Divisional Brigade and Station Commanders are not competent financial authorities.

Rule 12.—*Power to sanction departures from the rules.*

The Government of India have power to sanction departures from the rules in cases in which such departure is absolutely unavoidable (subject to a report to the Secretary of State if the expenditure exceeds Rs. 50,000).

APPENDICES.

(*Not reprinted.*)

SECTION V.

PROCEDURE IN REGARD TO HOME INDENTS.

17. We have indicated our disagreement with the attitude of the Committee on the general question of the method of purchasing such non-indigenous stores as will still have to be purchased for the public service. In conformity with their views on this subject our colleagues suggest the introduction of a system of indenting for requirements which will enable the head of the Stores Department in India to exercise the wide discretion in regard to such purchases which they desire he should have. In our opinion the procedure indicated is unnecessary and will be found cumbrous and dilatory in practice.

18. It is therefore necessary to define the procedure which in our opinion should be observed (*a*) by indenting officers and departments, and (*b*) by the central agency, to enable the necessary scrutiny of indents to be carried out efficiently with the minimum amount of inconvenience and delay. The view we have expressed, and which appears to be in accordance with that of the Industrial Commission and of the Government of India, is that the Stores Rules in regard to the purchase of imported stores are based on sound principles and only require to be altered in certain minor respects so as to adapt them to present conditions and recent developments, particularly the proposed establishment of an Indian Stores Department. If this view is accepted the procedure of scrutinising the Home indents need not, we think, be complicated by any general endeavour to ascertain whether articles which must in any case be imported can be obtained of suitable quality and at a satisfactory price from *merchants* in India. Such action would tend greatly to delay a decision on the question whether the articles should be included or excluded from the Home indent, and would in our opinion have no good result. The reasons on which we base this opinion have already been explained in some detail.

19. As regards purchase of plant and machinery through Indian branches of British manufacturing firms, we have suggested in the amended Stores Rules the conditions which should govern such transactions. These conditions are generally in accordance with the recommendations of the Government of India contained in the despatch quoted above and due regard has been paid to the observations of the Secretary of State in his Despatch No. 5-Stores, dated 20th September 1918. We consider that, subject to those conditions, the Controller General of Stores, and other qualified officers as therein provided, should be free so to purchase plant and machinery when they regard it as advantageous to do so; but in as much as one of the main reasons urged by the Government of India for permitting this method of purchase is that the branch employed will be able to afford technical advice and assistance to the indenting officer and will also be able to erect the plant and correct any defects that may develop later, it seems to us to be almost certain that when the indenting officer requires such assistance, etc., he will either purchase the plant himself, or will ask the Controller General of Stores to do so, should such purchase not be within the powers assigned to him. We therefore assume that purchases of this nature, when contemplated, will not come within the scope of the Home indents and will therefore not affect the prompt transmission of indents to the Home agency for compliance.

20. The organisation which is being recommended for the Stores Department in India, and its intimate association with the Directors of Industries in the various provinces, should ensure that full information will be available in the headquarters of the Department and at its provincial agencies as to the capacities and developments of local industries. The Department should, therefore, by the aid of the information which we propose that it shall constantly receive from the Home agency as to Home prices, be able to decide in most cases without difficulty whether or not demands for imported stores can be satisfactorily met by articles of local manufacture. In special cases the Controller General of Stores, India, before coming to a decision whether or not it will be economical to purchase stores of Indian manufacture may find it necessary to consult the Director General of Stores, London, by telegraphic reference as to Home prices. To facilitate such references it might be advisable to consider whether the existing Stores Code, which was drawn up some years ago, but has been little used, could be adapted for the purpose. In the case of important contracts, such as for example a large hydro-electric scheme (and possibly for shipbuilding) when considerable delay must in any event probably occur between the submission of tenders and their acceptance, it may sometimes be feasible to call for simultaneous tenders in England and India to an identical specification, but for ordinary supplies we are advised that the invitation of simultaneous tenders presents many practical difficulties, not the least of which is that of coming to a prompt decision on tenders received from countries many thousand miles apart, especially when as often happens technical or other

questions are raised by tenderers and must be settled before the order can be placed. It may be well to quote here from the evidence of Mr. F. Palmer, C.I.E., a partner in the firm which acts as Consulting Engineers to the India Office. He said :—

> "The main difficulty in the way of simultaneous tendering by firms in India and Great Britain was the very frequent practice which firms had of slipping qualifying clauses into their tenders. The tender which appeared to be the lowest might not necessarily be so. All tenders had to be subjected to most rigorous examination and comparison and this ruled out the use of cables. The one that appeared to be a very favourable tender in response to say a call for a girder in which the steel was required to pass up to 30 tons might be found to contain an inconspicuous clause that the steel in the girder offered could only be guaranteed up to 25 tons. Provided the tenders were 'clean,' that is, free from all qualifications, he would accept the lowest whether from India or from Great Britain. Even in normal times he had found the prices to vary considerably in very short periods."

We therefore do not recommend the general practice of calling for simultaneous tenders. Even in the case of important works or installations, we consider that simultaneous tenders should only be invited under the advice of the Consulting Engineers or other officers responsible for the design and efficiency of the plant specified.

21. It will be for the Controller General of Stores in India to decide whether or not demands for imported stores can be satisfactorily met by the supply of articles of Indian origin. If they cannot be so met we consider that the demands should be passed to the Home agency for compliance and that the responsibility of the Stores Department in India regarding them should thereupon cease. We consider also that when simultaneous tenders have been invited and the Home tender is found to be the more favourable, the order should be placed by the Home agency and action on the demand on which it arises should be entrusted entirely to that agency.

22. In these circumstances the procedure for scrutiny which we propose is as follows : Indenting officers, and departments, and among these we would include local Governments and Administrations and the state and company-worked railways, should prepare, as they do now, separate indents for stores which in their opinion cannot be obtained advantageously of local manufacture and must therefore be imported. In preparing these indents, they will be guided by information which will be furnished to them from time to time by the central agency as to the development of local industries. We consider that theoretically it would be best for the Home indents thus prepared to be forwarded to the central agency for scrutiny before they are sent Home. In that case, they would after scrutiny be

countersigned by the Controller General of Stores and forwarded by him direct to the Director General of Stores, London, or other Home agency, for compliance. Should the Controller General of Stores on scrutiny of an indent consider any article or articles comprised therein to be such as could advantageously be obtained of Indian manufacture, he would either strike the item or items in question out of the indent, or suspend their supply pending further enquiries, informing the indenting officer of the action taken, but would not delay the whole indent pending such enquiry. In cases of small importance, it would probably be sufficient for him to warn the indenting officer that in future such articles should be obtained of local manufacture mentioning the probable source or sources of supply. The matter could then be investigated before the next indent was prepared. But, though theoretically the above procedure would afford the greatest security against articles being imported which might with equal advantage be obtained of Indian manufacture, we think that in practice it would suffice and would avoid the delay due to the scrutiny if, at the time the indent was sent Home, a copy of it was sent to the Controller General of Stores for scrutiny. If on making such scrutiny that officer wished to strike any item or items out of the indent, with a view to the substitution of articles of Indian manufacture, or to suspend the supply of such articles pending further inquiry, it would be easy for him, unless scrutiny were unduly delayed, to request the Home agency by telegraph to cancel or suspend the item or items in question and in time to prevent any action being taken towards their purchase in England The telegram should be confirmed by letter and the indenting officer should be informed. The indents should bear a certificate that a copy has been sent to the Controller General of Stores for scrutiny.

23. Whichever procedure for scrutiny is adopted we consider that when once an indent has been passed to the Home agency, whether the Director General of Stores, London, or the Board of Directors of the railway company concerned, or their Consulting Engineers, all responsibility for compliance with the indent should rest with the Home agency and not with the Controller General of Stores in India, and that all correspondence regarding the indent or the stores demanded should be carried on as at present between the Home agency and the indenting officer direct.

SECTION. VI.

ORGANIZATION.

24. Differing as we do from the majority of the Committee in our views as to the work to be undertaken by the new Department, *i.e.*, in respect of imported stores,—which they evidently expect to be bought freely in India whereas we consider that these should still be bought as a rule through the Director General of Stores, London,—it may naturally appear that we should logically hold that the staff which they recommend should be reduced. This would be so if the numbers and cost of the proposed staff could be directly correlated with the volume of work to be done; but for several

reasons this is not the case. The Committee obviously can make no reliable estimate of the extent to which local Governments, Native States, railway companies, municipalities and other *quasi*-public bodies will utilise the new agency; and even if the actual clients were known still only an approximate idea could be formed of the total volume of work to be done. Moreover the staff that would be necessary to transact any definite volume of business in the unusual conditions in which the new Stores Department will work must be largely a matter of speculation at the outset. And finally the Committee have held, for reasons which we consider good, that technical specialists must be employed in the several distinct purchasing and inspection branches; and within limits the precise amount of work that may fall to the lot of any such branch would not affect the necessity for retaining the services of these officers.

25. We are in agreement with our colleagues that, at the outset at least, the superior staff indicated by them as necessary for the work of the various branches appears to represent an irreducible minimum, and that even if the Department handles in practice a much smaller quantity of imported stores than the Committee anticipates, a corresponding reduction of the superior staff will not be found practicable. As regards subordinate establishments the numbers and therefore the cost may more reasonably be expected to depend on the volume of stores handled and we therefore incline to the opinion that, if the policy and procedure which we recommend is adopted, the Committee's estimate of cost under this head may in practice prove to be susceptible of reduction.

SECTION VII.

Relations of the Indian with the Home Stores Agency.

26. We agree with the Committee that the Store Department of the India Office should be placed under a High Commissioner for India; but we disagree with their view that this should only be done as a temporary expedient and that after the Indian Stores Department has been formed the Home agency should be made a branch of the Stores Department in India, though still under the control of the High Commissioner in regard to matters of establishment, discipline and law.

27. Even supposing that the High Commissioner would be willing, which we think extremely improbable, to accept the charge of the Department under such conditions, it seems to us that it would be quite impracticable for the Department itself to serve two masters. Either it must be wholly under the control of the High Commissioner or wholly under that of the Stores Department in India, and of these alternatives we have no doubt whatever that the former is preferable. We assume that the High Commissioner will exercise in respect of the Director General of Stores, London, those general functions of control and assistance which are now exercised by the Secretary of State for India and by the Stores Committee of the Council of India with his authority as explained in Appendix E to the Committee's report. We consider that such control and

assistance is very necessary and could only be efficiently exercised by an authority in immediate touch with the Director General in London. We cannot see that any useful purpose would be served by making the Department in England subordinate to the Department in India. On the contrary, we think that the Controller General of Stores in India will have enough to do in organising and running the Department in India without being saddled with any responsibility for the working of another Department 6,000 miles away. It appears to us that these two agencies should be quite distinct though working in co-operation and corresponding freely with one another.

28. If the central agency in India is established on the lines proposed it will itself scrutinise all indents in order to eliminate all items which should be purchased in India under rules to be laid down. Having done this it will pass the indents to the Stores Department in England for compliance. The agency in India and the agency in England will both be under the Government of India as will the High Commissioner himself if appointed. The functions of the two agencies will be parallel, one being charged with the duty of buying stores in India, the other with that of buying at Home. We can no more conceive that it would be practicable for the agency in India to control the agency in London than we can conceive the reverse. In fact, we are convinced that it would be impossible to carry on the London agency satisfactorily unless it is allowed a perfectly free hand to do its best, with all the local knowledge and experience which it possesses, to supply stores of satisfactory quality, and of the description required by the indenting departments, at the best price obtainable.

29. Both agencies must be considered to be the servants of the departments to which they make supplies, and must be responsible to them for the quality and price of the stores supplied. When questions arise in regard to quality, price or urgency it is essential that each supplying agency should be in direct touch with the departments served. Where questions of policy arise the matter must be decided by the Government of India after consulting either or both agencies and hearing their views. As regards the English agency, the views would probably be ascertained through the High Commissioner. In our opinion, the views of the Home agency are just as much entitled to consideration as those of the Indian agency, and there is no doubt that a Department which has built up its experience for over 50 years should be in a position to deal with problems arising in England better than a new Department which for several years to come can have but small experience and that almost entirely Indian.

30. There seems to us to be no reason why a separate agency in London should not be able to afford just as much assistance to the agency in India in the capacity of a distinct and separate Department as if it were treated as a branch of the latter. It is found practicable in India to have many agencies, *e.g.*, railways, having very similar duties, but independent of one

another, though working in co-ordination for the benefit of the country. So far as we can judge the system works well. A general control of the railways is maintained by the Railway Board, and in the case of the Stores Agencies control would be maintained by one of the departments of the Government of India presumably the Industries Department.

(Signed) G. H. COLLIER,

„ T. RYAN.

APPENDIX A.

LIST OF WITNESSES.

I.—Witnesses examined before the Committee.

Calcutta, 17th December 1919 to 12th January 1920.

(1) W. F. Marchinton, Esq., Deputy Controller of Munitions, Bengal.

(2) J. F. Lewis, Esq., Manager, Carriage and Wagon Department, Messrs. Burn and Co., Ltd., Howrah.

(3) J. G. Fulton, Esq., Bridge and Structural Department, Messrs. Burn and Co., Ltd., Howrah.

(4) H. Burkinshaw, Esq., Consulting Engineer with Messrs. Bird and Co., Calcutta.

(5) The Hon'ble Major-General W. H. B. Robinson, C.B., K.H.S., I.M.S., Surgeon General with the Government of Bengal.

(6) J. J. Meikle, Esq., O.B.E., V.D., Superintendent, Government Printing, India.

(7) Rai Abinash Chander Banerjee Bahadur, nominated by the Bengal National Chamber of Commerce.

(8) J. M. Bates, Esq., Manager, Shipbuilding Department, Messrs. Burn and Co., Ltd., Howrah.

(9) Lieutenant-Colonel C. E. G. Schrottky, R.A., Inspector of Gun Carriages and Vehicles, Jubbulpore.

(10) Jotindra Nath Ghosh, Esq., nominated by the Bengal National Chamber of Commerce.

(11) G. Wells, Esq., Controller of Stores, East Indian Railway.

(12) H. F. Davy, Esq., Officiating Superintendent of Local Manufactures and Government Test House, Alipore.

(13) M. N. Crawford, Esq., Assistant to the Chief Engineer, Telegraphs.

(14) M. L. Pasricha, Esq., Superintendent of Telegraph Stores.

(15) E. Daltry, Esq., Officiating Controller of Printing, Stationery and Stamps.

(16) F. W. Wadley, Esq., Controller of Stores, Eastern Bengal Railway.

(17) The Hon'ble Dr. Sir Nilratan Sirkar, Kt., M.D., Vice-Chancellor, Calcutta University.

(18) T. N. Banerjee, Esq., Superintendent of Stores, Corporation of Calcutta.

(19) Brigadier-General H. A. Young, C.I.E., C.B.E., R.A., Director of Ordnance Factories.

(20) C. P. Walsh, Esq., Secretary, Public Works Department, Bengal, (Roads, Buildings and Railways).

(21) T. A. Ferrier, Esq., C.B.E., Officer-in-charge, Mathematical Instrument Office.

(22) J. A. Simpson, Esq., Controller of Stores, Bengal-Nagpur Railway.

(23) Miller M. King, Esq., nominated by the Indian Engineering Association, Calcutta.

(24) Lieutenant-Colonel B. J. Singh, C.I.E., I.M.S., Inspector General of Prisons, Bihar and Orissa.

(25) R. C. Arbery, Esq., Officiating Metallurgical Inspector, Jamshedpur.

(26) H. E. Skinner, Esq., nominated by the Indian Engineering Association, Calcutta.

(27) A. James, Esq., Superintendent of Stores, Assam-Bengal Railway.

Rangoon, 16th to 20th January 1920.

(28) A. Rodger, Esq., O.B.E., Forest Research Officer, Burma.

(29) H. Walton, Esq., M.B.E., M.Sc., Executive Engineer, Ye-U Canal Division.

(30) J. C. Paulson, Esq., Superintendent of Stores, Burma Railways.

(31) J. W. Richardson, Esq., nominated by the Burma Chamber of Commerce.

(32) T. Fforde, Esq., Superintendent of Police Supplies, Burma.

(33) M. Oppenheimer, Esq., nominated by the Rangoon Trades Association.

(34) R. A. Horne, Esq., Dockyard Superintendent, Irrawaddy Flotilla Co., Ltd.

(35) T. E. Gibson, Esq., nominated by the Burma Chamber of Commerce.

(36) Major A. Whitmore, M.D., I.M.S., Civil Surgeon, Rangoon.

Madras, 27th January to 2nd February 1920.

(37) S. J. Green, Esq., nominated by the Madras Trades Association.

(38) H. F. DeCourcy, Esq., A.M.I.C.E., Superintendent, Public Works Stores, Madras.

(39) W. Sargeaunt, Esq., Locomotive and Carriage Superintendent, Madras and Southern Mahratta Railway.

(40) P. C. Woodd, Esq., Superintendent of Stores, Madras and Southern Mahratta Railway.

(41) A. R. L. Tottenham, Esq., I.C.S., Superintendent of Stationery, Madras.

(42) Lieutenant-Colonel F. E. Swinton, C.I.E., I.M.S., Medical Storekeeper to Government, Madras.

(43) J. W. Madeley, Esq., M.A., M.I.C.E., C.E., etc., Special Engineer, Corporation of Madras.

(44) The Hon'ble Mr. S. Cox, Chief Conservator of Forests, Madras.

(45) L. B. Green, Esq., M.B.E., Assistant Director of Industries, Madras.

(46) C. Crighton, Esq., V.D., Locomotive and Carriage Superintendent, South Indian Railway.

(47) A. H. Christie, Esq., Superintendent of Stores, South Indian Railway.

(48) A. P. Symonds, Esq., nominated by the Madras Chamber of Commerce.

(49) The Hon'ble Mr. H. H. G. Mitchell, Chief Engineer, Madras Port Trust.

Bombay, 5th to 16th February 1920.

(50) Engineer Lieutenant Commander R. H. Ansell, R.I.M., Marine Store Officer, Bombay.

(51) Engineer Captain C. F. Laslett, M.B.E., R.I.M., Inspector of Machinery, R.I.M., Dockyard, Bombay.

(52) Lieutenant-Colonel P. Johnson, C.B.E., D.S.O., of Messrs. John Fowler and Company, Bombay.

(53) G. R. Webb, Esq., M.I.E.E., M.B.E., V.D., Chief Stores Superintendent, Great Indian Peninsula Railway.

(54) C. B. Pooley, Esq., Executive Engineer, Lake Whiting District, Bhatghar.

(55) Captain N. F. J. Wilson, C.M.G., C.B.E., A.D.C., R.I.M., Director, Royal Indian Marine, Bombay.

(56) H. L. Richardson, Esq., nominated by the Bombay Chamber of Commerce.

(57) G. H. Thiselton-Dyer, Esq., Deputy Director of Industries, Bombay.

(58) Major G. H. Willis, C.I.E., M.V.O., R.E., M.I.M.E., Mint Master, Bombay, nominated also by the Institution of Engineers, India.

(59) P. J. Gahan, Esq., M.B.E., Controller (Sales), Indian Munitions Board, Bombay.

(60) J. C. K. Peterson, Esq., of Messrs. Tata Sons, Limited, Bombay.

(61) W. J. McCaulis, Esq., Chief Storekeeper, Bombay, Baroda and Central India Railway.

(62) Jehangir Bomanji Petit, Esq., nominated by the Indian Merchants Chamber and Bureau, Bombay.

(63) N. M. Muzumdar, Esq., nominated by the Indian Merchants' Chamber and Bureau, Bombay.

(64) H. Lees, Esq., Chief Storekeeper, Bombay Port Trust.

(65) Major C. F. Marr, M.B., I.M.S., Medical Storekeeper to Government, Bombay.

(66) N. B. Saklatvala, Esq., nominated by the Bombay Millowners' Association.

(67) K. S. Framji, Esq., B.A., L.C.E., Superintending Engineer, Central Division, Poona.

(68) F. Palmer, Esq., C.I.E., of Messrs. Rendel, Palmer and Tritton, Consulting Engineers to the India Office.

Nagpur, 18th and 19th February 1920.

(69) P. Davies, Esq., A.M.I.C.E., Under Secretary, Public Works Department, Buildings and Roads Branch, Central Provinces.

(70) H. Frederickson, Esq., Manager, Bengal Nagpur Cotton Mill.

(71) F. J. Plymen, Esq., A.C.G.I., Deputy Director of Agriculture, Western Circle, Central Provinces.

Calcutta, 23rd February to 1st March 1920.

(72) Rai Bahadur A. P. Mullick, M. A., Officiating Superintending Engineer, Assam Circle.

(73) Motilal Fumra, Esq., nominated by the Marwari Chamber of Commerce, Calcutta.

(74) Sagarmalji Harlalka, Esq., nominated by the Marwari Chamber of Commerce, Calcutta.

(75) The Hon'ble Mr. C. D. M. Hindley, V.D., Agent, East Indian Railway.

(76) C. Warren Boulton, Esq., of Messrs. Alfred Herbert (India), Limited, Calcutta.

(77) Dr. W. A. K. Christie, B. Sc., Ph. D., Chemist, Geological Survey of India, Officiating Deputy Assay Master, Calcutta.

(78) M. J. Cogswell, Esq., C.I.E., Controller of Printing, Stationery and Stamps, Calcutta.

(79) B. Heaton, Esq., Principal, Civil Engineering College, Sibpur.

(80) J. L. Reid, Esq., nominated by the Indian Engineering Association, Calcutta.

(81) A. C. Wright, Esq., of the Shalimar Paint Colour and Varnish Company, Limited, Calcutta.

(82) W. Hodgkinson, Esq., nominated by the Institute of Engineers (India).

Cawnpore, 4th to 6th March 1920.

(83) C. R. O'Malley, Esq., Offg. Director of Industries, United Provinces, Cawnpore.

(84) F. H. Vick, Esq., M.I.M.E., F.R.S.A., Agricultural Engineer to Government, United Provinces, Cawnpore.

(85) Lieutenant-Colonel W. B. Spalding, O.B.E., R.A., Chief Inspector of General Stores, Harness Factory, Cawnpore.

(86) E. R. Stevens, Esq., I.F.S., Conservator of Forests, Utilization Circle, United Provinces.

(87) The Hon'ble Mr. C. Y. Chintamani, Editor, "The Leader," Allahabad.

(88) J. G. Ryan, Esq., nominated by the Upper India Chamber of Commerce, Cawnpore.

(89) Rai Sahib Dr. Murari Lal, M. B., nominated by the United Provinces Chamber of Commerce, Cawnpore.

Lucknow, 8th and 9th March 1920.

(90) F. C. Freeman, Esq., Controller of Stores, Oudh and Rohilkhand Railway, Lucknow.

(91) F. J. Harvey, Esq., Agent, Oudh and Rohilkhand Railway, Lucknow.

(92) Colonel C. Ainslie, R.E., Commanding Royal Engineer, 8th (Lucknow) Division, Lucknow.

Lahore, 12th to 19th March 1920.

(93) E. A. Scott, Esq., C.B.E., Assistant Director of Industries, Punjab.

(94) Rai Bahadur Ganga Ram, C.I.E., M.V.O., Executive Engineer, Public Works Department (Retired).

(95) Colonel H. A. D. Fraser, R.E., Commanding Royal Engineer, 1st (Peshawar) Division.

(96) Hem Raj, Esq., of Messrs. Dina Nath Hem Raj and Co., General Merchants and Government Contractors, Lahore.

(97) C. F. Langer, Esq., O.B.E., Controller of Stores, North Western Railway.

(98) Major G. E. Nottidge, O.B.E., R.E., Officer-in-charge, Central Mechanical Transport Stores Depot, Rawalpindi.

(99) The Hon'ble Mr. F. W. Woods, C.I.E., Secretary to the Government of the Punjab, Public Works Department, Irrigation Branch.

(100) W. R. Macpherson, Esq., of Messrs. Spedding and Co., Lahore.

(101) A. S. Montgomery, Esq., Secretary to the Government of the Punjab, Public Works Department, Buildings and Roads Branch, Lahore.

(102) Lieutenant-Colonel B. C. Battye, R.E., D.S.O., Executive Engineer, Sutlej River Hydro-Electric Project Division, Rupar.

(103) F. A. Hadow, Esq., Agent, North Western Railway.

(104) Lieutenant-Colonel C. W. Wilkinson, C.M.G., D.S.O., R.E., Chief Engineer, North Western Railway.

Delhi, 22nd March 1920.

(105) C. G. Barnett, Esq., Superintending Engineer, Public Works Department, 1st Circle, Delhi.

(106) Banwari Lal, Esq., of Messrs. Bhana Mal Gulzari Mal, Delhi.

(107) R. Grant Govan, Esq., of Messrs. Govan Bros., Kashmere Gate, Delhi.

Simla, 22nd April to 21st May 1920.

(108) J. MacKenna, Esq., M.A., C.I.E., I.C.S., Agricultural Adviser to the Government of India and Director of the Agricultural Research Institute, Pusa.

(109) Major-General Sir H. W. Perry, K.C.M.G., C. B., C.S.I., R.A.O.C., Director of Equipment and Ordnance Stores, Army Headquarters.

(110) Brigadier-General R. E. Vaughan, C.B., Director of Supplies and Transport, Army Headquarters.

(111) A. J. Gibson, Esq., F.C.H., F.L.S., I.F.S., Forest Economist, Forest Research Institute, Dehra Dun.

(112) Major-General J. C. Rimington, C.B., C.S.I., Director General of Military Works, Army Headquarters.

(113) The Hon'ble Colonel (Temporary Major-General) Sir S. D'A. Crookshank, K.C.M.G., C.B., C.I.E., D.S.O., M.V.O., Secretary to the Government of India, Public Works Department.

(114) Brigadier-General L. R. Kenyon, C.B., R.A., Director General of Ordnance, Army Headquarters.

(115) Colonel G. S. Ogg, C.I.E., Director of Ordnance Inspection, Army Headquarters.

(116) Sir G. S. Hart, K.B.E., C.I.E., Inspector General of Forests.

(117) Lieutenant-Colonel H. M. Alexander, D.S.O., O.B.E., I.A., Controller (Textiles) and Military Assistant (Clothing), Indian Munitions Board.

(118) D. L. McPherson, Esq., Controller (Munitions Manufacture), Indian Munitions Board.

(119) R. W. Church, Esq., B. Sc., Mining Engineer, and Metallurgist, Railway Department.

(120) The Hon'ble Major-General W. R. Edwards, C.B., C.M.G., M.D., F.R.C.S.E., K.H.P., I.M.S., Director General, Indian Medical Service.

(121) Lieutenant-Colonel H. Rose, O.B.E., M.B., F.R.C.S.I., I.M.S., Deputy Director General, Indian Medical Service.

(122) Major-General Sir G. F. MacMunn, K.C.B., K.C.S.I., D.S.O., Quartermaster-General in India, Army Headquarters, Simla.

(123) The Hon'ble Mr. G. R. Clarke, O.B.E., I.C.S., Director General of Posts and Telegraphs.

(124) W. Sutherland, Esq., V.D., M.I.E.E., Officiating Chief Engineer, Telegraphs.

(125) The Hon'ble Major-General Sir A. H. Bingley, K.C.I.E., C.B., Secretary to the Government of India, Army Department.

(126) Air Commodore T. I. Webb-Bowen, C.B., D.S.O., Royal Air Force, Simla.

(127) Colonel W. D. Waghorn, C.B., C.M.G., R.E., President, Railway Board.

(128) E. A. S. Bell, Esq., C.I.E., F.C.H., Member, Railway Board.

(129) Lieutenant-Colonel W. M. Coldstream, R.E., Officiating Surveyor General of India.

(130) K. C. Roy, Esq., Representative of the Associated Press of India, Simla.

(131) The Hon'ble Rao Bahadur B. N. Sarma, Elected Member of the Imperial Legislative Council.

II.—Witnesses not examined orally by the Committee.

Bengal.

(132) A. C. Coubrough, Esq., of Messrs. Mather and Platt, Calcutta.

(133) The Hon'ble Mr. F. A. A. Cowley, C.I.E, Secretary to the Government of Bengal, Irrigation Department.

(134) Sir H. A. Farrington, Bart., Conservator of Forests, Bengal.

(135) Lieutenant-Colonel F. S. C. Thompson, O.B.E., M.B., I.M.S., Inspector General of Prisons, Bengal.

(136) J. H. Wiggett, Esq., M.B.E., nominated by the Calcutta Trades Association.

Assam.

(137) The Hon'ble Rai Nagendra Nath Chowdhury Bahadur, Chairman, North Sylhet Local Board, Assam.

(138) The Hon'ble Mr. O. H. Desenne, Secretary and Chief Engineer, Public Works Department, Assam.

(139) H. W. Fox, Esq, nominated by the Chittagong Chamber of Commerce.

(140) Rai Sahib Mono Mohan Lahiri, B.L., Pleader, District Court, and Chairman, Tezpur Municipality.

(141) N. O. Peters, Esq, I.S.O., Manager, Jorhat Railway.

Burma.

(142) The Hon'ble Mr. F. A. Leete, F.C.H., Chief Conservator of Forests, Burma.

Madras.

(143) A. A. Biggs, Esq., Chief Engineer, Madras and Southern Mahratta Railway.

(144) Major J. P. Cameron, I.M.S., Inspector General of Prisons, Madras.

(145) E. D. Puzey, Esq., V.D., Superintendent of Stores, His Exalted Highness the Nizam's Guaranteed State Railway.

Bombay.

(146) Captain F. N. Booth, I.A.R.O., Purchasing Officer, Mechanical Transport Stores, Bombay.

(147) Dr. E. J. Butler, M.B., F.L.S., Imperial Mycologist and Joint Director, Agricultural Research Institute, Pusa.

(148) Major D. S. Johnston, R.E., Executive Engineer, Presidency District, Bombay.

(149) Ambalal Sarabhai, Esq., nominated by the Ahmedabad Mill-owners' Association.

(150) R. H. Young, Esq., nominated by the Karachi Chamber of Commerce.

Central Provinces.

(151) D. Clouston, Esq., M.A., B.Sc., C.I.E., Director of Agriculture, Central Provinces

(152) H. D. Coggan, Esq., of the Central India Mining Company, Kamptee.

United Provinces.

(153) J. C. Ferguson, Esq., I.C.S., Officiating Commissioner, Northern India Salt Revenue, Agra.

(154) J. A. Kellie, Esq., Agent and Chief Engineer, Rohilkund and Kumaon Railway.

(155) Colonel E. C. Ogilvie, C.M.G., C.B.E., Commanding Royal Engineer, Meerut Division.

(156) W. F. Perree, Esq., President, Forest Research Institute and College, Dehra Dun.

Punjab.

(157) J. W. A. Grieve, Esq., I.F.S., Conservator of Forests, Eastern Circle, Punjab, Lahore.

(158) Rai Sahib Lala Panna Lal, nominated by the Punjab Chamber of Commerce.

(159) H. B. Phelps, Esq., nominated by the Punjab Trades Association.

(160) K. Preston, Esq., Electrical Engineer, North-Western Railway.

(161) Flight Lieutenant J. Robertson, R.A.F., Superintendent, Aircraft Factory, Lahore.

Delhi.

(162) J. S. Pitkeathly, Esq., C.V.O., C.B.E., D.S.O., Electrical Engineer, Delhi.

Simla.

(163) G. H. W. Davies, Esq., I.C.S., Controller (Industrial Intelligence, Home Indents, etc.), Indian Munitions Board, Simla.

(164) N. V. Holberton, Esq., Controller, (Timber Supplies), Indian Munitions Board, Simla.

(165) A. J. R. Hope, Esq., Superintending Engineer, Simla Imperial Circle.

(166 A. H. Silver, Esq., C. I. E., of Messrs. Mitchell and Company, Delhi.

(167) C. A. Williams, Esq., Deputy Controller (Munitions Manufacture), Indian Munitions Board, Simla.

III.—Directors of Industries and others

(168) D. B. Meek, Esq., Controller of Munitions, Bengal Circle.

(169)) J. P. Hardiman, Esq., B. A., I. C. S , Commissioner, Meiktila Division, Burma, (formerly Controller of Munitions, Burma):

(170) The Hon'ble Mr. A. Y. G. Campbell, C.I.E., I.C.S., Director of Industries, Mad ras.

(171) R. D. Bell, Esq., C.I.E., M.A., B.Sc., I.C.S., Director of Industries, Bombay Circle, Bombay.

(172) A. L. Hoyle, Esq., I.C.S., Director of Industries, Central Provinces.

(173) Rai Kanak Lal Barua Baliadur, B. C., Director of Industries, Assam.

(174) The Hon'ble Mr. E. A. H. Blunt, O.B.E., I.C.S., Officiating Financial Secretary to the Government of the United Provinces (formerly Director of Industries, United Provinces.)

(175) The Hon'ble Mr. C. A. H. Townsend, I. C. S., Director of Industries, Punjab.

APPENDIX B.

History of the rules for the supply of articles for the public service in India, 1862-1918.

Rules of 1862.

In Secretary of State's Financial Despatch No. 218 of 27th December 1862, it was laid down that all articles manufactured in England should be procured only through the Stores Department of the India Office. It will be convenient to trace the evolution of the stores rules from the year 1870 in which the Government of India under Financial Resolution No. 3381, dated the 9th September 1870, directed that the control over indents, estimates and accounts of stores procured from Europe should be exercised in the Finance Department.

Rules for procedure, 1871.

2. After preliminary correspondence with the departments concerned, the Government of India issued a Resolution (No. 1267, Finance Department, dated the 21st July 1871) detailing the procedure to be adopted in the submission of indents and the preparation of estimates and accounts for civil and military stores (the annual expenditure in England on stores then averaged £1,352,000, of which £810,000 was for military stores). There is no trace in this resolution of any policy of encouragement of local industries, nor was the question of local purchase referred to.

Rules of 1875.

3. A revised set of rules was issued by the Government of India in Finance Department Resolution No. 3991, of 14th October 1875, laying down that articles required for the public service from Europe or America must be obtained by indent on the Secretary of State and were not to be bought in India, except :—

(*a*) with previous sanction of the Government of India, or local government, when inconvenience to the public service would arise owing to delay in supply of stores indented from England;

(*b*) with sanction of head of department when small supplies are urgently necessary;

(*c*) when articles are of a perishable nature;

(*d*) articles of occasional consumption to keep which in stock would be obviously less economical than occasional purchase in India.

These rules were communicated to the Secretary of State under Government of India No. 374 of 14th October 1875.

Proposals in 1876 for purchase in India.

4. Lord Salisbury was of the opinion that a change in procedure might be adopted with advantage. In his Despatch No. 4771 (Financial) of 7th December 1876 he reviewed the whole question and referred to the Secretary of State's Financial Despatch No 218 of 27th December 1862. It was pointed out that since that date payments for stores had greatly increased; and that the arrangements under which specified sums were allotted to provincial governments to defray expenditure gave those governments a direct interest in purchasing stores on the most reasonable terms.

For these and other reasons he had recently appointed a committee to enquire into the functions and administration of the India Office, Store Department, and he forwarded extracts of the committee's report dated 31st October 1876.

The Secretary of State went on to say—

"The Committee, having regard to the importance of reducing as far as possible payments in England as well as of expediting the supply of stores for India, recommended that, in substitution of the present rule requiring orders for all stores to be given through the India Office, it should be left to the Government of India and local governments to decide as to the mode in which, and persons by whom, supplies of any kind might be obtained, subject to the condition that nothing, except articles of Indian origin, should be purchased or ordered in India unless it could be paid for on delivery there after approval, and that no advances should be made to any agent or firm in respect of such service."

It was stated further that the committee pointed out that there were certain classes of stores which obviously could not advantageously be procured in India (*i.e.*, special machinery,

railway, engineering and telegraph plant) and which must necessarily continue to be obtained through the Stores Department.

In conclusion the Secretary of State approved the recommendations of the committee and requested the Government of India to issue the requisite instructions for carrying them into effect. The main points in the extracts of the committee's report were :—

(*a*) They were impressed with the importance of doing all that is possible to diminish the demands made by India for stores to be sent from England and to stimulate the development of a local system of supply in India. The conditions under which the present system arose of requiring all articles that have to be purchased in England to be supplied through the Store Department of the India Office were, to a considerable extent at least, obsolete.

(*b*) The introduction of provincial responsibility for local expenditure justified, if it did not require, a considerable relaxation of the present rule, irrespective of the general grounds of policy that suggested the propriety of encouraging the growth, both of truly local sources of supply and of a system of local agency for supplies not of Indian origin, in substitution of the centralised agency of the Store Department of the India Office.

(*c*) While all special machinery and appliances, such as engineering, railway and telegraph plant and material, would almost necessarily be obtained through the Store Department, a considerable proportion of miscellaneous stores might be got from local sources at reasonable prices, due care being taken to secure a satisfactory quality.

(*d*) As to the extended resort to sources of indigenous origin for stores in substitution for articles obtained from England, all that the committee could usefully do was to support the proposal that the Government of India should be strongly urged to give special attention to the subject. The committee remarked that through the extension of existing government establishments—such as the tannery at Cawnpore—might be suggested among other means of attaining the object in view, it was much more to be desired that the independent action of private persons or firms should be encouraged and developed, and this could only be accomplished by giving to such persons or firms a fair amount of orders.

Rules of 1878—Stores to be obtained through Indian Agents.

5. The Government of India accordingly, in Financial Resolution No. 912, of 16th February 1877, consulted the Military, and Public Works Department and local Governments in regard to rules and restrictions which might be expedient to lay down in substituting local purchase of certain stores for the agency of the Store Department of the India Office. On receipt of replies the Government of India in the Finance Department issued Resolution No. 3947, of 8th November 1878, which was briefly as follows :—

The Governor-General in Council observes that the following stores should still be obtained from Europe :—

(*i*) Special machinery and appliances including railway plant and material for construction or working of telegraphs, railways, or other engineering works which cannot be advantageously procured in India.

(*ii*) For the Army.

(*a*) Malt liquor, clothing material for European troops, and other European manufactures required on so large a scale as to be beyond the resources of local markets.

(*b*) Military supplies of a special nature, usually obtained from the War Office, or the Admiralty, or from contractors working under their supervision.

(*iii*) For the Indian Marine.—As for the Army.

(*iv*) Writing paper of European manufacture, so as to secure uniformity and durability in public documents (but, conditional on uniformity, local Governments may obtain all paper of European manufacture, excepting loan and water mark paper, from local contractors).

(*v*) Stamps.

(*vi*) Medicines, but local Governments may buy medicines in the local market if paid for from provincial funds.

It is to be borne in mind that the object is to relieve the Store Department of the India Office of petty detail and that indents on that Department are to be confined, as far as possible, to the few articles of large expenditure which may not be obtainable through local agency of a satisfactory quality, or without undue extra expense or inconvenience.

The following articles are to be obtained, as far as practicable, independently of the India Office by local purchase or direct from Europe, or America from manufacturers or through private agents.

(*a*) books and periodicals.

(*b*) type and printing materials.

(*c*) stationery of all kinds except that as provided for in (*iv*) above.

(*d*) all other civil stores except the marine stores as in (*iii*) above.

In respect of the above rules the Governor-General in Council observes that the changes now ordered are not suggested with a view to direct saving in the actual cost of stores; their object is to relieve the Store Department of the India Office of petty detail and to reduce the disbursements of the home Treasury for Stores which are expended in India.

A copy of this Resolution was forwarded to the Secretary of State with Despatch No. 437, of 14th November 1878. As an example of the thoroughness with which the Government of India intended these changes to be carried out a Resolution in the Finance Department No 3950, of 8th November 1878, was issued, directing that the Surveyor General should obtain his supplies for 1879 80 as far as possible independently of the India Office Store Department and commenting on the necessity of obtaining instruments and chemicals and materials for photographic and lithographic work through that department.

Secretary of State accepts the 1878 rules.

6. In despatch No. 94 of 13th March 1879, the Secretary of State considered the above quoted Resolution No. 3947 of 8th November 1878, by the Government of India for the provision of European stores otherwise than through the agency of the India Office. He observed that the Resolution was in general accordance with the views expressed in Lord Salisbury's Financial Despatch No. 477 of 7th December 1876, relative to the expediency of encouraging the local supply of stores. He directed that the special attention of local Governments should be drawn to the importance of substituting local manufactures for European articles even at some temporary increase in cost.

As regards the provision of stores not produced in India, the practice of dealing with merchants or agents on the spot should be adopted rather than that of issuing direct orders for the supplies to persons in England; but, when it was impracticable to procure stores from Europe through local agencies to be paid for in rupees in India, the existing system of indenting through the India Office was not to be departed from.

Payment in India may not be advantageous.

7. The Government of India in Despatch No. 283 of 8th September 1879, pointed out that employment of a local agency for the importation of foreign stores and payment in rupees in India, as opposed to dealing direct with the foreign supplier might lead to sacrifice of public money, and asked the Secretary of State to reconsider the orders on this point, and to allow the instructions contained in their Resolution No. 3947, of 8th November 1878, to remain in force.

Return to policy of 1862 with limited local purchase.

8. With Despatch No. 166, dated 27th May 1880, the Earl of Kimberley forwarded reports by the Director General of Stores, and by the Inspecting Engineer for State Railways and Engineering Supplies, India Office, on the question of direct purchase. Both these officials were strongly averse to the purchase of European stores other than through the organised agency of the Store Department of the India Office.

The Secretary of State considered that the objects aimed at by Her Majesty's Government had been imperfectly appreciated. These objects were:—

(*a*) reduction of the amount of bills drawn by the Secretary of State in Council against the Government of India by encouraging local purchase of, and payment for, anything the local market could supply;

(*b*) economy in India by a system of cash payments by local authorities;

(*c*) fostering the development of local industry.

The language of the special committee of 1876 might not have been so clear as was desirable, and it was not intended that local governments should be free to substitute for the agency of the Store Department, either directly or indirectly, that of some firm in England, nor was it intended that any firm should be constituted as agents in India for the purchase of stores. He desired that orders might be issued that when stores were of such a nature that they had to be purchased in England, there should be no departure from the system of forwarding an order on the Store Department of the India Office, which was the proper agent for the purchase of stores in England: that the purchase in the local market of such special stores as railway plant and material should be limited to articles usually procurable in the local market, and not extended to purchases in England either directly or through agents: and that it should again be announced that it was the wish of Government to give the utmost encouragement, consistent with the true economy, to the supply of articles by the local market.

Rules of 1880.

9. The Government of India accordingly issued Resolution in the Finance Department No. 3574 of 3rd November 1880, relative to the supply of articles of European manufacture required for the public service in India.

The principal rules were:—

(*i*) All European articles other than books, newspapers, etc., shall be obtained by indent upon the Secretary of State, and, save as hereinafter provided, must not be bought in India, or direct from Europe, independently of the India Office.

(*ii*) European articles, procurable in the local market, which can be purchased after inspection and paid for on delivery, may be bought in India, with the previous sanction of the Government of India, or local government as the case may be,

(*a*) when it is more economical to do so;

(*b*) when inconvenience to the public service is anticipated by delay in supply of stores indented for from England;

(*c*) when articles are of a perishable nature.

(*iii*) The utmost encouragement consistent with true economy should be given to the supply of European articles by the local market; and whenever it is possible to do so even at some temporary increase of cost, articles of manufacture, or of indigenous origin should be substituted for European articles.

This Resolution was forwarded to the Secretary of State by the Government of India under their No. 366, of 9th November 1880.

Resolution of 1883. Policy of encouragement of local manufactures.

10. The next Resolution was that issued by Lord Ripon's Government in 1883 (Resolution No. 185, Finance Department of 10th January 1883).

This was a very comprehensive document, recapitulating the existing rules and the method of submitting the annual statements

required by the Secretary of State. Among the appendices was one giving a list of articles which were procurable of Indian manufacture and the firms from which they were procurable. It contained a very definite pronouncement by the Government of India on the subject of encouragement of local industries. In view of its importance it will not be out of place to give somewhat full extracts.

Paragraph 2.—All articles required for the public service which cannot be manufactured in India are, as an almost invariable rule, to be obtained by indent on the Secretary of State. The Store Department of the India Office constitutes a special agency, which is maintained for the express purpose of purchasing stores in England on behalf of the Government of India save in the special cases hereinafter mentioned. Stores of European manufacture must not be bought in India or obtained direct from Europe independently of the India Office.

Paragraph 3.—The special cases, in which with previous sanction of Government of India or of local governments as the case may be, stores of European manufacture may be obtained in India are:—

(*i*) when for any special reason it may be more economical to do so;

(*ii*) when stores indented for from England have not arrived and inconvenience to the public service is anticipated from delay in the supply;

(*iii*) when the articles are perishable;

Paragraphs 4 to 11 deal with the method of submission of indents. The established proportion is to be taken as three years' supply and is to be based on the average of the previous three years' consumption.

Paragraphs 12 to 19 deal with the supply of books, newspapers, etc., which are exempted from the general rule and are to be obtained by direct orders to agents or publishers in Europe or America. Parliamentary papers are to be obtained from the Secretary of State.

Paragraphs 20 and 21 deal with preparation of annual estimates for stores.

Paragraphs 22 to 27 give detailed instructions for the returns of expenditure on stores required by the Secretary of State in order that he may observe the financial effect of the change in the mode of obtaining stores by substitution articles of local manufacture for imported stores.

Paragraph 28 reads as follows:—

"The orders of the Secretary of State make it incumbent on all officers of Government requiring stores of European manufacture to obtain them by indenting on the Secretary of State, and permit of purchases in the local market of articles made in Europe and America only under the special circumstances mentioned in paragraph 3 of this resolution."

"The Governor-General in Council, therefore, desires again to invite the special attention of local governments to the expediency of supplying the wants of Government by the purchase in the local market of articles of *bona fide* local manufacture. The Government of India is desirous to give the utmost encouragement to every effort to substitute for articles now obtained from Europe, articles of *bona fide* local manufacture or of indigenous origin, and where articles of European and of Indian manufacture do not materially differ in price and quality, the Government would always be disposed to give preference to the latter, and the Governor-General in Council desires to remind all officers of Government that there is no reason why articles manufactured in

India should not be obtained locally, even although the raw material necessary to their manufacture may have been originally imported from Europe. It is most important to bear in mind the distinction between articles of European manufacture and articles produced, or worked up in India from imported material; the former should not, save in exceptional cases, be purchased in the "local market, while the latter should by preference be purchased locally whenever the quality is sufficiently good, and the price not higher than the cost of laying down the imported article. There are many articles which may not be immediately obtained in the local market, but which can be made in the event of Government encouraging the manufacture."

Paragraph 29 refers to the appendix enumerating articles of Indian manufacture so far as have yet been ascertained by the Government of India.

Finance Committee in 1886 recommend a Director of Stores.

11. In July 1886 the Finance Committee submitted to the Government of India a note containing proposals for effecting economy in, and securing due control over, the purchase of stores required for Government service in India.

They noted (in detail) the following expenditure in thousands of rupees.

	1882-83. Rs.	1884-85 Rs.
Value of stores purchased through Secretary of State.	1,43,90	1,90,79
Value of imported stores purchased in India.	40,26	65,18
Value of stores manufactured in India.	39,42	70,71

They pointed out that the expenditure on stores represented a very large item in government expenditure. The total expenditure in England and India during the years under review was (in thousands) Rs 2,24,19 and Rs. 3,26,69, respectively, while the expenditure in India alone was Rs. 80,29 and Rs. 1,35,90. They considered that sufficient attention was not given to the rules contained in Government Resolution No. 185 of 10th January 1883, and that European stores were freely brought in India with resulting loss to government in their estimation of 20 per cent. They observed that the Secretary of State had drawn the attention of the Government of India to this point from time to time.

They, therefore, concluded that the supervision in India with regard to store indents was insufficient and they made the suggestion that there should be attached to the Government of India in the Finance Department an expert official to supervise the execution of all store indents reporting periodically to Government the result of his acts and observations. They said it was clear that Government must suffer considerable loss from the delay in complying with indents. They failed to see any necessity for demands of an ordinary nature being dealt with in any way at the India Office except by officers of the Store Department, who should, in the matter of purchase of stores, be considered as servants of the Government of India. An examination of the causes of delay and faulty compliance with indents suggested to them the expediency of the Store Department of the India Office being brought in whole, or in part, under the direct control of the Government of India.

Proposal to subordinate Director General of Stores to Government of India.

12. The Government of India in addressing the Secretary of State (Despatch 256 of 27th September 1887) on the matter made the following observations :—

(*i*) They were satisfied that they could as a general rule buy European stores at a smaller cost through the agency of the India Office Store Department than through any other agency, especially in regard to railway stores.

(*ii*) The expenditure in India on European stores was very large, but to a large extent unavoidable; in the case of railway works no amount of foresight could prevent large demands arising for articles of European manufacture.

(*iii*) The purchases of European stores in India would be largely reduced, and would not be made except in cases of real urgency, if the system of supply by the India Office were as unobjectionable in other respects as it was in the matter of price and quality of articles supplied. Several objections did exist in the system as then worked, and they were convinced that the removal of these objections was a necessary preliminary to a stricter enforcement of the rules.

(*iv*) The most important objection, on which there was practical unanimity on the part of indenting officers, was dilatoriness in execution of indents resulting, necessarily, in a multiplication of local purchases.

(*v*) They agreed with the Finance Committee that the requirement of the Secretary of State's sanction to each indent was a cause of material delay amounting in almost every case to a month.

(*vi*) There appeared to be great delay in calling for tenders and giving out contracts and they could conceive no reasons which would justify such delays. They recommended the Indian plan of inviting periodical tenders for small stores and supplies in constant demand; and also suggested a more prompt delivery of stores after contracts had been given out.

(*vii*) Another objection, which existed in the system in force, arose out of the attitude which the Store Department had been permitted to assume both toward the Government of India and indenting officers. Much of the advantage to be derived from an agency for purchase of stores in England was lost through the independent attitude assumed by the Store Department. The head of the Store Department should understand that he was the agent of the Government of India and responsible not for the propriety of their proposals but for the prompt execution of their orders.

(*viii*) They claimed that if the Store Department were made thoroughly efficient in the points noticed, if orders were promptly executed and if the Department occupied the position of an agent so that officers might be reasonably certain of obtaining the articles for which they had indented, they would be in a position to deal effectively with the purchase of European stores by prohibiting purchase in India except in cases of real urgency. They proposed that controlling officers should be allowed to sanction local purchases of European stores under certain other conditions besides urgency.

(*ix*) Finally, they did not endorse the proposal of the Finance Committee for the appointment of a Director of Stores for the whole of India. They recognised the advantage as far as the Public Works Department was concerned in having one purchasing authority at the presidency towns and at Karachi and, as the port storekeepers were already recognised as a channel for such purposes as far as railways were concerned, they proposed issuing orders under which the port storekeepers would be more fully utilised by all Public Works Department officers as their agents for purchase of all articles whether of European or local manufacture.

These orders were issued by Resolution No. 327-A. G., of 21st December 1887, in the Public Works Department.

Director General of Stores to remain subordinate to Secretary of State.

13. The reply of the Secretary of State was contained in his Despatch No. 191 (Financial), dated 26th July 1888. He stated that he had satisfied himself that considerable improvement had lately been effected in the working of the Store Department and that no pains would be spared to bring about further improvements as opportunity might occur.

In respect, however, of the Government of India's remark that the Director General of Stores should be considered as the agent

of the Government of India, he considered it would be more correct to describe the Government of India as being in these matters the agent of the Secretary of State. Under the Act for the Better Government of India, the expenditure of the revenues of India both in India and elsewhere was subject to the control of the Secretary of State and was incurred upon his responsibility. It was only by his delegation to the Government of India of a portion of the power entrusted to him, which he did with complete confidence that it will be well exercised, that it was possible for the Government of India to purchase stores with that freedom from minute check essential to the prompt despatch of business in India. It would, however, be entirely contrary to the spirit of the Act if the Secretary of State were to divest himself of the control over the officer in Great Britain whom he had appointed to manage the purchase and despatch of stores for India and for all of whose acts he alone was responsible to Parliament. It was further necessary for him to point out that for any interference with the literal execution of indents, it was the Secretary of State in Council who was responsible and not the Director General of Stores.

The Secretary of State went on to say that the supply of all minor articles might be accelerated by the constitution of depôts for such stores at the five great ports in India. He accordingly suggested that the supply of stores from England might be reconsidered (in conjunction with utilisation of services of port storekeepers) from this point of view with the intention of amalgamating indents for simultaneous purchase in England and subsequent despatch to the ports for distribution. Although he observed that the Government of India doubted the expediency of appointing a Director of Stores in India, he was, however, disposed to think that a valuable check on all transactions, particularly in respect of the economical purchase of stores locally, might be secured under the control of some such superior officer and he desired to commend this arrangement to the further consideration of the Government of India.

He contended that it would be an abuse of the rules allowing purchase of European stores if want of forethought or care in preparing indents for stores, which ought to be obtained from England, made it necessary to have recourse to purchase in India. True economy demanded that purchase in India should be limited to articles produced or manufactured in that country at a price which compared favourably with similar articles of European manufacture.

Government of India ask for permission to purchase locally in emergencies.

14. The Government of India replied in their Despatch No. 219 of 25th December 1888, that the question of appointment of a Director of Stores would receive their further consideration, and that, if they were not able to satisfy themselves that such an appointment was necessary, they might possibly go as far as to adopt the suggestion of utilising port storekeepers for such a duty and of placing under their care a small depot of railway and public works stores in general use.

In regard to the question of local purchase of European stores in India they asked that the second rule might be amended as follows:—

> "When stores indented for from England have not arrived or when a sudden emergency has arisen and serious inconvenience to the public service is anticipated from the delay which would occur if an indent for the stores required were sent to England".

Secretary of State agrees to local purchase in emergencies.

15. The Secretary of State in his Despatch No. 46 (Financial), dated the 28th February 1889, agreed with the Government of India that rule 2 should be relaxed in case of sudden emergency but that it should be made clear that mere non-arrival of stores indented for was not to be treated as reason for local purchase.

The amended rule was to read:—

> "When stores indented for from England have not arrived or when a sudden emergency has arisen, and in either case only if serious inconvenience to the public service would be caused by waiting for the stores from England."

This amendment was issued under Finance and Commerce Resolution No. 2586 of 23rd May 1889.

Committee on Store Department, India Office, 1888.

16. In despatch No. 146 (Financial) of 4th July 1889, the Secretary of State transmitted for the information of the Government of India the 1st and 8th reports of the special Committee on home charges issued in July 1888 and January 1889.

The reports dealt with the question of purchase of stores and an examination into the organisation of the Store Department. Taking the figures for the year 1887-88 they found that the cost of the Store Department (including £12,113 for Consulting Engineer's fees and expenses) was £73 242 against a total expenditure of £2,327,978, *i.e.*, 3·15 per cent. This total, however, included freight £193,480 and £50,728 for arms and clothing taken by troops.

The cost of the material inspected by the Consulting Engineer was £910,906 the cost of inspection being 1·330 per cent.

The value of stores actually inspected by the Store Department, excluding £118,055 for stamps and malt liquor for which special arrangements were made, was £635,136; and the net cost of the India Store Department £61,129. Deducting payment for inspection of all kinds both by the Store Department and by other government departments, the cost of purchase agency work, arranging shipment, etc., was found to be £45,874 or 1·971 per cent.

Appointment of Director of Stores in India considered.

17. In their despatch No. 126 of 6th May 1890, the Government of India laid before the Secretary of State their views on the appointment of a Director of Stores in India. They did not consider that any single person could exercise a better control over local purchase than was exercised by the various heads of departments, and, having regard to the enormous area over which his control would extend, they were of the opinion that the time entailed in the scrutiny of indents would make the scheme so unworkable that officers would be forced to choose between a departure from the rules at serious consequences to themselves, or delay in completion of works. Neither did they consider the amalgamation of indents in India by such an officer to be feasible.

As regards store depôts at ports they had considered the question from the aspect of railways, who would be the largest users. They pointed out that, whatever system was adopted for state railways, guaranteed railways, however constructed, must be allowed to make their own arrangements. That as far as state railways were concerned each was served by a different port hence each line would in effect still have its own reserve depôt, which it was the special object of the proposed system to prevent.

Their general conclusion on the whole question was that the appointment of a Director of Stores was not required for the following reasons :—

(1) Such an appointment with the necessary office establishment would cost a considerable annual sum and its tendency would be to increase.

(2) It would be almost impossible to find an officer combining the necessary qualifications, or if found to replace him. The result would probably be that experts in various branches would be called for.

(3) As regards local purchases this interference would be productive of no practical good.

(4) The proposed amalgamation by him of indents on England would also lead to great delays and thus increase what was considered to be the greatest evil in connection with the supply of stores from England.

(5) No general depôts of railways stores are required in the present circumstances of state railways in India and his intervention in the case of line depôts would be useless.

Secretary of State abandons proposal.

18. The Secretary of State in his despatch No. 191, (Financial) of 4th September 1890, agreed to abandon the proposal for the appointment of a Director of Stores in view of the strong objections raised by the Government of India.

Proposal to relax rules prohibiting local purchase of steel articles.

19. In their despatch No. 66 of 5th March 1889, the Government of India, in forwarding an application from Messrs. Richardson and Cruddas of Bombay for permission to tender for the supply of bridgework, girders, etc., made up in India from

imported bars and plates, gave it as their opinion that the prohibition of purchase in India of articles made of iron and steel should be relaxed, as far as bridgework, girders, iron roofing, etc., were concerned, provided that proper arrangements could be made for inspection of the material to be used and of the finished structure.

Secretary of State not in favour of proposal.

20. Lord Cross replied in Despatch No. 161 (Financial) of 25th July 1889. While concurring in the desirability of encouraging local supply, he was of the opinion that the practical difficulties in providing for adequate inspection in India for contracts for bridgework, etc., were great, and he enclosed for the attention of the Government of India a report made by his Consulting Engineer—Sir A. Rendel—on the quality of iron imported and its inspection. He thought that rejections for defective material and workmanship would prove both ruinous to contractors and injurious to Government and that, as recognised in the despatch under reply, the absence in India of mechanical and chemical appliances for testing iron and steel would add greatly to the difficulties of inspection. Nor could he lose sight of the consideration that the economical advantages secured by free competition would be lost owing to the limited number of capable firms in India. Before coming, however, to any decision in the matter he would be glad to know how the Government of India proposed to overcome the difficulties referred to. He would then be prepared to consider any suggested arrangements under which such extension of the manufacture of iron work could be brought about.

Government of India recommend appointment of inspectors.

21. The Government of India in their despatch No. 338 of 15th October 1890, transmitted to the Secretary of State a memorial signed by Messrs. Richardson and Cruddas and 34 other firms, and representations from the Government of Bombay and from the Chambers of Commerce at Madras and Karachi, in favour of some relaxation of the restrictions imposed on the purchase of supplies of iron and steel work in India. They said that it was evident from the papers forwarded that there was a very widespread feeling among iron manufacturers in India that their operations were unduly hampered by the prohibition of orders on behalf of Government. That there was some force in the argument, advanced in paragraph 6 of the memorial, that whereas on the one hand every encouragement was given by Government to the development of technical education, on the other hand the rules restricted the employment of those who had been educated in the technical institutes which had been established. This consideration lent weight to their opinion that, if proper safeguards could be introduced, some relaxation of the existing rules restricting local manufacture of iron and steel were eminently desirable. They proceeded, therefore, to consider how the difficulties mentioned by the Secretary of State could best be met; their proposals summarised were as follows:—

Firstly.—As regards inspection, as we cannot hope at present to obtain competent inspectors in India we propose that two qualified inspectors, thoroughly acquainted with the system obtaining at the India Office should be engaged on regular covenants to serve in India for not less than 5 years.

These men would be stationed at Bombay and Calcutta, and would make inspections elsewhere as required and train other men so that India might eventually obtain a competent staff.

Secondly.—As regards delay that might be expected to arise in consequence of rejection of material, we are disposed to consider this fear to be exaggerated by Sir A. Rendel, since it will not be to the advantage of local firms competing for government orders to import inferior material; but that this is a question to which experience alone can furnish a conclusive answer.

Thirdly.—As regards testing, there are many objections to testing in England, as suggested by Sir A. Rendel, material to be made up in India and complications would arise if rejections were made in India of material passed by the Home inspectors; on the whole we do not consider that this condition is one that can fairly be imposed on Indian manufacturers. There are a few testing machines in India and firms are prepared to provide the necessary testing machinery.

Fourthly.—As regards the economical dangers liable to result from the absence in India of free competition we are of opinion

that the scheme should not be allowed to drop on account of this fear. If the manufactured materials required can be obtained at about the same price and as good as if imported from England, there are undoubted administrative and economic advantages in procuring them in India. It is not necessary that every piece of iron work should cost no more than if imported from England, and if, on the whole, the scheme is likely to give satisfactory results it is in our opinion worth a trial.

The despatch went on to state that they had had under consideration the question of some limitation on the powers of local governments to give orders for local manufacture either in the form of a money limit, or, in cases of bridges, of a certain length of span, or a combination of both. On the whole, however, they were of opinion that no such restriction was necessary. They would explain to local Governments that the proposed relaxation of the rules applied generally to isolated works only and that large indents, such as those for the complete anticipated requirements of railways under construction, must continue to be sent to the India Office.

In conclusion they observed that the main preliminary feature of the present proposals was the appointment of the two competent inspectors and they requested that early steps should be taken to secure their appointment if their views commended themselves to the Secretary of State.

Secretary of State sends reports by Director General of Stores and Consulting Engineer.

22. Lord Cross in reply (Despatch No. 3-Financial of 8th January 1891) stated that it was with pleasure that he received the information afforded in the papers of the great progress made in recent years in the manufacturing industry of India and that he was desirous of taking any steps which might be conducive to its encouragement if not opposed to the general principles regulating the supply of European goods for the service of Government. Before, however, acting on the proposal made by the Government of India, that two qualified inspectors should be appointed by the Secretary of State to overcome the difficulties arising from the necessity for proper inspection, he wished the Government of India to consider carefully the observations in notes by the Consulting Engineer and the Assistant to the Director General of Stores.

On the general question, however, it was left to the Government of India, after consideration of the above papers, to adopt such measures and impose such limits as they might consider desirable for the purpose of giving fair and thorough trial to the experiment of obtaining in India articles made of iron and steel manufactured locally. Care was, however, to be taken to guard against any supposition that these measures were adopted in any other interests than those of economy and against any claim for the protection of local industry, or for compensation in event of its being found necessary to discontinue the practice of inviting tenders in India.

Sir A. M. Rendel, the Consulting Engineer, considered that, except in respect of boilers or engines, the workmanship in India was equal to the ordinary requirements of railways, but that the difficulties in the way of supplementing English with Indian labour were:—

(*i*) That India was not a metal producing country.

(*ii*) Danger of work contracted for in India going into bad hands.

(*iii*) The danger from want of competition, of getting an article not only inferior to, but more costly than, the English one.

As regards the first objection the advantage to Government in point of cost would not be in proportion to the value of the goods ordered, and he reckoned that taking the articles named in an appendix to the despatch half their value would be for material and transport which must be paid for in England. As regards the second objection he suspected that a large number of those whose names were attached to the memorial would be found on enquiry to be incompetent to execute work, or to be more or less agents for English manufacturers. The third objection he thought could be got over by comparison of prices, or in more important cases by

simultaneous tenders. In regard to inspection he did not think the plan of sending out two inspectors necessary at present. He thought too much time would be occupied in travelling and that the heat for six months in the year would militate against efficient work and that the appointment of such officers at present would shew that Government had adopted a policy of preference.

The memorandum by the Assistant to the Director General of Stores dealt with the delay that might occur in comparison of prices and the objections to the Government of India paying consistently more for their stores than if procured from England. He considered the most important objection to the appointment of the proposed inspectors was that, in absence of any organised inspection department, they would not be subject to adequate supervision and control.

Resolution of 1891.

23. The Government of India after due consideration of the problem in all its bearing issued Resolution No. 2650, in the Finance Department, dated 25th June 1891.

This Resolution commenced by laying down the policy of Government in respect of purchase in India of articles of local manufacture and reproduced in full in paragraph 28 of Resolution No. 185 of 10th January 1883; this was followed by a recapitulation of the circumstances permitting local purchase mentioned in paragraph 3 of the same Resolution as amended by Financial Resolution No. 2536, dated 23rd May 1890, *viz.*,

(1) when for any special reason it may be more economical to do so,

(2) when stores indented for from England have not arrived, or when a sudden emergency has arisen, and in either case only if serious inconvenience to the public service would be caused by waiting for the stores from England,

(3) when the articles are perishable.

The Resolution went on to state that some misconception appeared to have arisen regarding the application of paragraph 28 of Resolution No. 185 of 10th January 1883. The term "raw material" used therein,—the import of which from Europe for the purpose of being worked up into finished articles had been declared to be unobjectionable—had been held in some quarters to apply to bars and plates of iron and steel to be made up into bridges, roofs and other engineering structures. This, however, was not the purpose of the Resolution. It was considered by the Government of India that manufactured articles of iron and steel were classes of stores to which the objections to local purchase applied in the highest degree mainly on the grounds:—

(*i*) that much of the material imported into India was of inferior quality;

(*ii*) that delays would occur even in England on account of rejection of material;

(*iii*) absence in India of the necessary mechanical and chemical appliances for testing iron and steel;

(*iv*) loss of economical advantage secured by free competition which was unobtainable in India owing to the limited number of capable firms.

On these grounds the purchase in India of manufactures of iron and steel had been prohibited except under the special circumstances mentioned above. Having regard, however, to the representations made, and with a view of encouraging local industries and the development of technical education, the Governor-General in Council had now resolved as a tentative measure to modify the existing rules prohibiting the local purchase of articles of iron and steel manufactured from imported material. It was to be clearly understood that the relaxation of the existing rules was sanctioned solely in the hope of effecting economy in public administration both by actual saving in cost and by avoiding delay and that it was not intended to sanction thereby a procedure in any degree of a protective nature.

Accordingly in the annexure to the resolution was given a list of articles for which, in the opinion of the Governor-General in Council, tenders should be invited in future from local firms The relaxation of the rules regarding local manufacture was to be

limited to the less important supplies, *i.e.*, bridges and roofs of small span for the public works department, in the case of railways under construction the whole of the necessary supplies, as far as could be foreseen, were to be procured as heretofore by indent on the Secretary of State.

The Resolution went on to state that the following restrictions must be rigidly enforced :—

(1) That the articles locally supplied are not to have been imported into India in a finished or partly finished state.

(2) That the price is not to be in excess of that at which similar articles can be obtained by indent on the Secretary of State.

(3) That the quality is not to be inferior to English supplies.

In order that only those firms, whose shops were fitted with the necessary plant should be allowed to tender, local Governments were to furnish the Government of India with a list of firms whom they considered to be entitled to the privilege of tendering and it was laid down that Siemens, Martin or Bessemer steel of English make should be used ; the use of basic steel, or foreign steel or iron in any form, was prohibited; and samples of all raw material were to be subjected to test.

Resolution of 1892.

24. In Resolution No. 226-M., dated 14th June 1892, the Government of India re-stated the conditions as regards the tests to be applied to raw material and, when necessary, to the finished product, and again drew attention to the reasons which induced Government to relax, as a tentative measure, the rules previously in force. To it was appended a list of firms recommended by local Governments and a set of specifications shewing the conditions as regards test and manufacture prescribed by the Director-General of Stores, India Office, in the case of iron and steel work procured from England.

Resolution of 1895.

25. In Financial Resolution 1426-S.R., dated 25th March 1895, the question was again reviewed. It was believed, that the manufacture in India of the articles alluded to, had extended and that many engineering firms now possessed the apparatus necessary for testing the raw material and the finished product, and that it was possible indenting officers were not aware of the full extent to which the orders permitted them to supply themselves from Indian sources.

Government desired, therefore, once more to draw the attention of local Governments to the subject and invited them to submit names of other firms whom they considered qualified to be entitled to tender, and also to submit the names of additional articles which in their opinion might be included in the list of those which would be suitably made in India.

This Resolution was embodied in Public Works Department Code, Volume II, 5th Edition, as Standing Order No. 45, dated 18th July 1895.

Certain firms interview the Secretary of State.

26. In despatch No. 15 (Financial Stores), of 21st November 1895, the Secretary of State transmitted to the Government of India two representations on behalf of certain manufacturing firms and iron founders established in India, urging some relaxation of existing restrictions on purchase of ironwork in India.

The Government of India replying in their Despatch No. 65 of 11th March 1896, pointed out that the conditions under which such stores could be purchased were laid down in their Resolution in the Finance and Commerce Department No. 146-S. R., of 25th March 1895, and were to the effect :—

(*a*) That the articles locally supplied were not to be imported into India in a finished or partly finished state.

(*b*) That the price was not in excess of that at which similar articles could be obtained on indent from the India Office.

(*c*) That the quality was not inferior to that of English supplies.

Although the firms complained that the relaxation of existing restrictions ordered in Resolution No. 2650 of 25th June, 1891 was meagre and took specific exception to the limitations imposed by the concluding sentence of paragraph 4 of that Resolution they had not indicated in what particular respects they desired a further relaxation of the rules.

The conditions set forth in the Resolution of 25th June 1891, and re-stated in the Resolution of 25th March 1895, were prescribed under the orders contained in paragraph 5 of Lord Crewe's Despatch No. 3 (Financial) of 8th January 1891, and were duly confirmed and approved in his Despatch No. 208 of 29th October 1891. In the circumstances it was impossible for the Government of India to take any action.

Subsequently, however, the Government of India were furnished by the Engineering and Iron Trades Association with a list of the items which local firms were prepared to supply to government specifications. The Association stated that the restricting clause to which special exception was taken was that contained in paragraphs 4 and 2 respectively of the Resolutions of 1891 and 1895 and was as follows:—

"The relaxation of the rules will refer only to articles the certain want of which could not be anticipated, and delay in supply of which would involve loss in some respects."

Draft resolution referred to Secretary of State.

27. The Government of India were now in a position to reply to the Secretary of State's Despatch No. 15 (Financial) of 21st November 1895. In despatch No. 282, of 14th October 1897 they stated that after careful consideration they had decided that the list of articles of iron and steel manufactured in India from imported material which could be purchased locally should be considerably extended, and that the condition to which manufacturers had taken exception should be dispensed with. They requested the Secretary of State's approval to a draft resolution which they enclosed.

Resolution of 1898.

28. The Secretary of State's sanction was accorded in Despatch No. 5 (Financial) of 7th April 1898, and Resolution No. 2587-S.R., of 9th June 1898, was issued in the Finance and Commerce Department. This Resolution, after citing the previous Resolutions on the subject, stated that the Governor in Council had decided:—

(*i*) that the list of articles of iron and steel, manufactured in India from imported material, which may be purchased locally may be considerably extended;

(*ii*) that the condition limiting such purchases to articles the certain want of which could not be anticipated and the delay in the supply of which might involve loss, may be dispensed with;

(*iii*) that articles for state railways under construction and first equipment of large engineering projects should continue to be supplied by indent on England as a general rule in absence of express permission of the Government of India to purchase locally;

(*iv*) that in all other cases articles of the description given in Appendix A attached may be procured as required in India subject to the following restrictions:—

(*a*) That selected firms only are permitted to tender.

(*b*) Firms are to state names of makers from whom iron and steel have been imported and the nature of material.

(*c*) Raw material and manufactured articles are to pass tests in Appendix C.

(*d*) Articles supplied as of local manufacture shall not have been imported into India in a finished or partly finished state.

(*e*) Price is not to be in excess of similar articles of equal quality which could be obtained by indent on Secretary of State.

(*f*) Quality of the manufactured article is not to be inferior to that of English supplies.

The Resolution contained:—

(*a*) A list of articles that might be made up in India from imported raw material;

(*b*) a list of approved firms;

(*c*) a specification for wrought iron and steel work;

and was reproduced in Public Works Department Standing Order 172 of 7th September 1898.

Resolution of 1898 of small effect.

29. The practical effect of this Resolution was, however, inconsiderable as was pointed out to the Government of India by the Iron and Engineering Trades Association in 1899, and as a result of this representation Government issued a circular-letter No. 6 P. W., of 16th June 1899, in which they desired that all indents should be carefully scrutinised before transmission to the India Office with a view to judging whether articles were not "occasionally indented for from the Secretary of State which it would be more economical and satisfactory to buy in this country".

Proposal for increased powers of local purchase.

30. In the following years there was a considerable amount of correspondence on account of the great delay in the supply of stores from home, and after addressing local Governments and departments the Government of India sent a Despatch to the Secretary of State (No. 7. P. W., of 12th March 1903) on the subject.

They commenced by saying that they had on several previous occasions addressed him on the subject of purchasing English stores with a view to reducing the time taken for supply. That being aware that considerable delays still occurred, they had asked all local Governments and Administrations to report cases in the last five years in which:—

(*a*) articles of inferior quality had been supplied through the India Office;

(*b*) the articles supplied had differed from the specification in the indent;

(*c*) the prices paid by the India Office had been regarded as excessive;

(*d*) there had been a delay in supply;

(*e*) the grounds of dissatisfaction did not come under any of the preceding heads.

They had received and considered the replies and found that in respect of (*a*), (*b*), (*c*), and (*e*), there were comparatively few complaints and in respect of (*d*) there had been but few from the Stationery, Mint, Military and Marine Departments. These departments as a rule maintained large stocks. The articles they required were generally of descriptions that could readily be obtained from manufacturers and the annual demand was fairly steady.

The case, however, was very different with the reports received from the Public Works Department (which included railways). Here again there were comparatively few complaints in respect of cases (*a*), (*b*), (*c*), and (*e*), and they did not consider them more numerous than might have been expected. In case (*d*), however, there had been many cases of delay, of which a few typical ones, not previously reported, were enumerated. They assured the Secretary of State that there was a unanimous concensus of opinion among all the officers of this important department that very great delays took place in the supply of stores required by them and that the consequent inconveniences and extra expense stood in urgent need of remedy.

They considered that this time reckoned from date of receipt of an indent in England to that of the receipt of stores in India might be reduced in the case of urgent indents from "over three months" to "two months" and for ordinary indents from "ten months" to "three to four months", and that if a longer time was still necessary for the supply of ordinary stores it would be for local Governments to exercise more fully the powers they possessed for authorising the local purchase of stores. They considered that the limit of powers of officers of the Public Works Department (excepting managers of state railways) to purchase English stores locally (*viz.*, Rs. 50) was far too low and they were considering the advisability of revision.

The rule, based on paragraph 5 of Lord Cross' Financial Despatch No. 46 of 28th February 1889, which in its present form absolutely prohibited the purchase of English stores by means of orders given to agents or firms in India, required revision and they considered that when exceptional cases of emergency arose, they

should have power to sanction such purchases without reference to the Secretary of State. They proposed to revise Appendix 30 of Volume II, Public Works Department code (rules for purchase of stores) in the sense of the above remarks.

Secretary of State approves extended powers of local purchase.

31. The Secretary of State in Despatch No. 3 P. W. (Stores), of 29th May 1903, observed with satisfaction that after prolonged and exhaustive enquiry the Government of India had no serious complaint against the Store Department except in respect of delay in supply of stores to the Public Works Department.

With regard to the proposal made by the Government of India that purchases made from stock would greatly expedite delivery he stated that he was advised that stocks held for export were often of inferior quality to the goods shipped by the Store Department.

He enclosed a note by the Director General of Stores on the subject of inspection from which it could be seen that in many cases inspection was already extremely limited. In spite, however, of everything being done to expedite supply, manufacturing delays would still occur which could not be prevented by any foresight, and he pressed the importance of issuing such orders to indenting officers as would ensure ample time being allowed for the provision of stores wherever practicable. In conclusion he approved of the proposal to extend, within reasonable limits, the power of all officers of the Public Works Department to purchase English stores locally and thus diminish the number of indents now sent home for supplies of small value. He was not, however, prepared to sanction any relaxation of the rule that prohibited the purchase of stores by means of orders given to agents or firms in India who had to send them to England for execution.

Public Works Department Standing Order No. 85 of 1904.

32. The Government of India then issued Public Works Department Standing Order No. 85, dated 12th July 1904, (Public Works Department Code, Volume II, 6th edition) laying down the following rules for the supply of stores for the public service :—

Paragraph 1.—All articles which are not manufactured in India must be obtained by indent on the Store Department of the India Office except :—

(*a*) When for any special reason it may be more economical to purchase them in India.

(*b*) When serious inconvenience to the Public Service would be caused by waiting to obtain them from England.

(*c*) When the articles are perishable.

(*d*) Explosives which should always be purchased locally.

(*e*) Such other classes of articles as may be specially exempted by the Government of India from time to time.

Corrugated iron should always be obtained through the India Office.

Paragraph 2.—Purchases of the following articles are absolutely prohibited.

(*i*) Articles of foreign manufacture, which are not already in India at the time of order, from local agents or firms in India.

(*ii*) Articles from Europe or America except through the agency of the India Office.

Paragraph 3.—Laid down the financial limits within which officers of the buildings and roads, irrigation and railway branches of the Public Works Department might purchase articles of foreign manufacture when the conditions in paragraph 1 had been fulfilled.

Paragraph 4.—Laid down that the reasons for purchase under the exceptions laid down in paragraph 1 must be placed on record.

Paragraph 5.—Stated "It is to be distinctly understood that the powers of local purchase of European stores detailed in the above rules are not to be exercised unless the occasion necessitates a departure from the usual method of obtaining them through the India Office, the advantages of which cannot be too strongly insisted on *viz.*—

(*i*) Lower price for equal quality.

(*ii*) The certainty of obtaining the quality desired.

In all cases, therefore, requirements should be foreseen and indents sent forward in ample time for the articles to be obtained from England whenever practicable."

Paragraph 6.—All articles required for the public service which are manufactured in India from materials produced in the country may be purchased locally.

Paragraph 7.—Articles manufactured in India from imported materials may be purchased in the local market subject to the following conditions :—

(*a*) That the articles shall not have been imported into India in a finished or partly finished state.

(*b*) That the price is not in excess of that at which similar articles of equal quality can be obtained by indent on the Secretary of State, the cost of carriage to site being taken into account in each case.

(*c*) That in case of articles which do not require special tests the purchases shall only be made from *bona fide* manufacturing firms as may be approved by superintending engineers.

(*d*) That important iron and steel work shall only be obtained from firms approved by the local Government and entered in schedule B., as corrected from time to time by the Government of India and shall be subject to specifications laid down by the Government of India and required, if necessary, to pass the tests prescribed in Schedule C.

Rules 6 and 7 are permissive not mandatory in form.

Military Regulations for purchase of stores.

33. The preference to be given to Indian industries was more clearly expressed in the Regulations for the Army, Army Regulations, India, Volume V, paragraph 614 (1901) states :—

"No indent on the Secretary of State should be submitted without previous inquiry whether the articles included in the indent can be obtained of local manufacture. If goods of local manufacture are obtainable they should be preferred to imported articles provided they are practically as good in quality and provided also they are not appreciably dearer."

This rule appears in Army Regulations, India, Volume III, paragraph 13 :—

"No article shall be imported if it can be obtained of local manufacture practically as good in quality and not appreciably dearer". All stores of European and American manufacture must ordinarily be bought by, and can only be imported through, the India Store Department. They can, however, be bought locally by the competent financial authority :

(*a*) when serious inconvenience would arise from awaiting their arrival from England,

(*b*) when it is more economical to do so,

(*c*) when the stores are perishable.

In 1905 another paragraph, 13-A., was added to these rules to conform to Public Works Department Standing Order No. 85 of 1904, which in effect applied to all articles manufactured from imported materials the special restrictions which were originally intended to apply to iron and steel manufactures only. Paragraph 13-A. reads as follows :—

"Articles manufactured from imported materials may be purchased locally provided that :—

(*a*) they have not been imported in a finished or semi-finished state,

(*b*) their price does not exceed that at which similar articles of equal quality can be obtained by indent on the Secretary of State, the cost of carriage to site being taken into account in each case,

(*c*) they must be obtained from approved *bona fide* manufacturing firms,

(*d*) important iron and steel work shall only be obtained from firms approved by the Government of India ".

Memorial by Engineering and Iron Trades Association in 1905.

34. Such were the rules in force when a memorial was presented to the Government of India by the Engineering and Iron Trades Association on the 12th April 1905 in which it was pointed out that the policy of the Government of India with regard to the local purchase of stores inflicted great hardship on Indian manufacturing and importing engineering firms.

The Association pointed out that these firms had, in past years, maintained large and representative stocks of tools and stores primarily with a view of meeting their individual requirements as general contractors and manufacturers of larger material but also to enable them to execute orders for similar material from the Public Works Department and other branches of the public service. The committee of the Association pointed out that fully representative stocks of this class were costly to maintain, that the policy of abandonment of purchase in the local markets was inevitably resulting in the depletion of useful stocks and they claimed that by removing as far as possible the existing regulations against the local purchase of imported stores Government, while assisting firms to maintain stocks on a commensurate scale, would attain proportionate benefit not only in times of extremity but also from the expansion of established and development of other industries.

Stores Committee of 1906.

35. In consequence of this memorial the Government of India appointed a committee (known as the Stores Committee) in Resolution No. 1243-1252 (Commerce and Industry) of 19th February 1906. This Committee were instructed to enquire, among other things, into the working of the stores rules the method of comparison of prices as between locally manufactured and foreign articles and the quality of imported articles purchaseable in India.

Committee's recommendations.

36. The Committee submitted their report in July 1906 and recommended the following rules for the supply of articles for the public service:—

Rule I.—All articles produced in the country in the form of raw material or manufactured in India from materials produced in the country should, by preference, be purchased locally provided that the quality is sufficiently good for the purpose and price reasonable.

Rule II.—Unless similar articles can be obtained from the India Office, Store Department, at a price less than that of the article procurable in India, all articles manufactured in India from imported materials should, by preference, be purchased in the country subject to the following conditions:—

(*a*) that the articles shall not have been imported into India in a finished or practically finished state,

(*b*) that articles which need to be tested shall pass the prescribed tests for such articles,

(*c*) that in the case of articles which need not be tested the quality in respect of finish shall be sufficiently good for the purpose for which they are intended but in other respects practically equal to that of similar articles imported through the India Office,

(*d*) that important iron and steel work shall only be obtained from firms approved by Local Government as entered in a schedule corrected from time to time by the Government of India and shall be subject to current specifications prescribed by the Government of India for such work.

In cases where the selection of the source of supply was dependent on comparative prices the following procedure was to be adopted in making the comparison :—

(*i*) where articles are of a recognised standard type simultaneous tenders are to be invited in England and India, the English tender to include insurance and freight.

(*ii*) where such a course is not practicable, reference should be made to Home prices, freight and insurance charges as shewn in the rate lists,

(*iii*) where information is not available from rate lists, purchase in India is to be subject to the condition that the price is reasonable,

(*iv*) the following charges are to be included in order to arrive at the market value at an Indian port of the article imported from England :—

(*a*) Landing, wharfage, and port charges as shewn in the rate lists.

(*b*) Customs duty as shewn in the tariff as applicable to the article in question, calculated on its cost *plus* freight, insurance and the incidental charges in (*a*).

(*c*) India Office, Store Department, establishment charges at 2 per cent on *f. o. b.* cost *plus* freight,

(*v*) in cases (*i*) and (*ii*) cost of carriage to site from port or place of manufacture as the case may be shall be taken into account,

(*vi*) in all cases advantages of promptitude of supply must be taken into consideration as a factor affecting prices.

Rule III.—Subject to exception in rules 4 and 5, all articles not manufactured in India should be obtained by indent on the Store Department of the India Office.

(*a*) When necessity for provision can be readily foreseen.

(*b*) When for any special reason purchase in India is considered inadvisable.

Rule IV.—All articles not manufactured in India should be purchased locally ;

(*a*) When such purchase can be proved to be more economical.

(*b*) When serious inconvenience to the public service would be caused by delay in supply from home and prompt delivery in India can be obtained.

(*c*) When necessity for supply cannot readily be foreseen and they can be obtained more promptly in India, quality and price must, however, be taken into consideration.

Rule V.—The following articles whether manufactured or produced in India or not, should always be purchased in India provided that the required quality can be obtained :

(*a*) those of a perishable nature,

(*b*) explosives,

(*c*) such other classes of articles the purchase of which in India may be authorised by Government of India from time to time.

In regard to powers of purchase the Committee proposed that officers might purchase articles manufactured in India referred to in rules 1 and 2 and articles irrespective of sources of origin referred to in rule 5 up to the ordinary limits to which they were empowered to enter into contracts. Special limits were, however, suggested for all except local Governments and Director of Railway Construction (who were to have full powers) for purchases made under rule 4 and all officers were to place on record their reasons for purchases made under rule 4 for transactions exceeding Rs. 50. It was also to be understood that every effort was to be made to anticipate requirements so that indents might be sent forward in ample time for the articles to be obtained from England when such a course was practicable.

Government of India recommend the proposals with two exceptions.

37. In their Despatch (No. 33 of 16th May 1907) forwarding the report of the Committee to the Secretary of State the Government of India stated that they considered the rules in force to be defective in that they only permitted certain stores to be bought in India under certain conditions and that no satisfactory system was in force to enable their officers to determine whether those conditions had been fulfilled.

The Government of India agreed generally with the recommendations of the Committee and were prepared to give their full support to the draft rules formulated by them, but considered that the rules should include provision for the purchase of locally made articles irrespective of price, in cases of emergency. In the matter of comparison of prices however the Government of India did not agree with the Committee in their proposal to call for simultaneous tenders in India and England in the case of standardised articles.

They endorsed the Committee's criticisms of the existing rules, which were stated to be inadequate and to have failed in giving any indication of the policy of the Government of India, which had met with the invariable support of the successive Secretaries of State, in favour of the purchase of articles of indigenous origin and local manufacture; they noted that the existing rules were permissive only on this point. Executive officers must depend almost entirely on the precise instructions issued for their practical guidance and that it was no part of their duty to go beyond these instructions to ascertain from other sources the exact intentions of Government and they considered that the draft rules framed by the Committee would remove these defects. The mandatory form in which the first two rules had been cast and the preference therein given to articles of a non-Indian origin would afford to executive officers an unmistakable indication of the wishes of Government to encourage the purchase of local products and manufactures.

The Committee had found a difficulty in interpreting the terms "partly finished" and "*bona fide* manufacturing firm" which appeared in conditions (*a*) and (*c*) of rule 7 of Public Works Department Standing Order No. 85 of 1904. The Government of India agreed with the Committee that in certain classes of manufactures the placing together of component parts obtained in a finished state from other sources constituted a clearly defined industry, and that the Indian manufacturer had every right to be placed in this respect on precisely the same footing as the English manufacturer. They considered that a clearer indication in this matter would be secured by the substitution as proposed in the Committee's draft rule 2 (*a*) of the words "practically finished" for the then present wording "partly finished" and that a satisfactory safeguard against imperilling local manufactures in a finished state would be provided by the proposed establishment of an efficient inspecting staff.

The Government of India, however, considered that the recommendations made by the Committee in respect of supply of locally made articles were defective in two respects.

In the first place the Committee had omitted to make provision for the purchase of locally made articles irrespective of price in cases of emergency. While considering this omission to be a matter of no great importance, the Government of India considered that this provision should be included in the draft rules seeing that a similar relaxation was already in force in respect of imported articles.

The second defect noticed by the Government of India, on which they laid more stress, was that the draft rules contained no means of ensuring that articles procurable in India of Indian manufacture were not included in indents on the Secretary of State. The Government of India were of the opinion that special steps were necessary to render control in this respect more effective, and they decided that indenting officers should be required to explain in their indents the necessity for including in the demand any article which was available of Indian manufacture and they intended to subject indents, after despatch, to a scrutiny in the secretariat similar to that exercised in accordance with the wishes of the Secretary of State in respect of local purchase of imported stores.

As regards comparison of prices the Government of India agreed that an addition on account of customs duty should be made to the price of English stores and that a complete case had been made out by the Committee for the inclusion of a percentage to represent the establishment charges of the Store Department of the India Office. The latter was a special agency constituted for the particular purpose of placing with English manufacturers the orders of the Government of India. It had no counterpart in India and they agreed with the Committee in rejecting the argument that its cost was balanced by the cost of local purchase in India.

They also agreed with the Committee in their suggestion for amplification of rate lists so as to include incidental charges (freight, landing charges etc.,); but were unable to support the alternative method of simultaneous tenders, as they considered that the Committee had underestimated the inherent difficulties and they observed that a similar proposal had been negatived by Lord George Hamilton's despatch No. 11 Financial Stores, of 3rd September 1896.

They, therefore, proposed that the same method of comparison should be adopted in the case of standardised articles as had been recommended by the Committee for other articles; they also agreed with the Committee that promptitude of delivery was a factor affecting prices and that executive officers should be instructed to take this point into consideration in comparing the advantages offered by Indian and English sources of supply.

As regards the supply of articles not manufactured in India the investigation of the Committee satisfied the Government of India that a case had been made out, on the ground of economical and expeditious execution of work, for a modification of the system which had in principle remained unaltered since its introduction in 1880. They could not avoid the conclusion at which the Committee had arrived that the advantage of economy, whether actual or final so often claimed for the present procedure could not in point of fact be held to be indubitably proved while the evidence recorded, including as it did the opinion of independent bodies such as port trusts and municipalities, pointed to the general conclusion that articles of good quality could be secured in the Indian market.

The Committee recommended that imported articles should be locally purchased where economy would result and the Government of India agreed that this change was fully justified notwithstanding that the orders conveyed in Secretary of State's Despatches of 26th July 1882 and 28th February 1889 did not apparently contemplate the local purchase of English stores on the ground of economy alone.

The Committee also recommended that contracts for the entire construction of large buildings and other works including the supply of materials of European manufacture should be entered into with firms of recognised standing. The Government of India laid great stress on this recommendation, a similar proposal having been placed before the Secretary of State in their Despatch No. 14-P. W., of 26th May 1904. Mr. Brodrick was unable to give his assent for reasons stated in his Despatch No. 6-P. W. (Stores) of 30th September 1904, and the Government of India considered the proposal to be one of such importance that they desired to submit it once more for the favourable consideration of the Secretary of State.

The Committee also recommended the establishment of a special staff for the inspection of articles supplied in India. A similar proposal had been made by the Government of India in their Despatch No. 338 of 15th October 1896; objections were, however, raised by Sir A. Rendel, and the Assistant to the Director General of Stores on the score that the appointment of such officers would shew that Government had adopted a policy of preference and secondly that in the exercise of their powers such officers would not be subject to adequate supervision and control. The Committee considered these objections as untenable, a finding in which the Government of India concurred.

To sum up the Government of India asked the Secretary of State's sanction to the:—

(1) introduction of the rules and procedure formulated by the Committee subject to :—

(*a*) omission of simultaneous tenders in the case of standardised articles,

(*b*) inclusion of a rule to permit of purchase of locally manufactured articles in cases of urgency without reference to price ;

(2) that in cases of execution of important construction works by firms of approved standing the supply of English stores required might be included in the contracts ;

(3) to the establishment of an inspecting staff to test and pass supplies purchased in India.

Secretary of State gives no decision.

38. Mr. Morley in his Despatch No.21-Financial (Stores), of 18th October 1907, gave no decision on the proposals of the Government of India, but forwarded for their consideration reports by the Director General of Stores and the Consulting Engineer to the India Office, which he commended to the most careful consideration of the Government of India in view of great weight which he attached to the opinions expressed.

The memorandum by the Director General of Stores was a running commentary on the paragraphs of the Committee's report and was largely concerned with matters of detail.

The Consulting Engineer, Sir Alexander Rendel, however, correctly appreciated that the result of changes in the rules would result in transfer of purchases from England to India. He pointed out that in his experience this would result in payment of enhanced prices, that a considerable period would be occupied in educating superior Indian officials in purchase, and in eliminating corruption from among the subordinates. He agreed, however, that whatever system was adopted there would always be defects in detail since detail was more or less at the mercy of the personal element, and that it was quite impossible to balance one circumstance against another with any hope of arriving at a satisfactory result.

Government of India maintain their proposals.

39. The Government of India in reply in their Despatch No. 35, of 26th March 1908, observed that unlike the Consulting Engineer who had confined himself to questions of principle arising from the Committee's report, the Director General of Stores had entered into a close examination of the arguments and facts set forth; they did not propose to follow Mr. Grant Burls in his detailed criticism of the Committee's report nor to discuss specifically the points of secondary importance referred to in his note.

In the matter of *bona fide* manufacturers they dissociated themselves from Mr. Grant Burls' acceptance of the remarks of the Board of the Bombay, Baroda and Central India Railway referred to in paragraph 30 of the report, "that they did not consider the local letting of contracts involving the mere putting together of material obtained in parts from Europe as falling within 'encouragement of local enterprise' and that, until India was capable of manufacturing the necessary material in the country, the Board were not prepared to encourage local purchases of steel railway waggons or other railway specialities." The Government of India in particular took exception of these remarks as a "full and fair interpretation" of the existing regulations.

They stated that they had consistently maintained the attitude described in paragraph 12 (*b*) of Lord Lansdowne's Despatch No. 65 of 11th March 1889. In discussing the meaning to be attached to the expression "finished or partly finished state" they had reiterated in paragraph 13 of their Despatch No. 33 of 16th May 1907, the views of Lord Lansdowne's Government and they accepted the definition given by the Stores Committee that "in certain classes of manufacture the placing together of component parts obtained in a finished state from other sources constitutes a clearly defined industry." They maintained that it was clear that the attitude of the Board of the Bombay, Baroda and Central India Railway on this subject in no way represented their views and that in particular their attitude in respect

of non-encouragement of local purchase of steel railway requisites was in direct opposition both to the rules and practice of the Government of India.

They observed that Mr. Grant Burls' note and Sir A. Rendel's memorandum included numerous allusions to the "protective" character of the Committee's resolutions. The Government of India considered, however, that in respect of the purchase of articles of local manufacture the position was quite clear and was in no way affected by the questions of policy referred to.

The Government of India could not take into account the probable effect on English manufactures of any action on their part which might tend to develop local industrial efforts. They had repeatedly pledged themselves to encourage the purchase of the products of local industries and to foster local enterprise and their pledges had been endorsed by successive Secretaries of State. Whatever other objections might be taken to the Committee's report, their recommendations were not open to objection merely on the ground that they would have the effect of facilitating, at the expense of imported stores, the purchase by government departments of stores of Indian manufacture.

Secretary of State sends revised rules

40. Lord Morley's decision was conveyed in Despatch Financial (Stores) No. 21 of 13th November 1908. He agreed with the Government of India that the existing rules might with advantage be modified so as to give greater encouragement to the purchase in India of articles either produced or manufactured there, but decided that the draft rules required modification in some respects.

Rule 2, Clause (c).—The tendency of this rule as drafted appeared to encourage the purchase in India of inferior articles at a price not less than the English price; modification was necessary to make it clear that the intention was to encourage the purchase of such articles in India only in cases where no disadvantage to the State was involved.

Rule 3 required that two per cent on account of establishment charges of India Office, Store Department, should be added to the cost of imported articles when comparing the price of such articles purchased in India. If this were done it would be correct to add to the cost of articles purchased in India the cost of Government testing and inspection. It might be presumed that the two percentages would be approximately equal and that the best and simplest course appeared to be to omit both.

Rules 4 and 5.—The two rules were not quite consistent with each other. It appeared to the Secretary of State that they seemed to give excessive encouragement to the purchase in India of inferior, or more costly, imported articles on the grounds of difficulties, real or alleged, in the way of foreseeing their necessity; he considered that the rules contained in Standing Order No. 85, Appendix 30, Public Works Department Code 1904, were satisfactory, subject only to an addition for the purpose of authorising the purchase in India of articles of small value.

In view of the difficulty attending comparison of price and quality, the Secretary of State decided that lists of purchases in India not included in the rate lists should be sent to him every financial year in order that he might have an opportunity of noticing any cases in which excessive prices had been paid. The Government of India were directed to make it clear when promulgating the new rules that they were adopted as experimental only, and would be revised if they resulted in deterioration of quality, or an increase of cost of stores supplied to Government.

Sanction was also given, subject to certain conditions, of the supply of stores required for construction by Indian firms of approved standing in the case of important construction works let out on contract.

Stores Rules of 1909.

41. After a further Despatch by the Government of India (No. 101, of 24th December 1908) in respect of certain doubts regarding money limits, Lord Morley forwarded a revised draft with his despatch No. 2 Financial (Stores), of 5th February 1909, which was promulgated by the Government of India, Department

of Commerce and Industry, Resolution 4941-4988-102 of 14th July 1909. In this Resolution the Government of India reviewed the situation leading to the appointment of the Committee and gave a short resumé of their recommendations and the orders of the Secretary of State.

The Resolution stated that "The Governor-General in Council is now pleased to direct that the rules appended to this resolution shall be observed in supersession of all existing orders regarding the purchase of stores required for the use of government departments. He desires to impress on all concerned that the policy of Government is to encourage the purchase of articles locally manufactured or produced, and the first two of the rules now drawn up accordingly prescribe that preference shall be given to such articles when the quality is satisfactory and the price not unfavourable."

Substantial modifications were introduced in the rules applicable to the local purchase of European stores. Under rule 3 (*a*) officers were permitted to purchase, without restriction, English stores of small value which were in India at the time of the order within the money limits prescribed in rule 13 while under rule 5 purchases might similarly be made not only in cases of delay, but also where economy could be effected by the greater promptitude afforded by purchase in India.

The following is a summary of the rules of 1909 :—

Rule 1.—Articles produced in India in the form of raw material or manufactured in India from materials produced in India should, by preference, be purchased locally, provided the quality is sufficiently good and the price not unfavourable.

Rule 2.—Articles manufactured in India from imported materials *should*, by preference, be purchased in India subject to the following conditions :—

(*a*) That a substantial part of the process of manufacture has been performed in India.

(*b*) That the price is as low as that at which articles of similar quality can be obtained through the India Office.

(*c*) That the materials are subject to such inspection and test as may be prescribed by the Government of India.

Rule 3.—Articles not manufactured in India *should* be obtained from India Office Store Department except:—

(*a*) When articles *are in India* at time of order and cost does not exceed the limits in rule 13.

(*b*) In case of important works let out on contract, articles required for the construction may be supplied by the contracting firm subject to the conditions.

(*i*) that the firm is approved by the Government of India and included in a list of firms so approved.

(*ii*) that the materials are subject to current specifications, tests prescribed by Government of India.

Rule 4.—Gives a list of certain particular articles which *may* be purchased in India, whether manufactured or produced there or not.

Rule 5.—Prescribed that in cases where *serious* inconvenience to the Public Service would be caused by waiting to obtain articles from England, or where owing to promptitude of supply economy can be effected by purchase in India of articles which, under foregoing rules, should be obtained through the India Office, the purchase may be made in India subject to the money limits prescribed in rule 13, but that in cases of purchases of over Rs. 50 in value the reasons must be placed on record.

Rule 6.—States that nothing in these rules shall be deemed to prohibit purchase of European stores by one department or railway from another.

Rule 7.—States that all articles which under the foregoing rules are not to be bought in India should be obtained on indent on the Store Department of the India Office except articles which the Secretary of State may have specially authorised the Government of India or its officers to purchase direct outside India; a list of such articles is given.

Rule 8.—Requires that every effort should be made to foresee requirements so that there may be ample time to obtain them by indent on the India Office.

Rule 9.—Gives the time required from the transmission of an indent upon the Secretary of State to the receipt of the stores.

Rule 10.—Prescribes the following method of comparing prices in cases where the source of supply is contingent on price, the procedure is as follows:—

(*i*) Reference should be made to Home prices shewn in the rate lists; freight is to be added at latest rates *plus* insurance and freight brokerage.

(*ii*) In cases of important contracts prices ruling in the English market are to be obtained by telegram from the Director General of Stores.

(*iii*) Where necessary information is not available from rate lists, purchase in India is subject to the condition that the price is not unfavourable.

(*iv*) Following charges are to be included to arrive at market value, at an Indian Port, of an article imported from England.

(*a*) Landing, wharfage and port charges as shewn in rate lists.

(*b*) Customs duty as per tariff calculated on cost *plus* additional charges mentioned in the earlier part of this rule.

Rule 11.—Lays down that any articles purchased in India which should be tested are liable to specifications approved by the Secretary of State in Council and shall be required to pass the tests prescribed.

Rule 12.—Lays down that important iron and steel work purchased in India shall only be obtained from firms approved by local governments and entered into a schedule corrected from time to time by the Government of India—a list of approved firms (27 in the whole of India and Burma) is given.

Rule 13.—Prescribes the financial limits on the powers of officers to make purchases in India.

In the case of purchases under rules 1, 2 and 4 an officer's powers of purchase extend to the limits to which he is empowered to enter into contracts.

In the case of purchases under Rules 3 (*a*) and 5 (*i.e.*, articles not made in India) the powers of purchase are very carefully restricted. The highest powers are those accorded to local governments and officers exercising those powers; these powers are for any one article, or any number of similar articles purchased at one time, Rs. 3,000 in case of purchases made under Rule 3 (*a*) and full powers under rule 5.

Stores rules of 1913.

42. In Despatch No. 3-Financial (Stores), of 29th March 1912, the Secretary of State sanctioned the addition of interest charges to the cost of English stores for the purpose of comparing prices and a slight increase in the insurance rate. He was, however, unable to agree to the proposals submitted by the Government of India in Department of Commerce and Industry letter No. 47 of 21st September 1911, *viz.*, that the limit of Rs. 50 should be abolished in rule 5, or that the rule should be altered so as not to require the purchasing officer to record the reasons for purchase except when the limits applicable to purchases under rule 3 (*a*) were exceeded.

The Secretary of State considered it desirable to maintain a strict control over the special kind of purchase with which rule 5 dealt, but with a view to relieving officers of the necessity for recording very small purchases he substituted a limit of Rs. 750 for the existing limit of Rs. 50. He also introduced a further alteration for the purpose of making it quite clear that

purchases under rule 5 were allowed only when the articles were in India at the time of purchase. He thought it desirable to take this opportunity of emphasising the distinction between the scope of rules 3 and 5, respectively.

The object of rule 3 (a) was not to sanction local purchase of imported stores irrespective of price and quality merely because they happened to be in India at the time. The intention was that due regard should ordinarily be paid to the price and quality of similar stores obtained through the India Office.

The intention of rule 5, on the other hand, was that in circumstances of urgency, or where economy would result from immediate purchase, imported stores already in India might be purchased, if necessary, at higher prices than those paid by the India Office or when the quality, though adequate for the purpose, was inferior to that which would have been supplied through the India Office.

Rule 3 (a) was therefore amended by him and revised rules were enclosed which were to supersede those sent with Lord Morley's Despatch No. 2-Financial (Stores), dated 5th February 1909. The rules were accordingly issued under Government of India Resolution, No. 6847—6897-32, Department of Commerce and Industry, dated 12th September 1912.

Subsequently, in response to a request from the Government of India, the Secretary of State in Despatch No. 1-Financial (Stores), of 25th April 1913, sanctioned a proposal to modify rule 4 (*f*), so as to include among the list of articles which might be purchased in India electrical power and lighting plants of not more than 25 kilowatt capacity, even though they involved the provision of generators and cables for distribution ; the rules at present in force were issued by the Government of India under Resolution No. 5829—5876-11, Department of Commerce and Industry, dated 24th July 1913.

Comparison of stores rules with proposals made by Government.

48. Since the Stores Rules of 1913, though subject to temporary modifications due to the war, are still in force it will be convenient to contrast them with the proposals submitted to the Secretary of State in 1907.

In the first place, the words of the preamble " with a view to giving full effect to the policy of the Government of India with regard to the encouragement of local industries the following rules are to be observed " were omitted. Executive officers were thus deprived of this ever present reminder of the intentions of Government.

Secondly, in respect of articles produced in India of raw material or manufactured in India from materials produced in the country the words " not unfavourable " were substituted for " reasonable."

Thirdly, in respect of articles not manufactured in India, the Secretary of State prescribed that articles so purchased must always be in India at the time of the order ; no such recommendation was, however, made by the Government of India, who had in view (*a*) economy (*b*) saving of time (*c*) convenience of the public service.

Fourthly, in comparison of prices the proposal that two per cent. on account of establishment charges for the India Store Department should be added to English prices was negatived by the Secretary of State, and the recommendation that in all cases the advantage of promptitude of supply must be taken into consideration, as a factor affecting prices, was not embodied in the rules.

Fifthly, the rule that in cases of emergency articles of Indian origin, or manufacture, should, be purchased irrespective of price was omitted by the Secretary of State.

Sixthly, the Government of India recommended that articles not manufactured in India should, subject to the exceptions in rules 5 and 7, be obtained from the India Office :—

(*a*) when necessity could be *readily* foreseen ;

(*b*) when for any special reason the purchase in India was not considered advisable.

As amended by the Secretary of State, articles not manufactured in India should be obtained by indent on the Store Department of the India Office except when the article is in India at

the time of purchase, and the cost of supply does not exceed Rs. 3,000, unless the urgency clause can be invoked. Moreover the Secretary of State required that such stores should normally be obtained through the India Office and consistent failure to do so would incur a threat of reduction of powers of sanction.

Local purchase of plant and machinery.

44. In despatch No. 50, of 28th August 1913, the Government of India asked the Secretary of State whether the existing restrictions on the purchase in India of imported stores might not be waived so far as to allow the purchase of such stores through branches established in India of English firms recognised by the Director General of Stores as competent manufacturing firms. They were confident that if purchases through branch firms in India were permitted, the measure would fully justify itself not merely in the greater expedition with which stores of great quality would be made available to local officers, but also in the certainty that expert assistance would be at once available should repairs or the prompt supply of spare parts be necessary.

Their proposals were based to a large extent on certain recommendations of the Stores Committee of 1906, modified in the light of subsequent experience. They were aware that these proposals had been examined and rejected by the Secretary of State, but they ventured to state their proposals again in view of subsequent developments in India and the constant pressure to which they were subjected by commercial circles. The general grounds on which the recommendations were made were given in the Committee's report and the proposal had received the support of Lord Minto's Government in their Despatch No. 33 of 1907; on this point, however, they were over-ruled in Secretary of State's Despatch No. 21-Financial (Stores), dated 13th November 1908, for the reason that the proposal seemed "to give excessive encouragement to the purchase in India of inferior or more costly imported articles on the ground of difficulties, real, or alleged, in the way of foreseeing their necessity".

This was the decision they ventured to ask Lord Crewe to reconsider. They believed that sufficient emphasis had not been laid on the condition to which the Committee had referred in their report, that such purchases should be permitted, not from agents or middlemen, but only from Indian branches of the best English firms. This was a condition of primary importance and one on which they desired to lay considerable stress; it was obvious that all possible steps should be taken to discourage the purchase of imported stores, the price of which included middlemen's profit.

The first and most important objections raised by Lord Morley were those based on economy. The Government of India, however, contended that firms maintaining branches in India would not have to enhance their prices, that the increased profits from additional orders would go far towards maintaining the branch, and that it was a well known axiom that manufacturing firms were content to incur losses on branches which were expected in the long run to bring in considerable increase of clientele. That subsequent experience had confirmed the truth of the assertion made in 1907 that local authorities, such as port trusts, who were not subject in the ordinary course to the stores rules effected considerable purchases of plant and machinery through Indian branches of English firms at prices which compared favourably with those at which similar articles were available to Government under the existing system.

The introduction of the system of rate lists indicated in Secretary of State's Despatch No. 1 Financial, dated 12th February 1912, would furnish indenting officers with full and up-to-date information of the prices at which their requirements could be met by the Director General of Stores, and enable them to check prices and protect themselves against attempts to quote high prices. Moreover they proposed that purchases were only to be effected from Indian Branches in cases where after comparison the Indian price was equal to, or less than, the price at which the article could be delivered in India by the Director General of Stores. They did not propose to give local officers complete discretion in the selection of branch firms; they proposed that tenders for plant and machinery should only be invited from the Indian branches of firms with which the Director General of Stores had himself had

dealings and which he certified from experience to be cable of turning out satisfactory materials.

They were convinced that the system they now recommended would result in greater expedition in the supply of Government Stores. The existing system had worked well within the limitations to which it was subject, and though they were convinced that the Director General had reduced to a minimum the delays which must necessarily occur, at the same time it was evident that delays did occur. In addition to arguments based on efficiency, economy and expedition they desired to point out that although the existing system went a certain way towards encouraging the purchase of indigenous manufactures, it did not tend towards the establishment in this country of reliable firms whose manufactures would be generally satisfactory.

In conclusion they submitted for the Secretary of State's approval the following draft rule 3 (c) :—

"Plant and machinery may be purchased from branches established in India of manufacturing firms of repute which are borne on the list of the Stores Department of the India Office subject to the following conditions :—

(*i*) that the branch firm maintains a staff of expert mechanics, capable of erecting and maintaining the plant and machinery required ; is approved by the Government of India ; and is included in the list of firms so approved.

(*ii*) that the actual price of the goods (exclusive of any expenditure representing cost of erection by the firm) is as low as that at which articles of the same make can be obtained through the India Office.

(*iii*) that the cost of the supply does not exceed the limits prescribed in Rule 13 for purchases made under Rule 5.

Proposals accepted in principle.

45. Lord Crewe replied in Despatch No. 3 Financial (Stores), of 10th April 1914, that this proposal had been discussed by Mr. (now Sir Lionel) Abrahams, Assistant Under Secretary of State for India, at Delhi in January with representatives of the Government of India and that the opinions arrived at were set out in a memorandum by Sir Lionel Abrahams which he enclosed. He stated that he accepted generally the suggestions contained in the memorandum and requested the Government of India to submit for his approval detailed proposals in accordance therewith.

The opinion of those present at the meeting and the suggestions arrived at were as follows :—

The ordinary practice by which stores not manufactured in India are bought through the Stores Department of the India Office is sound as providing, by means of competition, the best safeguard against excessive price, and by means of inspection, during manufacture when necessary, the best safeguard against unsatisfactory quality. There are, however, some cases among those that would be covered by the proposed additional rule in which it would be advantageous to depart from this practice. Such cases arise under the following conditions :—

(*i*) When plant or machinery is required of standard pattern manufactured by firms recognised as satisfactory by the Store Department of the India Office,

(*ii*) When it is advantageous to the Department or officer concerned to have the call of the services of responsible representatives of the manufacturing firm for assistance, in putting together or repairs.

(*iii*) When the value of the plant or machinery is so small that it would be extravagant to bring out representatives from the place of manufacture, and

(*iv*) When, as explained below, the purpose for which the plant or machinery is to be used is such that inspection during manufacture can be dispensed with without risk of serious advantage.

In order to make provision for such cases it was desirable that the Government of India should draw up for the approval of the Secretary of State a list of the specified articles which might, subject to a money limit, be bought from Indian branches of manufacturing firms established outside India and approved by the Store Department of the India Office. All articles, the failure of which might lead to loss of life were to be omitted. All articles, where risk of failure might lead to serious interruption of important Public Services were similarly to be excluded. The money limit for any one order was to be Rs. 15,000 to Rs. 20,000 until experience of the working of the proposed new rule showed it could be raised.

List of plant and machinery.

46. The Government of India submitted with Despatch No. 6 of 27th April 1917, a draft rule for the approval of the Secretary of State which in their opinion would give full effect to the conditions embodied in the memorandum of Sir Lionel Abrahams. They found, however, that it was not possible to exclude in their entirety articles manufactured in India. As manufacture in India of most of the articles was a contingency that might arise at any time it was undesirable in their opinion to have to amend the list from time to time and they thought it preferable that the possibility of simultaneous manufacture should be admitted at the outset. The draft rule was as follows:—

Plant and machinery of the descriptions specified in Appendix C and component parts for repairs and renewals of such plant and machinery may be purchased from branches established in India and approved by the Government of India of manufacturing firms borne on the list of the Store Department of the India Office. A list of approved branch firms is given in Appendix D. This rule is subject to the following conditions:—

(*i*) That the plant and machinery are of standard pattern as ordinarily manufactured by the above firms.

(*ii*) That the branch firm entertains a staff of expert mechanics capable, when so required, of erecting and repairing plant and machinery which it supplies.

(*iii*) That the actual price of the article (exclusive of any expenditure representing cost of erection by the firm) is as low as that at which articles of the same make can be obtained through the India Office.

(*iv*) That the cost of supply under any one order or detailed estimate in respect of any one type of standard plant or machinery does not exceed Rs. 20,000.

(*v*) That the purchase of plant and machinery which by its failure might lead to loss of life or serious interruption of an important public service is prohibited.

Proposals returned for further consideration.

47. Mr. Montagu in reply, Despatch Stores No. 5 of 20th September 1918, pointed out that the effect of the sanction asked for would enable the Government of India to obtain, through a limited number of manufacturers, the bulk of their requirements in engineering plant and machinery amounting to about half a million sterling in value per annum subject to the limitations in the draft rule. He had submitted the proposals to the criticism of the officers of the Store Department and of his Consulting Engineers and it would be seen from a perusal of the summary of their reports which he enclosed that they were unanimous in considering that the proposed change in the method of ordering plant and machinery was open to very serious objection.

The chief points in the report by the Director General of Stores were:—

(*a*) That the proposal would, unless adopted to a very limited degree and with suitable precautions, inevitably lead to a great waste of money.

(*b*) That the suggestions made in Sir Lionel Abrahams memorandum were submitted to the Government of India in the hope that the scheme evolved would be so limited in scope as to render objections unimportant.

(*c*) That appendix C comprised practically all conceivable engineering supplies.

(*d*) That appendix D contained the names of 27 firms only, some of whom had no branches but only agents in India and others were mere factors and not actual manufacturers of the articles concerned. Moreover for important supplies such as cranes, engines, lathes, sluice gates, etc., hardly any of the best makers were included.

The Consulting Engineers' remarks were :—

(*a*) That the list of firms was inadequate since many of the firms were not makers of the articles which it was proposed to obtain from them.

(*b*) Condition 2 did not seem to be of great importance as the technical staff of a railway at any rate should be just as capable of erecting plant and machinery as the mechanics of a branch firm.

(*c*) Under the proposed system there could be none but the most perfunctory inspection of the articles supplied. In boilers, for example, the only inspection which could be made after arrival in India would be an entirely superficial one.

(*d*) On the whole they did not consider that the proposals in their present form at any rate would be workable or advisable.

The Secretary of State could not see his way to disregard entirely the conclusions at which these officers had arrived though he realised that many of their objections were those which had influenced his predecessors in the past but to which the Government of India had consistently taken objection. He was anxious to approve of the proposed rule to the utmost degree consistent with the public interest.

Departmental criticism showed that the list of approved firms was necessarily very limited and that there were many articles of plant and machinery shewn in appendix C which they did not manufacture. He would, therefore, lay down as a condition to be embodied in the rule that only such articles as were actually manufactured by the home firms through whose Indian branches they were ordered should be covered by the proposed rule. The second limitation on the proposals which occurred to him as very necessary for reasons given in the departmental criticism, was that no article should be ordered from branch firms in India which required test during manufacture. These criticisms seemed to him to be weighty and he was not disposed to disregard them ; but it would always be open to the Government of India to make further suggestions on this point and in this connection he would suggest for consideration the practicability of such tests being conducted by officers of the Store Department.

The question of the price of the article ordered was of the utmost importance and he would emphasize the necessity of exercising the greatest care to see that the plant and machinery covered by these proposals were only ordered by officers who were both familiar with machinery and capable of comparing local with home prices. He considered the limit of Rs. 20,000 for single orders was high.

Subject to the above remarks he was disposed to approve the proposals, but, as owing to war conditions it was unlikely that there would be much scope for the operation of the new rule for some years, he would ask the Government of India to give further consideration to the matter and submit a further rule embodying the conditions he had ventured to suggest as desirable. In conclusion the Secretary of State considered that the Government of India would doubtless not lose sight of the fact that the proposal to order from Indian branches of British manufacturers stores to be made in England and sent out to India would, if adopted to any considerable extent, in his opinion, have the effect of deterring British firms from setting up manufacturing branches in India, as it seemed more than probable that if, and so long as, British firms could obtain orders through their branches in India and make the articles in this country they would agree that they would gain nothing by setting up manufacture in India.

APPENDIX C.

Rules for the Supply of Articles for the Public Service (1913).

Subject to the provisions of the General Rules specified below, and to any instructions regarding specific articles which have been, or may be, issued by the Government of India from time to time (*e.g.*, those relating to the supply of stationery), the following are the rules relating to the supply of articles required for the public service. These rules supersede all previous orders which are not explicitly continued.

Rule 1.—*Articles manufactured in India from Indian materials.*

All articles which are produced in India in the form of raw material, or are manufactured in India from materials produced in India, should, by preference, be purchased locally, provided that the quality is sufficiently good for the purpose, and the price not unfavourable.

Rule 2.—*Articles manufactured in India from imported materials.*

All articles manufactured in India from imported materials should, by preference, be purchased in India subject, however, to the following conditions :—

(*a*) That a substantial part of the process of manufacture of the articles purchased has been performed in India.

(*b*) That the price is as low as that at which articles of similar quality can be obtained through the India Office.

(*c*) That the materials employed are subjected to such inspection and tests as may be prescribed by the Government of India.

Note.—The term "a substantial part of the process of manufacture" in clause (a) means that a substantial part of the preparation of the finished article must be performed in India, whether from raw materials or from component parts obtained in a finished state from other sources.

Rule 3.—*Articles which are not manufactured in India.*

Articles which are not manufactured in India should be obtained by indent upon the Store Department of the India Office, except in the following cases :—

(*a*) When the articles are already in India at the time of order, and their price and quality are not unfavourable as compared with those at which similar articles could be obtained through the India Office, and the cost of the supply does not exceed the limits prescribed at the end of Rule 13.

(*b*) In the case of important construction works let out on contract, articles not manufactured in India required for the construction of such works may be supplied by the contracting firm subject to the following conditions :—

(*i*) That the firm is approved by the Government of India and is included in the list of firms so approved—*vide* Schedule B, Appendix 30, P. W. D. Code, Volume III.

(*ii*) That the materials are subject to the current specifications and tests prescribed by the Government of India.

Note.—Articles of clothing and equipment of European manufacture required for the Burma Police Department may be procured for the present without the intervention of the India Office.

Rule 4.—*Articles which should be purchased in India.*

The following articles, whether manufactured or produced in India or not, should be purchased in India, provided that they comply with the current specifications, are of the requisite quality, and can be obtained at a not unfavourable price.

(*a*) Those of a perishable nature.

(*b*) Explosives.

(*c*) Block tin.

(*d*) Wines and spirits and English bottled beer for the use of Government hospitals in India.

(*e*) Kerosine oil.

(*f*) Plant and materials for electric installations intended to take current from existing centres; and small electrical power and lighting plants of not more than 25

kilowatt capacity, which involve the provision of generators and cables for distribution, provided they comply with the current specifications and tests prescribed by the Store Department of the India Office.

(*g*) Australian timber.

(*h*) Australian copper.

(*i*) Italian marble.

(*j*) British Columbian timber.

(*k*) Plant and materials for small gas installations the cost of which does not exceed Rs. 15,000.

(*l*) Cheap articles of common use required in small quantities only.

(*m*) Such other classes of articles as may from time to time be prescribed by the Government of India. All such cases should be reported to the Secretary of State for his information.

RULE 5.—*Special purchases in India.*

When serious inconvenience to the public service would be caused by waiting to obtain an article from England through the Director-General of Stores, or when, owing to the greater promptitude of supply, an economy can be effected by purchasing in India articles which, under the foregoing rules, should be obtained through the Store Department, the purchase may be made in India, subject to Rule 13, provided that the articles are already in India at the time of order; but in such cases, if the value of the articles exceeds Rs. 750, the sanctioning officer should place on record the reasons which make the local purchase desirable. This record shall be available for the inspection of the Examiner of Accounts or the Supervising Officer when required.

RULE 6.—*Inter-departmental purchases.*

Nothing in the rules is to be deemed to prohibit the purchase of stores of European manufacture by one department or railway from another.

RULE 7.—*Method of obtaining stores not purchased in India.*

All articles which, under the foregoing rules are not to be bought in India, should be obtained by indent on the Store Department of the India Office, except any which the Secretary of State may have specially authorised the Government of India or its officers to purchase direct outside India. Such purchase is at present permissible in the case of the following articles:—

(*i*) Seeds.

(*ii*) Cinchona bark.

(*iii*) Articles for experimental or research purposes required by officers approved by the Government of India from time to time. A list of the officers thus approved is given in Appendix A.

(*iv*) Excise instruments and apparatus required by Provincial Excise Departments for experimental or research purposes.

(*v*) China, glass, cutlery, plate, crockery, and perishable fabrics, including linen for residences which are furnished by Government.

(*vi*) Australian timber.

(*vii*) British Columbian timber.

(*viii*) Australian lead.

(*ix*) Such articles as Superintendents of Vaccine Depots may require for the preparation of vaccine lymph (*e.g.*, lanoline and glycerine).

(*x*) Chemicals and scientific instruments which do not require careful inspection and testing or which are of standard description usually quoted by well-known firms, provided that the articles cannot be procured from the Medical Store Depots.

(*xi*) Articles required for Viceregal residences in special and urgent cases

Note.—Payments for stores purchased under this rule should be made direct to the suppliers by the purchasing officers.

Rule 8.—*Forecast of requirements which should under the rules be complied with by indent on the India Office.*

All requirements should be fulfilled locally in accordance with the provisions of the Resolution No. 4941—4988-102, dated the 14th July 1909, provided that quality and price are not unfavourable and provided that such purchase does not violate any of the instructions contained in these rules. In cases, however, in which stores have to be obtained through the India Office, every effort should be made to foresee requirements so that the indents may be despatched in ample time. Persistent failure of any officer to make such efforts should be brought to notice by the Local Government or other authority which may, at its discretion, cancel or reduce the power of sanction entrusted to the officer at fault.

Rule 9.—*Time required to obtain stores from England.*

It may be assumed that the time required from the transmission of an indent upon the Secretary of State to the receipt of the stores is :—

Urgent telegraphic indents, not less than three months.

Ordinary indents, six to ten months, according to the articles demanded.

For special stores, *e.g.*, large girders, rolling stock, etc., up to one year in ordinary times.

Note.—When ordinary stock articles conforming to well-recognised standards are required within a shorter period than three months, and the purchase has, under the rules, to be made through the India Office, the indenting officer shall, if he desires that the procedure indicated in the Resolution in the Department of Commerce and Industry No. 6822-6869-37, dated the 13th September 1911, be adopted, state the fact clearly in his telegraphic indent.

Rule 10.—*Method of comparing prices.*

In all cases in which the selection of source of supply depends upon comparison of prices, the procedure to be adopted for such a comparison is as follows :—

(*i*) A reference should be made to Home prices as shown in the rate lists, and freight should be added at the lowest rates paid by the India Office together with 13*s.* 4*d.* per 100*l.* for interest, 2*s.* 2*d.* per 100*l.* for insurance, and 3*d.* per ton for freight brokerage.

(*ii*) In cases of important contracts, the prices ruling in the English market should be ascertained by telegraphic reference to the Director-General of Stores,

(*iii*) In cases where the necessary information as to Home prices is not available from the rate lists, the purchase in India shall be subject to the condition that the price is not unfavourable,

(*iv*) In order to arrive at the market value at an Indian port of the article imported from England the following charges shall be included :—

(*a*) Landing, wharfage, and port charges as shown in the rate lists,

(*b*) Customs duty, as shown in the tariff to be applicable to the article in question, to be calculated on its cost *plus* the additional charges mentioned in the earlier part of this rule.

(*v*) The cost of carriage to site from port or place of manufacture, as the case may be, shall be taken into account.

Rule 11.—*Tests.*

Any articles purchased in India which should be tested are liable to the specifications laid down from time to time by competent authority, with the approval of the Secretary of State in Council, and should be required to pass the tests prescribed for such articles.

Rule 12.—*Firms from which iron and steel may be bought in India.*

Important iron and steel work, if purchased in India, should only be obtained from firms approved by the Local Government or Administration and entered in a Schedule as corrected from time to time by the Government of India. A list of approved firms is given in Appendix B.

Note.—By "important iron or steel work" are meant articles of iron or steel, which form important components of the project in hand, *e.g.*, bridge girders and roof trusses, built up in the firm's workshops and supplied, ready for erection, in such sections as may be convenient, and rolled steel beams, rails or other sections cut to length or otherwise prepared at the firm's workshops to suit the indenting officer's requirements. The intention of the rule is to ensure that part, the accurate preparation of which is essential to the security of a project, shall be obtained only from firms which possess workshops and appliances capable of turning out work of the desired standard. The raw materials used may be either imported or of Indian manufacture, subject to the usual specifications.

*This rule is in abeyance for the period of the war.

Rule 13.*—*Financial limits on powers of officers to make purchases in India.*

In the case of purchases made under Rules 1, 2 and 4, an officer's powers of purchase extend to the ordinary limits to which he is empowered to enter into contracts but in the case of purchases made in India under Rules 3 (*a*) and 5, the limits for expenditure on any one article on any number of similar articles purchased at one time are as follows :—

(*a*) *Civil Departments.*

	Rs.
(*i*) Heads of Departments, Commissioners of Divisions, other officers of or above the rank of Collector whom the Local Government may select, and Principals of Colleges and Inspectors of Schools in Bengal, Bihar and Orissa and Assam.	250
(*ii*) Other officers authorised to incur expenditure.	50
(*iii*) Controller of Printing, Stationery and Stamps.	1,000
(*iv*) Local Government or Administration :—	
1. In case of purchases made under Rule 3 (*a*).	3,000
2. In case of purchases made under Rule 5.	Full powers.

The powers of a Local Government are also exercised by the following officers:—

Surveyor-General of India.

Agricultural Adviser to the Government of India and Director of the Agricultural Research Institute, Pusa.

Director-General of Observatories.

Director-General, Posts and Telegraphs.

Political Resident, Persian Gulf.

Superintendent of Port Blair.

(*b*) *Public Works Department.*

	For purchases made under Rule 3 (a).	For purchases made under Rule 5.
	Rs	Rs
(*i*) Executive or Assistant Engineer holding charge of a Division	200	500
(*ii*) Superintending Engineer or Superintendent of Works ...	1,000	2,500
(*iii*) Local Government or Administration	3,000	Full powers.

(*c*) *Railway Department.*

(*i*) Executive or Assistant Engineer holding charge of a Division on a line under construction or survey	200	500
(*ii*) Engineer-in-Chief holding charge of a line under construction or survey	1,000	2,500
(*iii*) Agent of an open line	1,000	2,500
(*iv*) Railway Board	3,000	Full powers.

NOTES.—Agents of open lines may delegate to their Engineers-in-Chief, Executive Engineers, or Assistant Engineers holding charge of a Division, such power of purchase as they deem fit up to the limits specified for lines under construction, and to their Chief Storekeepers up to the limits specified for Executive Engineers.

(d) Army Department.

	For purchases made under Rule 8 (a).	For purchases made under Rule 5.
	R	R
(i) Director-General of Military Works...	3,000	Full powers.
(ii) Divisional Commander	3,000	5,000
(iii) Officer Commanding an independent brigade; Director-General of Ordnance*; Director, Royal Indian Marine; Director-General, Indian Medical Service (for medical store depôts); Director, Army Clothing; and Director-General, Army Remount Department	2,500	2,500
(iv) Officer Commanding a brigade other than those included in (iii); Director of Ordnance Factories; Director of Ordnance Inspection and Director of Ordnance Stores	1,000	1,000
(v) Superintendent, Army Clothing Factory; Supply and Transport Officer on special duty in Kashmir; and Deputy Director, Royal Indian Marine	500	500
(vi) Chief of the General Staff; General Officer Commanding, Northern and Southern Armies; Adjutant General in India; Quartermaster-General in India; Director, Medical Services, Army Headquarters, India; Military Secretary to His Excellency the Commander-in-Chief, Military Accountant-General; Controllers of Military Accounts; and Controller of Military Supply Accounts	250	250
(vii) Officer Commanding a station; Superintendent Army Remount Department; Superintendent Ordnance Factory; Government Inspector of Army Boots Factory, Cawnpore; Assistant Directors of Ordnance Stores; Inspectors (Ordnance Department), the Assistant Inspector in charge of General Stores and the Proof and Experimental Officer, Balasore; Medical Store-keeper; Commandant, Indian Staff College; Assistant Director of Supplies; Assistant Director of Transport, and Assistant Director of Grass Farms	200	200
(viii) Officer Commanding a unit (including a hospital); Senior Medical Officer, Indian Medical Service, of a Station; Recruiting Officer for Gurkhas at Gorakhpur; Officers (Ordnance or Departmental) in charge of depots; Assistant Inspectors (Ordnance Department) with the exception of the Assistant Inspector in charge of General Stores; Officer-in-charge of Supply Reserve Depots; Commissioned Officers Commanding Depot Transport Lines, Officer in charge of Supplies and Chief Chemical Examiner	20	20

* The Director-General of Ordnance has full powers of local purchase under Rule 5 in cases where the purchases are required to meet urgent field service requirements or to replace issue from mobilization reserves for the equipment of troops suddenly ordered on field service.

(e Indian Munitions Board.

(i) Metallurgical Inspector, Indian Munitions Board, Jamshedpur	500	500

NOTE 1.—The financial limits imposed under this rule in respect of purchases made under rules 3 (a) and 5 do not apply to the purchase of articles required on mobilization or during the continuance of military operations.

NOTE 2.—These powers are subject to the rules of the budget system. No sanction may be given which will involve expenditure from the budget grant of any future year. The powers extending to each sanction, whether against Army, Military Works, or Marine funds

In the case of the Ordnance, Medical Store and Remount Departments, the Divisional Brigades and Station Commanders are not competent financial authorities.

RULE 14.—*Power to sanction departures from the rules.*

The Government of India have power to sanction departures from the rules in cases in which such departure is absolutely unavoidable, [subject to a report to the Secretary of State if the expenditure exceeds Rs. 10,000.]

[ ] Suspended for the period of the war.

LOCAL PURCHASE RULES.

APPENDIX A.

List of officers referred to in rule 7 (*iii*), who are authorised to obtain direct from manufacturers or dealers in England, America, Japan, or other foreign countries such articles as they may require for experimental or research purposes.

Superintendent, X-ray Institute.

Chemical Examiners.

Superintendents of Vaccine Depots.

Principals of Medical Colleges.

Superintendents of Medical Schools.

Directors of Bacteriological, Pathological or Research Laboratories, including officers in charge of Divisional and Brigade Laboratories.

Principals of Arts Colleges.

Principals of Technical and Industrial Institutes.

Directors of Industries.

Directors of Fisheries.

Sanitary Commissioners.

Director, Madras Cinchona Department.

Principals of Training Colleges.

Principals of Veterinary Colleges.

Officer-in-charge of the experimental Sewage Installation at Poona.

Surveyor-General of India.

Inspector-General of Forests.

Director-General of Observatories.

Director of Botanical Survey.

Agricultural Adviser to the Government of India and Director, Agricultural Research Institute, Pusa.

Imperial Bacteriologist, Civil Veterinary Department.

Imperial Agricultural Chemist.

Imperial Mycologist.

Imperial Entomologist.

Directors of Agriculture.

President of the Imperial Forest Research Institute.

Principal of the Imperial Forest College.

Director, Geological Survey of India.

Railway Board.

Directors of Public Instruction.

Chief Malaria Medical Officer, Punjab.

Chief Conservator of Forests, Burma.

Director of the Zoological Survey of India.

Inspector of Science and European Schools, Central Provinces.

Metallurgical Inspector, Indian Munitions Board.

APPENDIX B.

List of Firms referred to in Rule 12. (Not printed).

APPENDIX D.

FIGURES RELATING TO EXPENDITURE.

1. We have prepared the following tables to illustrate our report; they show the total expenditure on stores, its incidence between Government of India, Local Governments, Railways, the distribution between India and England and the relative expenditure on certain selected commodities or groups of commodities. All figures relating to India represent average annual expenditure in thousands of rupees for two periods—prewar—1910-11 to 1913-14 and war—1914-15 to 1918-19.

2. It must be clearly understood that the data from which these tables have been compiled have been gathered from reports and returns published by various authorities and at different times. The underlying factors are not the same in all cases and to have insisted on absolute accuracy from such a multitude of officers would have involved an amount of labour incommensurate with the result.

3. The tables, therefore, must be considered as illustrative and relative rather than as affording figures of absolute expenditure; nevertheless they present a convenient view of the situation in respect of the purchase of stores in India, as between imported stores, and stores produced and manufactured in India, and also in England.

4. The question of accuracy does not arise in respect of expenditure by the Store Department of the India Office since the figures have been taken from the Home Accounts of the Government of India, neither does it enter into the table of distribution between the Department, Consulting Engineers, etc., which has been taken from departmental records. Nor can we question the accuracy of the table comparing total imports into India with imports on government account which have been taken from the Statistical Abstract relating to British India and the Accounts of Sea-borne Trade and Navigation.

5. Tables I and II have been compiled from a return specially prepared for the Committee under instructions from the Indian Munitions Board and we wish to record our appreciation of the work of the officers and staffs of the various government departments and railway companies who have furnished us with such valuable information.

The return is intended to show the entire purchase of each province, railway and department for each year. It includes, therefore, as far as the information is available, those purchases excluded from the abstract return of the expenditure on stores purchased in India submitted annually to the Secretary of State, *i.e.*:—

(*a*) purchases under Rule 6 of the Rules for the supply of articles for the public service, *i.e.*, purchases of stores of European manufacture by one department or railway from another,

(*b*) purchases invariably made in India such as bricks, lime and mortar, Indian timber, etc.,

but purchases made by contractors for government works and purchases of food and fodder are excluded.

The classification adopted follows that in the Catalogue of Indian Manufactures and in the Nomenclature and Classification of State Railway Stores. The information relating to stores obtained from government factories is exclusive, in each case, of factories or workshops under control of the department to which the returns relate.

The following classification is adopted :—

A. Bridgework.

B. Engineers Plant.

C. Workshop Machinery and Heavy Tools.

D. Ballast and Permanent way.

E. Rolling Stock { (*a*) Locomotives. (*b*) Coaching and Goods Stock.

F. Building, Station and Fencing Materials.

G. Tools and Stores.

1. Hardware, Metals and Implements.
2. Timber.
3. Hides and Leather.
4. Oils and Paints.
5. Textiles.
6. Chemicals
7. Stationery.
8. Coal.
9. Cement.
10. Miscellaneous.

H. Electrical Plant and materials.

6. The following short account of the tables will serve to explain their origin, and purpose and use:—

Table I shows the expenditure under three main headings, (*a*) imported stores locally purchased; (*b*) produce of India, indigenous or manufactured; (*c*) stores obtained through the India Office, or through the Home Boards of company-worked railways; for (*i*) departments under the Government of India; (*ii*) local Governments; (*iii*) railways, both State and company-worked; (*iv*) Army Department. This table presents a comparative statement of the expenditure of the various branches of the Indian administration and is probably the most accurate statement of actual expenditure obtainable notwithstanding that records have in some cases been destroyed.

Table II shows the same information cast in the form of percentages for representative services or groups of services; it shows at a glance the incidence of expenditure in England and in India.

Table III shows the relative expenditure on selected commodities or groups of commodities by representative branches of the administration; it has been compiled from the same source as Tables I and II.

Table IV shows the amount spent annually in India on selected imported stores. It has been abstracted from the reports sent each year by the Government of India to the Secretary of State.

Table V shows similar information in respect of stores produced in India and is from the same source.

Table VI shows the yearly expenditure on stores by the Store Department of the India Office for various branches of the Indian administration, together with the cost of freight. It has been compiled from the Home Accounts of the Government of India.

Table VII compares the total imports into India of selected commodities with the amounts imported on government account. It has been compiled partly from the Statistical Abstract Relating to British India and partly from the Accounts of Sea-borne Trade and Navigation of British India.

Table VIII shows the distribution of work at the India Office between that undertaken wholly in respect of both purchase and inspection by the staff of the India Store Department; that purchased on the advice of, but inspected by, the Consulting Engineers and Naval Architect to the India Office; and that supplied by the War Office and Admiralty. This information was specially compiled for us by the Director General of Stores at the India Office.

Table IX shows the expenditure on account of salaries, wages, travelling expenses of the Store Department of the India Office as given in the Home Accounts of the Government of India. In order, however, to arrive at an idea of the total annual cost, it is

necessary to add the following amounts as furnished by the Director General of Stores:—

	£
Contingencies	14,500
Pensions	8,500
Consulting Engineers' expenses and fees	11,700
Freight Commission	4,500
Stationery	1,200
Rent of India Store Depot	6,000
Proportionate rent of India Office	1,200
Total ...	47,600

Table X shows the cash expenditure incurred in India by the Indian Munitions Board. Although the figures include large expenditure on behalf of His Majesty's Government, it is of interest as showing the volume of work the new Indian Stores Department may be called upon to undertake in time of war.

7. Although these tables do not in every case relate specifically to the report, we think they will form a useful reference for those readers who may wish to investigate the subject in detail.

TABLE I.

Average annual value, in thousands of rupees, of stores purchased by Government Departments and Railways during the period 1910-11 to 1913-14.

Name.	Imported stores purchased in India.	Produce of India—		Stores obtained through Director General of Stores or Home Board.	Stores purchased outside India.	Total.
		From government factories.	From private dealers.			
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Government of India—						
1. Mints	25	15	1,50	1,22	...	3,12
2. Printing, Stationery and Stamps ...	1,67	3	30,72	7,65	...	40,07
3. Posts and Telegraphs ...	2,76	40	3,31	18,98	...	25,45
4. Survey of India	15	1	62	1,62	...	2,40
5. Secretariat Departments, including subordinate offices.	1,31	16	1,71	28	17	3,63
Total ...	6,14	75	37,86	29,75	17	74,67
Local Governments, and Administrations—						
1. Bombay	5,68	79	9,92	5,20	70	22,29
2. Madras	8,13	2,80	10,13	9,67	13	25,86
3. Bengal	4,72	45	5,71	2,16	11	13,15
4. Bihar and Orissa	5,26	31	3,01	21	24	9,03
5. Punjab	4,10	71	11,62	4,24	79	21,16
6. United Provinces	4,83	55	6,64	1,22	29	13,53
7. Burma	3,78	68	5,66	3,30	1,70	15,12
8. Assam	2,77	62	2,00	36	16	5,91
9. Central Provinces	3,46	61	3,84	86	15	8,94
10. Delhi	8,29	26	2,58	1,79	11	13,06
11. Coorg	18	1	4	...	...	23
12. Peshawar	2,87	34	1,11	45	...	4,77
13. Rajputana	60	7	22	37	...	1,26
14. Baluchistan	30	...	10	...	...	46
Total ...	50,05	7,70	62,22	29,83	4,46	1,54,26
State-Worked Railways—						
1. North Western	17,87	59	1,43,28	2,18,79	...	3,80,03
2. Oudh and Rohilkhand * ...	44	13	14,36	49,21	...	64,14
3. Eastern Bengal	1,87	...	4,19	84,01	...	90,07
Total ...	19,68	72	1,61,83	3,52,01	...	5,34,24
Company-Worked Railways—						
1. East Indian	28,89	*53,66	69,77	1,23,01	..	2,66,33
2. Bengal Nagpur						
3. Great Indian Peninsula ...						
4. Bombay, Baroda and Central India.	...	...	Information not available.			
5. Madras and Southern Mahratta ...						
6. South Indian	6,17	...	32,94	55,11	...	94,22
7. Assam Bengal						
8. Bengal and North-Western ...						
9. Rohilkund and Kumaon ...	...	...	Information not available.			
10. Burma						
Total ...	35,06	53,66	9,71	1,78,12	...	3,60,55
Army Department—						
1. Royal Indian Marine ...	92	26	7,39	5,79	...	14,36
2. Ordnance Department, Factories ...	46	59,53	17,46	32,93	...	1,08,37
3. Ordnance Department, Arsenals ...	14	...	14,87	6,76	...	21,77
4. Indian Medical Service ...	10	2,01	84	14,55	...	17,50
5. Military Works Services ...	4,94	20	3,54	1,08	...	9,76
6. Army Clothing Factories ...	3	27	11,46	10,07	...	21,83
Total ...	6,59	62,27	53,55	71,18	...	1,93,59
GRAND TOTAL ...	1,17,52	1,25,10	4,09,17	6,60,89	4,63	13,17,31

* Represents value of stores manufactured in Railway Workshops.

TABLE I—*concld.*

Average annual value, in thousands of rupees, of stores purchased by Government Departments and Railways during the period 1914-15 to 1918-19.

Names.	Imported stores purchased in India.	Produce of India.— From government factories.	Produce of India.— From private dealers.	Stores obtained through Director General of Stores or Home Board.	Stores purchased outside India.	Total.
Government of India –	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1. Mints	85	19	2,41	2,77	85	6,07
2. Printing, Stationery and Stamps ...	3,16	11	51,56	9,60	46	64,39
3. Posts and Telegraphs	7,66	79	7,59	24,58	...	40,62
4. Survey of India	1,91	13	82	3,95	...	6,81
5. Secretariat Departments, including subordinate offices.	3,91	84	3,31	50	75	8,81
Total ...	17,49	1,56	66,69	41,40	2,06	1,29,20
Local Governments and Administrations—						
1. Bombay	17,93	1,03	19,61	6,59	1,16	46,32
2. Madras	7,67	2,90	17,08	8,01	22	35,91
3. Bengal	11,41	1,25	13,60	1,24	13	27,63
4. Bihar and Orissa	5,72	71	9,30	66	17	16,56
5. Punjab	7,74	1,37	11,88	1,95	12	23,06
6. United Provinces	11,92	1,39	9,58	1,55	41	24,85
7. Burma	16,12	1,29	16,58	5,49	3,22	41,69
8. Assam	3,53	60	3,02	20	6	7,41
9. Central Provinces	3,88	74	8,37	88	10	13,91
10. Delhi	10,93	5	13,09	2,95	5	27,12
11. Coorg	33	2	16	...	...	51
12. Peshawar	2,76	37	1,19	1	...	4,33
13. Rajputana	1,23	13	57	21	...	2,14
14. Baluchistan	35	...	13	1	...	49
Total ...	1,01,51	11,85	1,24,16	29,77	4,64	2,71,93
State-Worked Railways—						
1. North Western	31,37	55	1,84,37	87,87	...	3,04,16
2. Oudh and Rohilkhand ...	15,65	10	23,13	11,63	...	50,40
3. Eastern Bengal	15,90	1,13	44,84	38,92	...	1,00,79
Total ...	62,92	1,78	2,52,33	1,38,32	..	4,55,35
Company-Worked Railways—						
1. East Indian	37,00	68,69*	76,98	1,00,01	...	2,82,68
2. Bengal Nagpur	28,47	...	41,18	25,63	...	95,28
3. Great Indian Peninsula	48,01	...	1,68,99	35,47	...	2,40,47
4. Bombay, Baroda and Central India	41,30	...	81,89	21,83	...	1,44,52
5. Madras and Southern Mahratta ...	18,25	...	45,66	19,25	..	83,16
6. South Indian	8,11	...	42,42	28,40	...	78,93
7. Assam Bengal	8,34	...	14,86	4,70	1	27,91
8. Bengal and North-Western ...	5,01	...	14,18	2,14	...	21,33
9 Rohilkund and Kumaon ...	2,03	...	6,62	77	...	9,42
10. Burma	3,88	...	18,74	13	...	22,75
Total ...	1,96,40	68,69	5,01,02	2,38,33	1	10,06,45
Army Department–						
1. Royal Indian Marine ...	28,81	1,03	15,40	68,71	...	1,03,95
2. Ordnance Department, Factories ...	2,65	20,79	1,16,95	1,25,40	...	2,65,79
3. " " Arsenals ...	26	...	12,30	21,50	...	44,06
4. Indian Medical Service ...	97	21,95	9,33	45,06	...	77 34
5. Military Works Services ...	24,55	94	17,39	1,30	1	44,08
6. Army Clothing Factories ...	Information not available.					
Total	53,24	44,71	1,73,39	2,59,87	1	5,30,23
Grand Total	4,32,56	1,28,59	11,17,69	7,07,69	6,72	23,93,15

*Represents value of stores manufactured in Railway workshops.

TABLE II.

Average annual value, in thousands of rupees, of stores purchased during the period 1910-11 to 1913-14 comparing expenditure in England and India.

Names.	Imported stores purchased in India.		Produce of India—				Stores obtained through Director General of Stores or Home Board.		Stores purchased outside India.		Total.
	Value.	Percentage on total.	From government factories.		From private dealers.		Value.	Percentage on total.	Value.	Percentage on total.	
			Value.	Percentage on total.	Value.	Percentage on total.					
	Rs.		Rs.		Rs.		Rs.		Rs.		Rs.
1. Government of India Departments ...	6,14	8·2	75	1·0	37,86	50·7	29,75	39·9	17	0·2	74,67
2. Local Governments	50,05	32·5	7,70	5·0	62,22	40·3	29,83	19·3	4,46	2·9	1,54,26
3. State-worked Railways	19,68	3·7	72	0·1	1,61,83	30·3	3,52,01	65·9	...	...	5,34,24
4. Company-worked Railways ...	Detailed information not available.										
5. Royal Indian Marine	92	6·4	26	1·8	7,39	51·5	5,79	40·3	...	...	14,36
6. Ordnance Department, Factories ...	46	0·4	59,53	54·9	15,45	14·3	32,93	30·4	..	...	1,08,37
7. Ordnance Department, Arsenals ...	14	0·6	...	...	14,87	68·3	6,76	31·1	...	...	21,77
8. Indian Medical Service	10	0·6	2,01	11·5	84	4·8	14,55	83·1	..	...	17,50
9. Military Works Services ...	4,94	50·6	20	2·0	3,54	36·3	1,08	11·1	..	...	9,76
Total as per Table I ...	1,17,52	8·9	1,25,10	9·5	4,09,17	31·1	6,60,89	50·2	4,63	0·3	13,17,31

TABLE II—*concld.*

Average annual value, in thousands of rupees, of stores purchased during the period 1914-15 to 1918-19 comparing expenditure in England and India.

Names.	Imported stores purchased in India.		Produce of India —				Stores obtained through Director General of Stores or Home Board.		Stores purchased outside India.		Total.
	Value.	Percentage on total.	From government factories.		From private dealers.		Value.	Percentage on total.	Value.	Percentage on total.	
			Value.	Percentage on total.	Value.	Percentage on total.					
	Rs.		Rs.		Rs.		Rs.		Rs.		Rs.
1. Government of India Departments ...	17,49	19·5	1,56	1·3	66,69	51·6	41,40	32·0	2,06	1·6	1,29,20
2. Local Governments	1,01,51	37·3	11,55	4·4	1,24,16	45·7	29,77	10·9	4,64	1·7	2,71,03
3. State-worked Railways	62,92	13·8	1,78	0·4	2,52,33	55·4	1,38,32	30·4	...	...	4,55,35
4. Company-worked Railways ...	1,98,40	19·7	68,69	6·8	5,01,02	49·8	2,38,33	23 7		...	10,06,45
5. Royal Indian Marine	23,81	21·9	1,03	0·9	15,40	14·1	68,71	63·1	...	...	1 08,95
6. Ordnance Department, Factories ...	2,65	1·0	20,79	7·8	1,18,95	44·8	1,23,40	46·4	...	..	2,65,79
7. Ordnance Department, Arsenals ...	26	0·8	...	...	12,30	36·1	21,50	63·1	...	...	34,06
8. Indian Medical Service ...	97	1·2	21,95	28·4	9,36	12·1	45,06	58·3	...	...	77,34
9. Military Works Services ...	24,55	55 7	94	2·1	17,38	39·5	1,20	2·7	1	...	44,08
Total as per Table I ...	4,32,56	18·1	1,28,59	5·3	11,17,59	46·7	7,07,69	29·6	6,72	0·3	23,93,15

TABLE III.

Average annual value, in thousands of rupees, of commodities purchased by Government Departments and Railways during the period 1910-11 to 1913-14.

Names.	Imported stores purchased in India.	Produce of India—		Stores obtained through Director General of Stores or Home Board.	Total.
		From government factories.	From private dealers.		
	Rs.	Rs.	Rs.	Rs.	Rs.
STRUCTURAL STEEL WORK.					
1. Mints	...	...	...	...	...
2. Printing, Stationery and Stamps ...	...	...	...	...	...
3. Government of Bombay	3	...	...	1	4
4. „ „ Madras	25	2	...	3	30
5. „ „ Bihar and Orissa ...	95	...	2	...	97
6. „ „ the Punjab	3	...	...	...	3
7. „ „ the United Provinces ...	2	...	8	...	10
8. „ „ Burma	31	...	12	2	45
9. Delhi Administration	4	...	...	...	4
10. North Western Railway	7	...	8	9,57	9,72
11. Oudh and Rohilkhand Railway	...	...	...	...	...
12. Eastern Bengal Railway	...	...	1	*	1
13. East Indian Railway	Information not available.				
14. Bengal Nagpur Railway					
15. Great Indian Peninsula Railway ...					
16. Bombay, Baroda and Central India Railway...					
17. South Indian Railway	1	...	...	2,63	2,64
18. Royal Indian Marine	...	...	...	...	...
19. Ordnance Department, Arsenals	...	...	...	...	...

*Information not available.

TABLE III—*contd.*

Average annual value, in thousands of rupees, of commodities purchased by Government Departments and Railways during the period 1914-15 to 1918-19.

Names.	Imported stores purchased in India.	Produce of India—		Stores obtained through Director General of Stores or Home Board.	Total.
		From government factories.	From private dealers.		
	Rs.	Rs.	Rs.	Rs.	Rs.
STRUCTURAL STEEL WORK.					
1. Mints	...	...	...	...	...
2. Printing, Stationery and Stamps... ...	...	...	...	...	...
3. Government of Bombay	22	2	59	...	83
4. „ „ Madras	22	...	10	...	32
5. „ „ Bihar and Orissa ...	29	...	9	...	38
6. „ „ the Punjab	8	2	...	27	32
7. „ „ the United Provinces ...	17	6	13	9	45
8. „ „ Burma	1,58	...	38	...	1,96
9. Delhi Administration	1	...	...	...	1
10. North Western Railway	3	...	14	1,09	1,26
11. Oudh and Rohilkhand Railway	...	...	3	1	4
12. Eastern Bengal Railway	...	...	33	...	33
13. East Indian Railway	5	...	4	11	20
14. Bengal Nagpur Railway	...	...	6	2	8
15. Great Indian Peninsula Railway ...	3	...	...	57	60
16. Bombay, Baroda and Central India Railway...	6	...	9	14	29
17. South Indian Railway	1	...	...	30	31
18. Royal Indian Marine	Information not available.				
19. Ordnance Department, Arsenals	...	...	...	...	...

TABLE III—*contd.*

Average annual value, in thousands of rupees, of commodities purchased by Government Departments and Railways during the period 1910-11 to 1913-14.

Names.	Imported stores purchased in India.	Produce or Industry—		Stores obtained through Director General of Stores or Home Board.	Total.
		From government factories.	From private dealers.		
	Rs.	Rs.	Rs.	Rs.	Rs.
ENGINEERS' PLANT AND WORKSHOP MACHINERY.					
1. Mints	...	...	...	27	27
2. Printing, Stationery and Stamps	...	2	...	4	6
3. Government of Bombay	59	1	3	1,27	1,90
4. „ „ Madras	32	...	12	90	1,34
5. „ „ Bihar and Orissa	41	...	9	1	51
6. „ „ the Punjab	32	....	1	1,41	1,74
7. „ „ the United Provinces ...	49	1	7	21	78
8. „ „ Burma	27	...	3	26	56
9. Delhi Administration	66	...	1	99	1,68
10. North Western Railway	1,31	3	24	5,67	7,29
11. Oudh and Rohilkland Railway	1	...	4	...	5
12. Eastern Bengal Railway	41	...	75	*	1,16
13. East Indian Railway	Information not available.				—
14. Bengal Nagpur Railway					
15. Great Indian Peninsula Railway					
16. Bombay, Baroda and Central India Railway ...					
17. South Indian Railway	1	...	...	1,63	1,64
18. Royal Indian Marine	...	...	...	42	42
19. Ordnance Department, Arsenals	...	...	...	3	3

* Information not available.

TABLE III—*contd.*

Average annual value, in thousands of rupees, of commodities purchased by Government Departments and Railways during the period 1914-15 to 1918-19.

Names.	Imported stores purchased in India.	Produce of India—		Stores obtained through Director General of Stores or Home Board.	Total.
		From government factories.	From private dealers.		
	Rs.	Rs.	Rs.	Rs.	Rs.
ENGINEERS' PLANT AND WORKSHOP MACHINERY.					
1. Mints	3	1	5	19	28
2. Printing, Stationery and Stamps	...	1	...	...	1
3. Government of Bombay	1,00	2	34	98	2,34
4. „ „ Madras	53	2	15	44	1,14
5. „ „ Bihar and Orissa	28	...	9	10	47
6. „ „ the Punjab	66	9	14	68	1,57
7. „ „ the United Provinces	1,81	1	9	51	2,42
8. „ „ Burma	61	1	17	6	85
9. Delhi Administration	59	...	2	1,29	1,90
10. North Western Railway	89	2	10	1,67	2,68
11. Oudh and Rohilkhand Railway	5	...	3	8	16
12. Eastern Bengal Railway	60	...	11	91	1,62
13. East Indian Railway	1,30	...	1	1,40	2,71
14. Bengal Nagpur Railway	50	...	1	52	1,03
15. Great Indian Peninsula Railway	1,16	...	20	1,96	3,32
16. Bombay, Baroda and Central India Railway ..	54	...	4	21	79
17. South Indian Railway	9	...	...	28	37
18. Royal Indian Marine	Information not available.				
19. Ordnance Department, Arsenals	...	...	...	9	9

TABLE III—*contd.*

Average annual value, in thousands of rupees, of commodities purchased by Government Departments and Railways during the period 1910-11 to 1913-14.

Names.	Imported stores purchased in India	Produce of India—		Stores obtained through Director General of Stores or Home Board.	Total.
		From government factories.	From private dealers.		
	Rs.	Rs.	Rs.	Rs.	Rs.
COACHING AND GOODS STOCK.					
1. Mints	...	...	...	...	...
2. Printing, Stationery and Stamps	...	...	—	...	...
3. Government of Bombay	4	...	8	...	12
4. „ „ Madras	3	...	2	...	5
5. „ „ Bihar and Orissa	34	...	1	...	35
6. „ „ the Punjab	26	...	6	13	45
7. „ „ the United Provinces	23	...	...	...	23
8. „ „ Burma	...	...	3	...	3
9. Delhi Administration	39	...	10	22	71
10. North Western Railway	29	...	6,00	71,31	77,60
11. Oudh and Rohilkhand Railway	...	...	2	...	2
12. Eastern Bengal Railway	...	...	1,20	*	1,20
13. East Indian Railway	Information not available.				
14. Bengal Nagpur Railway					
15. Great Indian Peninsula Railway					
16. Bombay, Baroda and Central Railway ...					
17. South Indian Railway	...	...	...	7,42	7,42
18. Royal Indian Marine	...	...	...	...	...
19. Ordnance Department, Arsenals	...	...	...	...	...

* Information not available.

TABLE III—*contd.*

Average annual value, in thousands of rupees, of commodities purchased by Government Departments and Railways during the period 1914-15 to 1918-19.

Names.	Imported stores purchased in India.	Produce of India—		Stores obtained through Director General of Stores or Home Board.	Total.
		From government factories.	From private dealers.		
	Rs.	Rs.	Rs.	Rs.	Rs.
COACHING AND GOODS STOCK.					
1. Mints	...	...	...	...	...
2. Printing, stationery and Stamps	...	...	...	...	...
3. Government of Bombay	13	1	7	5	26
4. „ „ Madras	19	1	3	1	24
5. „ „ Bihar and Orissa	45	...	6	...	51
6. „ „ the Punjab	9	...	5	3	17
7. „ „ the United Provinces ...	27	...	1	...	28
8. „ „ Burma	1	...	...	...	1
9. Delhi Administration	26	...	1	19	46
10. North Western Railway	6	10	17,47	25,93	43,53
11. Oudh and Rohilkhand Railway	52	...	18	2,50	3,20
12. Eastern Bengal Railway	1	...	2,44	9,30	11,75
13. East Indian Railway	4,70	...	...	17,03	21,73
14. Bengal Nagpur Railway	2,72	...	98	8,12	11,82
15. Great Indian Peninsula Railway	1,34	...	89	9,09	10,31
16. Bombay, Baroda and Central India Railway ...	3,68	...	2,56	2,79	9,03
17. South Indian Railway	22	...	...	1,48	1,70
18. Royal Indian Marine	Information not available.				
19. Ordnance Department, Arsenals	...	...	...	...	...

TABLE III—*contd.*

Average annual value, in thousands of rupees, of commodities purchased by Government Departments and Railways during the period 1910-11 to 1913-14.

Names.	Imported stores purchased in India.	Produce of India—		Stores obtained through Director General of Stores at Home Board.	Total.
		From government factories.	From private dealers.		
	Rs.	Rs.	Rs.	Rs.	Rs.
HARDWARE, METALS AND IMPLEMENTS.					
1. Mints	5	...	10	·41	56
2. Printing, Stationery and Stamps	1	...	...	24	25
3. Government of Bombay	95	2	33	67	1,97
4. „ „ Madras	96	13	12	2,01	3,24
5. „ „ Bihar and Orissa	78	17	11	2	1,08
6. „ „ the Punjab	1,35	12	37	1,13	3,02
7. „ „ the United Provinces	1,10	6	45	15	1,76
8. „ „ Burma	71	7	20	19	1,17
9. Delhi Administration	47	...	3	24	74
10. North Western Railway	2,96	21	44	17,00	20,62
11. Oudh and Rohilkhand Railway	18	12	28	...	58
12. Eastern Bengal Railway	63	...	21	...	84
13. East Indian Railway	Information not available.				
14. Bengal Nagpur Railway					
15. Great Indian Peninsula Railway					
16. Bombay, Baroda and Central India Railway ...					
17. South Indian Railway	40	...	8	2,73	3,21
18. Royal Indian Marine	...	...	...*	2,32	2,32
19. Ordnance Department, Arsenals	6	...	55	60	1,21

*Information not available.

TABLE III—*contd.*

Average annual value, in thousands of rupees, of commodities purchased by Government Departments and Railways during the period 1914-15 to 1918-19.

Names.	Imported stores purchased in India.	Produce of India—		Stores obtained through Director General of Stores or Home Board.	Total.
		From government factories.	From private dealers.		
	Rs.	Rs.	Rs.	Rs.	Rs.
HARDWARE, METALS AND IMPLEMENTS.					
1. Mints	42	2	19	1,60	2,23
2. Printing, Stationery and Stamps	39	...	...	37	76
3. Government of Bombay	4,48	8	63	53	5,66
4. „ „ Madras	1,92	5	50	2,01	4,48
5. „ „ Bihar and Orissa	88	23	28	28	1,67
6. „ „ the Punjab	3,13	5	1,12	59	4,89
7. „ „ the United Provinces	3,44	4	52	15	4,15
8. „ „ Burma	3,63	20	1,08	1,37	6,28
9. Delhi Administration	2,57	...	43	36	3,36
10. North Western Railway	6,54	1	6,57	8,83	21,95
11. Oudh and Rohilkhand Railway	2,05	7	2,29	7	4,43
12. Eastern Bengal Railway	2,30	17	1,37	1,21	5,05
13. East Indian Railway	6,19	...	13,30	5,12	24,61
14. Bengal Nagpur Railway	4,59	...	3,77	1,65	10,01
15. Great Indian Peninsula Railway	13,40	...	6,48	2,66	2251
16. Bombay, Baroda and Central India Railway ...	13,80	...	2,41	3,34	19,55
17. South Indian Railway	98	...	33	1,16	2,42
18. Royal Indian Marine	Information not available.				
19. Ordnance Department, Arsenals	14	...	60	4,38	5,12

TABLE III—*contd.*

Average annual value, in thousands of rupees, of commodities purchased by Government Departments and Railways during the period 1910-11 to 1913-14.

Names.	Imported stores purchased in India.	Produce of India—		Stores obtained through Director General of Stores or Home Board.	Total.
		From Government factories.	From private dealers.		
	Rs.	Rs.	Rs.	Rs.	Rs.
TIMBER.					
1. Mints	...	...	16	2	18
2. Printing, Stationery and Stamps	...	...	1	...	1
3. Government of Bombay	2	10	36	10	58
4. „ „ Madras	2	...	87	...	89
5. „ „ Bihar and Orissa	1	2	22	...	25
6. „ „ the Punjab	2	...	91	...	93
7. „ „ the United Provinces	...	1	60	1	62
8. „ „ Burma	1	1	36	...	38
9. Delhi Administration	...	1	51	„	52
10. North Western Railway	4	...	12,29	1	12,34
11. Oudh and Rohilkhand Railway	...	...	1,09	...	1,09
12. Eastern Bengal Railway	...	...	...	*	...
13. East Indian Railway	Information not available.				
14. Bengal Nagpur Railway					
15. Great Indian Peninsula Railway					
16. Bombay, Baroda and Central India Railway ...					
17 South Indian Railway	...	...	3,53	...	3,52
18. Royal Indian Marine	...	26	...	19	45
19. Ordnance Department, Arsenals ...	...	...	87	...	87

* Information not available.

TABLE III—*contd.*

Average annual value, in thousands of rupees, of commodities purchased by Government Departments and Railways during the period 1914-15 to 1918-19.

Names.	Imported stores purchased in India.	Produce of India—		Stores obtained through Director General of Stores or Home Board.	Total.
		From government factories.	From private dealers.		
	Rs.	Rs.	Rs.	Rs.	Rs.
TIMBER.					
1. Mints	...	...	39	2	41
2. Printing, Stationery and Stamps	...	...	2	...	2
3. Government of Bombay	47	9	88	1	1,45
4. „ „ Madras	12	4	1,15	...	1,31
5. „ „ Bihar and Orissa	1	...	24	...	25
6. „ „ the Punjab	1	1	49	...	51
7. „ „ the United Provinces	...	...	1,33	...	1,33
8. „ „ Burma	1	10	1,15	...	1 26
9. Delhi Administration	...	...	63	...	63
10. North Western Railway	...	...	5,98	...	5,98
11. Oudh and Rohilkhand Railway	...	...	2,29	...	2,29
12 Eastern Bengal Railway	2,26	81	2,95	...	6,02
13. East Indian Railway	64	...	10,76	...	11,30
14. Bengal Nagpur Railway	...	...	3,12	...	3,12
15. Great Indian Peninsula Railway	...	...	6,24	...	6,24
16. Bombay, Baroda and Central India Railway ...	46	...	3,65	...	4,11
17. South Indian Railway	...	...	1,19	...	1,19
18. Royal Indian Marine	Information not available.				
19. Ordnance Department, Arsenals	...	...	59	...	59

TABLE III—*contd.*

Average annual value, in thousands of rupees, of commodities purchased by Government Departments and Railways during the period 1910-11 to 1913-14.

Names.	Imported stores purchased in India.	Produce of India—		Stores obtained through Director General of Stores or Home Board.	Total.
		From government factories.	From private dealers.		
	Rs.	Rs.	Rs.	Rs.	Rs.
HIDES AND LEATHER.					
1. Mints	...	...	...	3	3
2. Printing, Stationery and Stamps	...	...	1	...	1
3. Government of Bombay	3	...	49	1	53
4. „ „ Madras	...	74	80	4	1,58
5. „ „ Bihar and Orissa	2	...	2	...	4
6. „ „ the Punjab	...	1	26	...	27
7. „ „ the United Provinces ...	1	...	36	...	37
8. „ „ Burma	4	...	74	...	78
9. Delhi Administration	4	...	...	...	4
10. North Western Railway	3	...	74	1,34	2,11
11. Oudh and Rohilkhand Railway	...	...	..	...	...
12. Eastern Bengal Railway	2	...	...	*	2
13. East Indian Railway	Information not available.				
14. Bengal Nagpur Railway...					
15. Great Indian Peninsula Railway					
16. Bombay, Baroda and Central India Railway ...					
17. South Indian Railway	4	...	1	14	19
18. Royal Indian Marine	...	...	...	8	8
19. Ordnance Department, Arsenals	...	...	1	...	1

* Information not available.

TABLE III--*contd.*

Average annual value, in thousands of rupees, of commodities purchased by Government Departments and Railways during the period 1914-15 to 1918-19.

Names.	Imported stores purchased in India.	Produce of India—		Stores obtained through Director General of Stores or Home Board.	Total.
		From government factories.	From private dealers.		
	Rs.	Rs.	Rs.	Rs.	Rs.
HIDES AND LEATHER.					
1. Mints	1	...	1	4	6
2. Printing, Stationery and Stamps	1	...	...	...	1
3. Government of Bombay	12	...	81	...	93
4. „ „ Madras	3	69	1,29	5	2,05
5. „ „ Bihar and Orissa	2	...	9	...	11
6. „ „ the Punjab	1	1	22	...	24
7. „ „ the United Provinces ...	2	...	4)	...	42
8. „ „ Burma	2	...	1,29	...	1,31
9. Delhi Administration	12	...	2	...	14
10. North Western Railway	8	1	7	8	24
11. Oudh and Rohilkhand Railway	1	...	10	1	12
12. Eastern Bengal Railway	23	...	10	...	33
13. East Indian Railway	16	...	13	...	29
14. Bengal Nagpur Railway	...	...	...	...	...
15. Great Indian Peninsula Railway	33	...	69	8	1,1)
16. Bombay, Baroda and Central India Railway ...	53	...	17	...	70
17. South Indian Railway	26	...	7	24	57
18. Royal Indian Marine	Information not available.				
19. Ordnance Department, Arsenals	...	...	...	...	...

TABLE III—*contd.*

Average annual value, in thousands of rupees, of commodities purchased by Government Departments and Railways during the period 1910-11 to 1913-14.

Names.	Imported stores purchased in India.	Produce of India—		Stores obtained through Director General of Stores or Home Board.	Total.
		From government factories.	From private dealers.		
OILS AND PAINTS.	Rs.	Rs.	Rs.	Rs.	Rs.
1. Mints	2	...	13	1	16
2. Printing, Stationery and Stamps	1	...	...	3	4
3. Government of Bombay	33	...	27	1	61
4. „ „ Madras	21	2	48	16	86
5. „ „ Bihar and Orissa	24	...	13	...	37
6. „ „ the Punjab	38	...	13	...	51
7. „ „ the United Provinces	9	2	12	5	28
8. „ „ Burma	12	1	16	2	31
9. Delhi Administration	11	...	1	...	12
10. North Western Railway	3,96	2	8,37	2,76	15,11
11. Oudh and Rohilkhand Railway	4	...	74	...	79
12. Eastern Bengal Railway...	13	...	3	*	16
13. East Indian Railway	Information not available.				
14. Bengal Nagpur Railway...					
15. Great Indian Peninsula Railway					
16. Bombay, Baroda and Central India Railway ...					
17. South Indian Railway	1,20	...	2,38	1,11	4,75
18. Royal Indian Marine	...	...	...	89	89
19. Ordnance Department, Arsenals	...	...	52	36	88

* Information not available.

TABLE HI—*contd.*

Average annual value, in thousands of rupees, of commodities purchased by Government Departments and Railways during the period 1914-15 to 1918-19.

Names.	Imported stores purchased in India.	Produce of India—		Stores obtained through Director General of Stores or Home Board.	Total.
		From government factories.	From private dealers.		
	Rs.	Rs.	Rs.	Rs.	Rs.
OILS AND PAINTS.					
1. Mints	8	...	28	1	37
2. Printing, Stationery and Stamps	3	...	...	2	5
3. Government of Bombay	1,18	...	49	5	1,72
4. „ „ Madras	82	2	1,23	23	2,30
5. „ „ Bihar and Orissa	36	...	23	1	60
6. „ „ the Punjab	94	...	25	3	1,22
7. „ „ the United Provinces	31	2	59	6	98
8. „ „ Burma	48	...	1,20	12	1,80
9. Delhi Administration	54	...	18	...	72
10. North Western Railway	7,78	28	10,47	1,28	19,81
11. Oudh and Rohilkhand Railway	1,87	3	1,98	1	3,89
12. Eastern Bengal Railway	6,03	5	1,93	...	8,05
13. East Indian Railway	11,90	...	1,33	...	13,23
14. Bengal Nagpur Railway	1,17	...	1,36	...	2,53
15. Great Indian Peninsula Railway	13,67	...	8,66	33	22,66
16. Bombay, Baroda and Central India Railway ...	5,43	...	90	...	6,33
17. South Indian Railway	2,45	...	2,91	46	5,82
18. Royal Indian Marine	Information not available.				
19. Ordnance Department, Arsenals	1	...	46	78	1,25

TABLE III—*contd.*

Average annual value, in thousands of rupees, of commodities purchased by Government Departments and Railways during the period 1910-11 to 1913-14.

Names.	Imported stores purchased in India.	Produce of India—		Stores obtained through Director General of Stores or Home Board.	Total.
		From government factories.	From private dealers.		
	Rs.	Rs.	Rs.	Rs.	Rs.
TEXTILES.					
1. Mints	...	7	1	1	9
2. Printing, Stationery and Stamps	...	...	2	2	4
3. Government of Bombay	44	23	1,57	14	2 38
4. „ „ Madras	17	1,14	1,47	45	3,23
5. „ „ Bihar and Orissa	10	1	13	...	24
6. „ „ the Punjab	24	13	2,47	5	2,89
7. „ „ the United Provinces... ...	2	29	2,48	21	3,00
8. „ „ Burma	73	21	1,59	2	2,60
9. Delhi Administration	...	...	1	...	1
10. North Western Railway	35	26	2.26	,42	4,29
11. Oudh and Rohilkhand Railway	1	...	...	...	1
12. Eastern Bengal Railway	1	...	...	*	1
13. East Indian Railway	Information not available.				
14. Bengal Nagpur Railway					
15. Great Indian Peninsula Railway					
16. Bombay, Baroda and Central India Railway ...					
17. South Indian Railway	3	...	3	3	9
18. Royal Indian Marine	...	...	...	1,27	1,27
19. Ordnance Department, Arsenals	2	...	11,90	79	12,71

* Information not available.

TABLE III—*contd.*

Average annual value, in thousands of rupees, of commodities purchased by Government Departments and Railways during the period 1914 15 to 1918-19.

Names.	Imported stores purchased in India.	Produce of India—		Stores obtained through Director General of Stores or Home Board.	Total.
		From government factories.	From private dealers.		
	Rs.	Rs.	Rs.	Rs.	Rs.
TEXTILES.					
1. Mints	3	15	3	2	23
2. Printing, Stationery and Stamps	1	...	6	3	12
3. Government of Bombay	1,64	24	7,06	12	9,98
4. „ „ Madras	23	1,42	4,27	51	6,49
5. „ „ Bihar and Orissa	4	22	2,92	17	3,35
6. „ „ the Punjab	27	37	4,66	10	5,40
7. „ „ the United Provinces ...	6	84	2,48	14	3,52
8. „ „ Burma	2,18	35	3,45	6	6,04
9. Delhi Administration	7	...	6	...	13
10. North Western Railway	49	1	78	16	1,44
11. Oudh and Rohilkhand Railway	2	...	66	...	68
12. Eastern Bengal Railway	34	5	92	...	1,31
13. East Indian Railway	61	...	3,96	...	4,57
14. Bengal Nagpur Railway	...	...	...	...	...
15. Great Indian Peninsula Railway	98	...	61	50	2,09
16. Bombay, Baroda and Central India Railway ...	13	...	23	...	34
17. South Indian Railway	4	...	5	...	9
18. Royal Indian Marine	...	Information not available.			
19. Ordnance Department, Arsenals	2	...	2,34	39	2,75

TABLE III—*contd.*

Average annual value, in thousands of rupees, of commodities purchased by Government Departments and Railways during the period 1910-11 to 1913-14.

Names.	Imported stores purchased in India.	Produce of India—		Stores obtained through Director General of Stores or Home Board.	Total.
		From government factories.	From private dealers.		
	Rs.	Rs.	Rs.	Rs.	Rs.
CHEMICALS.					
1. Mints	...	...	1	1	2
2. Printing, Stationery and Stamps	...	...	...	...	...
3. Government of Bombay...	27	20	1	6	54
4. „ „ Madras	7	...	2	13	22
5. „ „ Bihar and Orissa	2	...	2	2	6
6. „ „ the Punjab	20	6	1	3	30
7. „ „ the United Provinces ...	23	7	8	7	50
8. „ „ Burma	2	12	16	13	43
9. Delhi Administration	5	...	...	...	5
10. North Western Railway...	8	...	2	...	10
11. Oudh and Rohilkhand Railway	...	...	1	...	1
12. Eastern Bengal Railway	1	...	...		1
13. East Indian Railway	Information not available.				
14. Bengal Nagpur Railway...					
15. Great Indian Peninsula Railway					
16. Bombay, Baroda and Central India Railway ...					
17. South Indian Railway	...	...	...	...	...
18. Royal Indian Marine	...	...	...	...	...
19. Ordnance Department, Arsenals	1	...	...	3	4

* Information not available.

TABLE III—*contd.*

Average annual value, in thousands of rupees, of commodities purchased by Government Departments and Railways during the period 1914-15 to 1918-19.

Names.	Imported stores purchased in India.	Produce of India—		Stores obtained through Director General of Stores or Home Board.	Total.
		From government factories.	From private dealers.		
	Rs.	Rs.	Rs.	Rs.	Rs.
CHEMICALS.					
1. Mints	....	...	11	...	11
2. Printing, Stationery and Stamps	...	...	...	...	...
3. Government of Bombay	61	37	10	6	1,16
4. „ „ Madras	70	2	12	33	1,17
5. „ „ Bihar and Orissa	10	...	4	1	15
6. „ „ the Punjab	42	19	7	2	70
7. „ „ the United Provinces ...	58	22	17	3	1,00
8. „ „ Burma	14	25	11	9	59
9. Delhi Administration	12	3	1	3	19
10. North Western Railway...	8	...	8	...	16
11. Oudh and Rohilkhand Railway	6	...	7	...	13
12. Eastern Bengal Railway	25	...	11	...	36
13. East Indian Railway	48	...	40	...	88
14. Bengal Nagpur Railway	...	...	...	...	...
15. Great Indian Peninsula Railway	15	...	6	1	22
16. Bombay, Baroda and Central India Railway ...	...	...	...	...	...
17. South Indian Railway	...	...	...	...	...
18 Royal Indian Marine	...	Information not available.			
19. Ordnance Department, Arsenals	1	...	...	3	4

TABLE III—*contd.*

Average annual value, in thousands of rupees, of commodities purchased by Government Departments and Railways during the period 1910-11 to 1913-14.

Names.	Imported stores purchased in India.	Produce of India—		Stores obtained through Director General of Stores or Home Board.	Total.
		From government factories.	From private dealers.		
	Rs.	Rs.	Rs.	Rs.	Rs.
STATIONERY.					
1. Mints	...	...	...	...	...
2. Printing, Stationery and Stamps	1,56	1	30,39	7,24	39,22
3. Government of Bombay	1,38	13	4,90	1,24	7,64
4. „ „ Madras	33	12	4,87	5,13	9,95
5. „ „ Bihar and Orissa	14		21	5	40
6. „ „ the Punjab	3	17	13	...	33
7. „ „ the United Provinces	4	1	14	3	22
8. „ „ Burma	...	...	...	...	...
9. Delhi Administration	...	...	3	...	3
10. North Western Railway	94	1	2,13	58	3,66
11. Oudh and Rohilkhand Railway	...	...	...	...	...
12. Eastern Bengal Railway	1	...	...	...*	1
13. East Indian Railway	Information not available.				
14. Bengal Nagpur Railway					
15. Great Indian Peninsula Railway					
16. Bombay, Baroda and Central India Railway					
17. South Indian Railway	3	...	12	23	38
18. Royal Indian Marine	...	...	...	...	...
19. Ordnance Department, Arsenals	...	...	...	...	...

* Information not available.

TABLE III—*contd.*

Average annual value, in thousands of rupees, of commodities purchased by Government Departments and Railways during the period 1914-15 to 1918-19.

Names.	Imported stores purchased in India.	Produce of India—		Stores obtained through Director General of Stores or Home Board.	Total.
		From government factories.	From private dealers.		
	Rs.	Rs.	Rs.	Rs.	Rs.
STATIONERY.					
1. Mints	...	...	...	...	...
2. Printing, Stationery and Stamps	2,62	8	53,09	9,08	64,81
3. Government of Bombay	2,69	10	4,40	2,18	9,87
4. „ „ Madras	41	47	5,35	2,13	8,36
5. „ „ Bihar and Orissa	5	3	31	2	41
6. „ „ the Punjab	6	30	25	...	61
7. „ „ the United Provinces ...	5	1	29	6	41
8. „ „ Burma	10	1	8	...	19
9. Delhi Administration	1	...	5	...	6
10. North Western Railway	14	...	2,11	16	2,41
11. Oudh and Rohilkhand Railway	9	...	43	2	54
12. Eastern Bengal Railway	25	1	1,03	...	1,29
13. East Indian Railway	61	...	2,72	...	3,33
14. Bengal Nagpur Railway	...	...	...	...	...
15. Great Indian Peninsula Railway	74	...	1,13	31	2,18
16. Bombay, Baroda and Central India Railway ...	1,34	...	2,10	45	3,89
17. South Indian Railway	12	...	11	13	36
18. Royal Indian Marine	Information not available.				
19. Ordnance Department, Arsenals	...	...	...	...	...

TABLE III—*contd.*

Average annual value, in thousands of rupees, of commodities purchased by Government Departments and Railways during the period 1910-11 to 1913-14.

Names.	Imported stores purchased in India.	Produce of India—		Stores obtained through Director General of Stores or Home Board.	Total.
		From government factories.	From private dealers.		
	Rs.	Rs.	Rs.	Rs.	Rs.
COAL.					
1. Mints	6	1	72	9	88
2. Printing, Stationery and Stamps	...	...	13	...	13
3. Government of Bombay	7	2	11	4	24
4. „ „ Madras	...	...	15	2	17
5. „ „ Bihar and Orissa	...	...	4	...	4
6. „ „ the Punjab	...	...	78	...	73
7. „ „ the United Provinces ...	1	...	17	...	18
8. „ „ Burma	4	2	39	...	45
9. Delhi Administration	...	...	48	...	48
10. North Western Railway	1,07	...	82,92	4,09	88,09
11. Oudh and Rohilkhand Railway	...	...	5 22	...	5 22
12. Eastern Bengal Railway	Information not available.				
13. East Indian Railway	Information not available.				
14. Bengal Nagpur Railway					
15. Great Indian Peninsula Railway					
16. Bombay, Baroda and Central India Railway ...					
17. South Indian Railway	...	...	25,17	1,97	27,14
18. Royal Indian Marine	23	...	5,68	34	6,25
19. Ordnance Department, Arsenals	...	...	20	...	20

TABLE III—*contd.*

Average annual value, in thousands of rupees, of commodities purchased by Government Departments and Railways during the period 1914-15 to 1918-19.

Names.	Imported stores purchased in India.	Produce of India—		Stores obtained through Director General of Stores or Home Board.	Total.
		From government factories.	From private dealers.		
	Rs.	Rs.	Rs.	Rs.	Rs.
COAL.					
1. Mints	3	...	1,69	6	1,78
2. Printing, Stationery and Stamps	...	...	16	...	16
3. Government of Bombay	26	1	1,29	...	1,56
4. „ „ Madras	11	...	32	...	43
5. „ „ Bihar and Orissa	...	...	35	...	35
6. „ „ the Punjab	7	1	72	...	80
7. „ „ the United Provinces	...	...	33	...	33
8. „ „ Burma	20	13	1,76	1	2,10
9. Delhi Administration	...	...	1,49	...	1,49
10. North Western Railway	2,99	...	90,73	1,03	94,25
11. Oudh and Rohilkhand Railway	...	...	7,19	...	7,19
12. Eastern Bengal Railway	...	...	21,21	...	21,21
13. East Indian Railway	...	...	12,38	...	12,38
14. Bengal Nagpur Railway	...	...	17,47	...	17,47
15. Great Indian Peninsula Railway	...	...	1,17,96	...	1,17,96
16. Bombay, Baroda and Central India Railway ...	4	...	47,87	...	47,91
17. South Indian Railway	...	...	26,51	64	27,15
18. Royal Indian Marine	...	Information not available.			
19. Ordnance Department, Arsenals	...	...	17	-	17

TABLE III—*contd.*

Average annual value, in thousands of rupees, of commodities purchased by Government Departments and Railways during the period 1910-11 to 1913-14.

Names.	Imported stores purchased in India.	Produce of India—		Stores obtained through Director General of Stores or Home Board.	Total.
		From government factories.	From private dealers.		
	Rs.	Rs.	Rs.	Rs.	Rs.
CEMENT.					
1. Mints	...	...	...	...	...
2. Printing, Stationery and Stamps	...	...	...	...	...
3. Government of Bombay	21	...	8	4	33
4. „ „ Madras	19	...	24	...	43
5. „ „ Bihar and Orissa	31	...	3	...	34
6. „ „ the Punjab	13	...	5	58	76
7. „ „ the United Provinces	12	...	3	12	27
8. „ „ Burma	30	...	4	6	40
9. Delhi Administration	8	...	5	...	13
10. North Western Railway	10	...	4	17	31
11. Oudh and Rohilkhand Railway	...	...	...	...	...
12. Eastern Bengal Railway	6	...	...	*	6
13. East Indian Railway	Information not available.				
14. Bengal Nagpur Railway					
15. Great Indian Peninsula Railway					
16. Bombay, Baroda and Central India Railway ...					
17. South Indian Railway	...	...	...	...	...
18. Royal Indian Marine	...	...	...	3	3
19. Ordnance Department, Arsenals	...	...	...	...	...

*Information not available.

TABLE III—*contd.*

Average annual value, in thousands of rupees, of commodities purchased by Government Departments and Railways during the period 1914-15 to 1918-19.

Names.	Imported stores purchased in India.	Produce of India—		Stores obtained through Director General of Stores or Home Board.	Total.
		From government factories.	From private dealers.		
	Rs.	Rs.	Rs.	Rs.	Rs.
CEMENT.					
1. Mints	...	...	...	1	1
2. Printing, Stationery and Stamps	...	...	...	...	...
3. Government of Bombay...	85	8	35	45	1,68
4. „ „ Madras	51	...	49	13	1,13
5. „ „ Bihar and Orissa	30	5	37	...	72
6. „ „ the Punjab	38	...	6	11	55
7. „ „ the United Provinces ...	28	2	46	13	89
8. „ „ Burma	2,67	...	16	6	2,89
9. Delhi Administration	8	...	66	7	81
10. North Western Railway	9	...	80	9	98
11. Oudh and Rohilkhand Railway	1	...	5	...	6
12. Eastern Bengal Railway	3	...	7	...	10
13. East Indian Railway	...	...	15	51	66
14. Bengal Nagpur Railway...	8	...	8	10	16
15. Great Indian Peninsula Railway	37	...	1,05	...	1,42
16. Bombay, Baroda and Central India Railway ...	17	...	7	10	34
17. South Indian Railway	...	...	...	...	...
18. Royal Indian Marine	Information not available.				
19. Ordnance Department, Arsenals	...	...	...	...	...

TABLE III—*contd.*

Average annual value, in thousands of rupees, of commodities purchased by Government Departments and Railways during the period 1910-11 to 1913-14.

Names.	Imported stores purchased in India.	Produce of India—		Stores obtained through Director General of Stores or Home Board.	Total.
		From government factories.	From private dealers.		
	Rs.	Rs.	Rs.	Rs.	Rs.
MISCELLANEOUS.					
1. Mints	10	7	35	33	85
2. Printing, Stationery and Stamps	6	...	16	8	30
3. Government of Bombay	40	7	76	33	1,56
4. „ „ Madras	16	...	1,17	18	1,51
5. „ „ Bihar and Orissa	34	2	72	5	1,13
6. „ „ the Punjab	34	21	1,27	11	1,93
7. „ „ the United Provinces ...	16	.6	81	9	1,12
8. „ „ Burma	35	9	52	24	1,20
9. Delhi Administration	2,38	2	34	4	2,8[illegible]
10. North Western Railway	1,23	2	6,75	5,93	13,93
11. Oudh and Rohilkhand Railway	4	...	15	...	19
12. Eastern Bengal Railway...	29	...	6	*	35
13. East Indian Railway	Information not available.				
14. Bengal Nagpur Railway...					
15. Great Indian Peninsula Railway					
16. Bombay, Baroda and Central India Railway ...					
17. South Indian Railway	17	...	19	74	1,09
18. Royal Indian Marine	68	...	1,71	...	2,39
19. Ordnance Department, Arsenals	3	...	81	4,40	5,24

*Information not available.

TABLE III—*contd.*

Average annual value, in thousands of rupees, of commodities purchased by Government Departments and Railways during the period 1914-15 to 1918-19.

Names.	Imported stores purchased in India.	Produce of India—		Stores obtained through Director General of Stores or Home Board.	Total.
		From government factories.	From private dealers.		
	Rs.	Rs.	Rs.	Rs.	Rs.
MISCELLANEOUS.					
1. Mints	14	...	64	71	1,49
2. Printing, Stationery and Stamps	10	...	29	10	49
3. Government of Bombay	97	5	1,39	62	3,03
4. „ „ Madras	74	7	1,44	1,93	4,18
5. „ „ Bihar and Orissa	48	13	89	5	1,50
6. „ „ the Punjab	71	25	1,83	7	2,86
7. „ „ the United Provinces ...	89	15	1,34	13	2,51
8. „ „ Burma	2,08	18	1,80	31	4,37
9. Delhi Administration	2,37	1	2,23	10	4,71
10. North Western Railway	4,87	12	3,36	2,42	10,77
11. Oudh and Rohilkhand Railway	48	...	68	6	1,22
12. Eastern Bengal Railway	1,11	3	1,11	93	3,08
13. East Indian Railway	7,76	...	15,30	4,44	27,50
14. Bengal Nagpur Railway	13,08	...	6,13	49	19,70
15. Great Indian Peninsula Railway	4,05	...	8,58	26	12,89
16. Bombay, Baroda and Central India Railway ...	8,09	...	6,31	1,87	16,27
17. South Indian Railway	56	...	60	42	1,58
18. Royal Indian Marine	Information not available.				
19. Ordnance Department, Arsenals	4	...	1,15	13,93	15,11

TABLE III—*contd.*

Average annual value, in thousands of rupees, of commodities purchased by Government Departments and Railways during the period 1910-11 to 1913-14.

Names.	Imported stores purchased in India.*	Produce of India—		Stores obtained through Director General of Stores or Home Board.	Total.
		From government factories.	From private dealers.		
	Rs.	Rs.	Rs.	Rs.	Rs.
ELECTRICAL PLANT AND MATERIALS.					
1. Mints	1	...	2	2	5
2. Printing, Stationery and Stamps	...	...	...	1	1
3. Government of Bombay	11	...	...	...	11
4. „ „ Madras	9	...	...	13	22
5. „ „ Bihar and Orissa	10	...	...	...	10
6. „ „ the Punjab	5	...	...	1	6
7. „ „ the United Provinces ...	96	...	...	6	1,02
8. „ „ Burma	23	...	1	1,91	2,14
9. Delhi Administration	82	...	...	16	98
10. North Western Railway	67	...	...	4,19	4,86
11. Oudh and Rohilkhand Railway	...	...	...	...	...
12. Eastern Bengal Railway	...	...	...	...	...
13. East Indian Railway	Information not available.				
14. Bengal Nagpur Railway					
15. Great Indian Peninsula Railway					
16. Bombay, Baroda and Central India Railway ..					
17. South Indian Railway	25	...	3	2,36	2,64
18. Royal Indian Marine	...	...	...	27	27
19. Ordnance Department, Arsenals	1	...	...	54	55

*Information not available.

TABLE III—*concld.*

Average annual value, in thousands of rupees, of commodities purchased by Government Departments and Railways during the period 1914-15 to 1918-19.

Names.	Imported stores purchased in India.	Produce of India—		Stores obtained through Director General of Stores or Home Board.	Total.
		From government factories.	From private dealers.		
	Rs.	Rs.	Rs.	Rs.	Rs.
ELECTRICAL PLANT AND MATERIALS.					
1. Mints	8	...	1	11	20
2. Printing, Stationery and Stamps	...	...	...	...	...
3. Government of Bombay	1,27	...	6	34	1,67
4. „ Madras	26	...	1	9	36
5. „ Bihar and Orissa	90	...	4	...	94
6. „ the Punjab	26	...	...	2	28
7. „ the United Provinces	88	...	...	8	96
8. „ Burma	41	...	...	3,04	3,45
9. Delhi Administration	3,17	...	9	9	3,35
10. North Western Railway	1,69	...	30	1,58	3,57
11. Oudh and Rohilkhand Railway	37	...	2	14	53
12. Eastern Bengal Railway	1,20	...	5	27	1,52
13. East Indian Railway	1,42	...	...	1,31	2,73
14. Bengal Nagpur Railway	1,86	...	7	1,47	3,40
15. Great Indian Peninsula Railway	2,42	...	59	1,50	4,51
16. Bombay, Baroda and Central India Railway ...	1,89	...	...	72	2,61
17. South Indian Railway	35	...	6	71	1,12
18. Royal Indian Marine	Information not available.				
19. Ordnance Department, Arsenals	2	...	...	1,88	1,90

TABLE IV.

Value, in thousands of rupees, of imported stores purchased in India during the years 1907-08 to 1913-14.

Description of class.	1907-08.	1908-09.	1909-10.	1910-11.	1911-12.	1912-13.	1913-14.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1. Agricultural implements	...	5	...	...	...	6	6
2. Apparel	60	73	74	49	58	46	46
3. Building and Engineering materials	13,90	8,14	5,49	7,38	7,17	11,04	12,47
4. Canvas	30	45	21	38	34	55	70
5. Chemicals, drugs and Medicines	43	39	29	7	7	16	4
6. Cordage and rope	10	15	7	7	3	16	33
7. Cotton linen and silk goods	51	68	67	47	1,38	1,36	1,30
8. Glass and glassware	50	22	10	3	17	37	20
9. Hardware and cutlery	1,05	1,08	39	36	27	61	36
10. Hides and skins	...	...	1	...	3	3	...
11. Scientific instruments, etc.	9	5	...	26	8	10	22
12. Leather and manufactures of leather	16	7	10	9	9	12	5
13. Machinery and plant	4,61	6,34	5,20	7,77	6,10	10,99	22,74
14. Iron and Steel	8,44	7,81	3,14	6,78	5,74	6,02	7,58
15. Brass, copper, lead, tin, zinc and other undistinguished metals	1,30	1,28	37	50	62	77	72
16. Oils	11	9	6	5	27	38	39
17. Paints and colours	66	53	48	28	36	50	49
18. Paper and pasteboard	25	25	34	22	27	30	41
19. Pitch and tar	12	...	4	3	1	7	16
20. Printing and Lithographic materials	7	7	11	6	6	42	25
21. Soap	9	...	...	...	...	...	...
22. Tools	1,27	65	10	30	24	60	48
23. Stationery	3,28	4,05	2,36	2,85	2,14	1,84	2,75
24. Wire, Iron and Steel	53	47	30	32	24	35	1,17
25. Woollen goods	4	...	2	1	2	5	8

TABLE IV—*concld.*

Value, in thousands of rupees, of imported stores purchased in India during the years 1914-15 to 1918-19.

Description or class.	1914-15.	1915-16.	1916-17.	1917-18.	1918-19.
	Rs.	Rs.	Rs.	Rs.	Rs.
1. Bridge work	2,94	2,75	3,15	1,85	52
2. Engineers' plant, excluding petty tools ...	7,23	3,80	5,27	3,64	3,12
3. Workshop machinery and heavy tools ...	3,86	1,83	4,06	4,52	7,68
4. Locomotives	3,61	1,73	1,58	2,19	3,92
5. Coaching and goods stock	3,62	2,56	2,53	4,00	6,34
6. Building and station materials and fencing.	15,32	16,69	11,85	13,39	8,69
7. Tools and cutlery	3,34	2,80	3,11	5,15	8,14
8. Hardware	6,68	5,37	6,28	10,46	11,97
9. Wire	1,89	1,54	2,42	2,99	7,38
10. Iron and Steel	8,52	8,83	14,48	28,87	19,95
11. Brass, copper, lead, tin, zinc and miscellaneous.	5,60	6,54	4,37	8,04	7,36
12. Timber, other than indigenous ...	9,74	27	82	54	1,80
13. Hides and Skins	5	10	15	19	7
14. Leather and manufactures of leather ...	64	51	75	87	58
15. Paints and Colours	3,28	2,77	4,19	4,95	4,47
16. Oils	13,51	11,99	19,31	17,24	41,32
17. Canvas	95	1,86	2,09	2,67	21
18. Cotton, linen and silk goods ...	3,70	4,30	5,46	6,20	5,32
19. Woollen Goods	81	1,19	3,47	1,95	1,48
20. Miscellaneous apparel and equipment ...	79	99	1,08	1,67	1,49
21. Cordage and rope	48	49	41	61	66
22. Chemicals, drugs and medicines ...	2,68	2,76	3,30	5,97	5,99
23. Scientific instruments	97	80	1,66	4,90	3,34
24. Paper and pasteboard	1,23	85	2,05	2,62	4,90
25. Stationery	3,97	2,89	3,16	4,85	6,07
26. Printing and lithographic materials ...	64	66	54	1,28	96
27. Earthenware, glass and glassware ...	1,77	1,36	1,81	1,85	2,00
28. Pitch and tar	24	15	25	55	57
29. Soap	16	8	19	16	18
30. Miscellaneous	4,49	5,69	5,23	7,18	9,25
31. Electrical plant and materials ...	10,04	6,60	8,33	12,01	13,17

N.B.—The difference between the headings in the description column for the periods 1907-14 and 1914-19 is due to a revised classification having been introduced from 1914.

TABLE V.

Expenditure, in thousands of rupees, on stores produced in India during the years 1907-08 to 1913-14.

Description or class.	1907-08.	1908-09.	1909-10.	1910-11.	1911-12.	1912-13.	1913-14.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1. Agricultural implements	...	...	...	...	...	8	1
2. Apparel	1,03	1,06	1,55	93	1,59	1,20	1,44
3. Building and Engineering materials	9,20	7,05	4,77	5,04	10,08	4,21	14,61
4. Canvas	83	4	8	15	17	24	17
5. Chemicals, drugs and medicines	3,52	2,77	2,80	3,12	3,27	2 61	3,60
6. Cordage and rope	1,15	89	87	55	1,01	63	1,26
7. Cotton, linen, and silk goods	4,04	3,33	5,37	5,14	6,29	5,4	7,68
8. Glass and Glassware	...	...	...	...	1	...	...
9. Hardware and cutlery	1,80	1,37	50	42	62	31	31
10. Hides and skins	43	39	37	40	16	23	28
11. Scientific instruments, and apparatus...	47	18	19	25	28	36	34
12. Leather and manufactures of leather	9,05	8,39	8,52	4,33	4,08	6,41	7,94
13. Machinery and plant	1,32	1,81	2,67	4,23	3,49	3,76	4,93
14. Iron and Steel	3,04	2,13	4,60	2,91	3,55	3,0	5,09
15. Brass, copper, lead, tin, zinc and other undistinguished metals	3,14	20	24	1,58	60	1,92	1,90
16. Oils	95	76	81	95	1,09	1,19	1,24
17. Paints and colours	78	70	88	1,10	1,19	1,27	1,51
18. Paper and pasteboard	40,56	38,11	36,69	39,30	35,95	34,52	36,04
19. Pitch and Tar	3	8	7	3	2	...	2
20. Printing and lithographic materials	30	47	23	43	9	...	14
21. Soap	27	39	31	38	60	36	59
22. Tools	26	14	12	12	7	8	15
23. Stationery	26	65	73	29	29	38	54
24. Wire, iron and steel	1	...	7	5	9	3	8
25. Woollen goods	4,40	6,77	4,12	4,30	5,32	7,32	7,53

TABLE V—*concld.*

Expenditure, in thousands of rupees, on stores produced in India during the years 1914-15 to 1918-19.

Description or class.	1914-15.	1915-16.	1916-17.	1917-18.	1918-19.
	Rs.	Rs.	Rs.	Rs.	Rs.
1. Bridge work	4,61	2,88	1,10	18	29
2. Engineers' plant, excluding petty tools ...	3,22	50	68	53	91
3. Workshop machinery and heavy tools ...	37	28	13	52	69
4. Locomotives	32	24	7	1,09	48
5. Coaching and goods stock	16,68	7,35	5,57	25,46	49,20
6. Building and station materials and fencing.	10,13	8,54	8,35	6,25	7,74
7. Tools and cutlery	1,10	79	86	1,47	2,16
8. Hardware	2,92	3,16	3,59	4,81	3,70
9. Wire	22	4	7	7	1,53
10. Iron and Steel	31	6,67	,37	10,99	17,36
11. Brass, copper, lead, tin, zinc and miscellaneous.	92	1,19	2,38	1,93	2,50
12. Timber, other than indigenous ...	...	...	...	48	...
13. Hides and Skins	71	68	65	57	63
14. Leather and manufactures of Leather ...	4,85	5,13	5,36	5,50	5,84
15. Paints and Colours	2,76	2,09	2,60	3,35	2,74
16. Oils	12,04	11,61	19,59	17,51	26,36
17. Canvas	1,14	99	1,47	1,54	1,77
18. Cotton, linen and silk goods ...	15,64	13,96	17,79	21,80	37,62
19. Woollen goods	5,53	6,66	9,42	10,81	11,50
20. Miscellaneous apparel and equipment ...	2,96	2,65	1,97	2,21	1,98
21. Cordage and rope	1,22	1,42	2,10	1,80	2,31
22. Chemicals, drugs and medicines ...	2,21	2,31	2,86	3,95	4,87
23. Scientific instruments	23	14	23	71	43
24. Paper and pasteboard	35,79	37,91	50,40	77,16	92,61
25. Stationery	1,77	3,36	4,24	4,72	6,62
26. Printing and lithographic materials ...	3,90	2,55	3,26	4,37	1,18
27. Earthenware, glass and glassware ...	57	48	89	76	1,85
28. Pitch and tar	1,11	38	39	55	73
29. Soap	16	12	14	19	21
30. Miscellaneous	4,75	5,16	4,01	6,24	9,59
31. Electric plant and materials ...	24	21	46	29	33

N.B.—The difference between the headings in the description column for the periods 1907-14 and 1914-19 due to a revised classification having been introduced from 1914.

TABLE VI.

Expenditure in England during the years 1904-05 to 1909-10 on stores procured for shipment to India.

Head of Service.	Payments for stores made during—					
	1904-05.	1905-06.	1906-07.	1907-08.	1908-09.	1909-10.
	£	£	£	£	£	£
1. Mints	13,463	10,433	35,251	42,053	32,339	19,835
2. Stationery and Printing	92,938	82,425	107,567	130,381	119,856	109,078
3. Stamps	38,432	41,417	98,463	105,449	134,354	101,522
4. Posts and Telegraphs	205,883	326,467	263,291	179,615	118,895	96,598
5. Public Works Department	59,781	82,530	87,893	103,348	71,369	54,856
6. Railways	1,168,772	1,865,282	2,045,249	2,204,191	3,124,546	1,980,849
7. Marine	181,058	141,854	247,265	102,424	87,296	61,366
8. Army Department, excluding Clothing and Ordnance and Miscellaneous	388,024	366,020	304,075	230,540	150,238	176,855
9. Army Department, Clothing and Ordnance and Miscellaneous...	1,334,911	617,402	1,449,905	493,697	491,071	350,223
10. All other stores	279,116	287,421	327,731	430,906	471,347	341,047
Total ...	4,262,373	4,321,250	4,966,690	4,022,604	4,801,311	3,292,144
Total freight charges on above ...	140,794	147,420	153,763	156,775	212,308	155,149

TABLE VI—*concld.*

Expenditure in England during the years 1910-11 to 1917-18, on stores procured for shipment to India.

Head of Service.	Payments for stores made during—							
	1910-11.	1911-12.	1912-13.	1913-14.	1914-15.	1915-16.	1916-17.	1917-18.
	£	£	£	£	£	£	£	£
1. Mint	10,369	16,098	13,804	21,862	15,625	8,281	14,604	27,672
2. Stationery and Printing	113,818	95,400	81,986	95,823	102,513	98,873	105,881	115,843
3. Stamps	78,096	88,850	88,184	103,995	53,642	85,507	103,603	108,700
4. Posts and Telegraphs	92,129	145,887	135,450	158,991	150,444	166,354	265,206	216,175
5. Public Works Department	74,252	173,829	142,641	127,446	127,630	67,520	27,868	—1,014
6. Railways	1,781,493	1,985,986	2,252,809	2,757,411	2,257,232	777,636	288,056	403,824
7. Marine	71,518	58,687	77,443	109,429	75,552	401,448	1,084,085	222,079
8. Army Department, excluding Clothing and Ordnance and Miscellaneous ...	145,595	211,866	200,596	206,104	221,676	537,230	2,995,799	3,074,715
9. Army Department, Clothing and Ordnance and Miscellaneous	346,646	391,301	548,560	578,752	585,900	1,186,677	3,072,060	4,841,853
10. All other stores	279,230	373,081	394,185	428,321	456,062	283,865	294,873	204,971
Total ...	2,942,146	3,540,385	3,934,678	4,587,633	4,046,276	3,612,891	8,252,053	9,214,817
Total freight charges on above ...	130,419	201,585	238,080	298,557	245,581	193,306	264,673	227,396

TABLE VII.

Value, in thousands of pounds sterling, of principal Government stores imported into British India by sea during the years 1907-08 to 1919-20.

Articles.	1907-08.	1908-09.	1909-10.	1910-11.	1911-12.	1912-13.	1913-14.	1914-15.	1915-16.	1916-17.	1917-18.	1918-19.	1919-20.
	£	£	£	£	£	£	£	£	£	£	£	£	£
1. Apparel, including boots and shoes	39	57	31	23	16	25	42	62	92	453	580	1,240	424
2. Arms, ammunition, etc.	288	105	74	143	94	146	350	216	129	396	1,826	958	1,044
3. Books and printed matter	88	116	65	89	89	15	5	9	8	5	4	2	4
4. Building and Engineering materials	56	52	40	28	65	83	90	67	42	48	*		*
5. Chemicals, drugs and medicines	60	47	72	67	77	122	78	73	163	312	355	328	312
6. Coal, coke and patent fuel	3	28	48	18	60	103	276	58	17	6	11	44	1
7. Cotton manufactures	42	42	38	30	42	23	26	37	42	353	733	546	297
8. Flax manufactures	20	29	41	18	23	30	23	39	91	503	526	295	207
9. Hardware and cutlery	321	208	233	155	196	176	227	284	296	541	334	694	870
10. Instruments and apparatus	116	136	11	95	123	140	137	183	174	268	326	307	419
11. Machinery and millwork	181	256	185	166	211	172	204	213	129	138	177	255	447
12. Metals	540	380	338	323	404	474	532	482	921	1,012	1,022	1,298	1,667
13. Paper, stationery, etc.	126	124	103	97	80	116	139	156	146	258	163	267	403
14. Railway plant and rolling stock	1,791	3,013	1,967	1,294	1,680	1,695	2,685	2,273	979	163	327	424	4,463
15. Ships, parts of	268	2	2	16	9	12	26	8	13	568	324	12	20
16. Telegraph materials	105	63	64	71	86	72	101	102	80	126	150	142	579
17. Woollen manufactures	97	59	33	34	78	34	40	54	75	246	955	2,434	690
18. All other articles	294	291	282	239	321	316	342	352	705	1,690	1,475	2,793	1,794
Total ...	4,429	5,006	3,627	2,901	3,654	3,754	5,373	4,668	4,132	7,076	9,287	13,019	13,780

* Included under all other articles.

TABLE VII—*concld.*

Value, in thousands of pounds sterling, of imports of principal articles of private merchandise into British India by sea from foreign countries during the years 1907-08 to 1919-20.

Articles.	1907-08.	1908-09.	1909-10.	1910-11.	1911-12.	1912-13.	1913-14.	1914-15.	1915-16.	1916-17.	1917-18.	1918-19.	1919-20.
	£	£	£	£	£	£	£	£	£	£	£	£	£
1. Apparel, including boots and shoes	1,003	948	966	1,235	1,394	1,517	1,669	1,079	1,173	1,414	1,053	1,437	1,966
2. Arms, ammunition, etc.	325	217	195	216	235	243	237	214	196	235	193	257	372
3. Books and printed matter	221	259	252	268	304	282	329	305	278	298	317	339	424
4. Building and Engineering materials	351	411	382	467	431	614	707	648	711	637	755	544	1,240
5. Chemicals, drugs and medicines	1,129	977	1,128	1,222	1,304	1,326	1,457	1,368	1,793	2,181	2,704	2,640	3,435
6. Coal, coke and patent fuel	396	548	484	381	342	778	711	523	181	103	50	157	129
7. Cotton manufactures	32,501	25,697	26,471	30,022	33,193	42,030	44,381	32,860	28,915	35,522	37,953	41,174	59,758
8. Flax manufactures	178	166	141	175	194	228	284	237	260	439	270	200	424
9. Hardware and cutlery	2,035	1,869	1,742	2,072	2,229	2,428	2,821	1,805	1,660	2,174	1,917	2,267	4,718
10. Instruments and apparatus	865	768	680	778	867	989	1,214	891	869	1,162	1,150	1,445	2,220
11. Machinery and Millwork	4,574	4,554	3,522	3,359	3,041	3,611	5,173	4,027	3,185	3,632	2,940	3,336	9,018
12. Metals	8,785	8,621	8,470	9,603	9,477	10,335	14,716	9,180	7,462	7,157	6,852	10,704	22,769
13. Paper, stationery, etc.	957	910	998	1,104	1,153	1,384	1,525	1,226	1,340	2,071	1,971	2,280	3,127
14. Railway plant and rolling stock	4,801	4,947	3,627	2,830	2,258	4,269	6,690	6,773	2,812	1,046	331	696	4,587
15. Ships, parts of	199	251	263	66	44	97	151	201	95	69	174	137	395
16. Telegraph materials	...	...	...	...	...	...	...	...	...	...	6	4	2
17. Woollen manufactures	1,921	1,974	1,460	2,121	2,364	2,174	2,701	1,366	734	1,481	1,483	1,543	1,673
18. All other articles	26,449	27,703	27,259	30,317	32,853	35,027	37,400	29,301	36,265	40,127	40,155	48,530	91,843
Total ...	86,670	80,850	78,040	86,236	92,383	107,332	122,165	91,953	87,991	99,748	100,283	112,689	208,000

TABLE VIII.

Distribution of expenditure, in thousands of pounds sterling, on stores between the Store Department, India Office, Consulting Engineers, War Office, etc., during the years 1910-11 to 1918-19.

Year.	India Store Depot.		Consulting Engineers.		Admiralty.		War Office.		Naval Architect.		Total.
	Value of stores inspected.	Percentage on total.	Value of stores supplied.	Percentage on total.	Value of stores supplied.	Percentage on total.	Value of stores supplied.	Percentage on total.	Value of stores supplied.	Percentage on total.	
	£		£		£		£		£		£
1910-11	1,081	30·7	1,781	58·9	4	0·1	97	3·3	28	1·0	2,941
1911-12	1,346	38·0	1,986	56·1	6	0·2	144	4·1	5	1·6	3,540
1912-13	1,366	34·7	2,252	57·2	4	0·1	231	5·9	81	2·1	3,934
1913-14	1,695	7·0	2,757	60·1	9	0·2	111	2·4	15	0·3	4,587
1914-15	1,666	41·2	2,257	55·8	2	...	87	2·2	34	0·8	4,046
1915-16	2,460	68·1	778	21·5	7	0·2	65	1·8	302	8·4	3,612
1916-17	4,916	51·4	283	3·0	9	0·1	2,427	25·4	1,922	20·1	9,563
1917-18	4,029	37·2	404	3·8	11	0·1	5,849	54·1	525	4·8	10,818
1918-19	5,837	44·0	577	4·3	23	0·2	6,695	50·4	141	1·0	13,273

TABLE IX.

Salaries and wages of the Store Department of the India Office during the years 1904-05 to 1917-18.

Year.	Salaries, wages, and allowances of Store Department, India Office Branch.	Wages of artificers and labourers professional, inspection, travelling expenses, rates, repairs, supplies, etc.	Miscellaneous charges connected with the supply of stores to India.	Total.
	£	£	£	£
1904-05	29,100	27,025	56,619	112,744
1905-06	29,039	26,008	11,803	66,850
1906-07	30,162	25,204	8,419	63,785
1907-08	32,915	23,250	10,469	66,634
1908-09	32,373	24,303	7,810	64,485
1909-10	32,095	24,893	36,143	93,131
1910 11	32,477	24,919	11,734	69,130
1911-12	33,487	27,335	16,498	77,320
1912-13	34,209	25,543	9,563	69,315
1913-14	35,507	27,192	12,029	74,728
1914-15	36,344	25,974	89,498	151,816
1915-16	35,527	29,695	47,652	112,874
1916-17	36,482	38,134	192,916	267,482
1917-18	40,893	39,960	488,170	569,023

TABLE X.

Cash expenditure, in thousands of rupees, incurred in India by the India Munitions Board from 1917-18 to December 1919.

Particulars.	1917-18.	1918-19.	1919-20 (up to December 1919.)
	Rs.	Rs.	Rs.
I.—SALARIES, ESTABLISHMENTS, ETC.			
(a) Headquarters	7,79	19,90	8,02
(b) Provincial	9,85	35,89	16,56
Total I. ...	1,764	55,79	24,58
II.—SUPPLIES.			
(a) Rivercraft and Inland Water Transport Stores ...	1,50,97	1,29,08	12,59
(b) Tata's rails and Fishplates	1,05,16	30,67	3,79
(c) Other railway materials	1,46,82	1,94,90	73,80
(d) Timber	86,36	2,74,71	66,14
(e) Textiles and Jute	95,50	1,26,46	1,04,52
(f) Ordnance and Miscellaneous Stores.	2,53,83	16,50,35	3,76,81
Total II ...	8,88,64	24,06,12	6,37,69
III.—FACTORIES, ETC.			
(a) Army Clothing Factories	3,67,67	12,08,68	3,51,61
(b) Ordnance Factories	67,74	4,31,74	1,42,74
(c) Acetone Factory.	1,09	1,56	1,24
(d) Albion Shell Factory	6,69	13,93	2,88
(e) Tanneries and Tanstuff	15,35	17,14	78
(f) Kutra Iron Works	1,37	2,25	53
(g) Tent-making Factory	...	5,14	74
Total III ...	4,79,91	16,80,43	5,00,52
Grand total ...	13,36,19	41,42,34	11,62,79

APPENDIX—E.

FUNCTIONS, PROCEDURE, AND ORGANISATION OF THE STORES DEPARTMENT OF THE INDIA OFFICE IN SO FAR AS RELATES TO THE SUPPLY OF STORES TO INDIA.

(Furnished by the Director General of Stores, India Office.)

Functions.

In this particular respect, the duty of the Department is to obtain, inspect, and ship the stores demanded by the various departments of the Government of India, and local Governments, etc. Demands are not initiated in England, nor is it any part of the duty of the Stores Department to accumulate or maintain stocks of stores in anticipation of demands from India. The stocks are held in India and the responsibility for the timeliness and sufficiency of the demands rests entirely on the authorities in that country. In a few special instances, by the desire of the Government of India, stocks of certain stores have at times been held, *e.g.*, helmets for troop service and certain clothing materials and medical stores.

The responsibility of the Stores Department for the provision of supplies begins when the demand is received and ends when the stores are delivered by the export ship at the port in India, though its responsibility for the correctness and quality of the supplies does not end until the stores have been accepted by the indenting department. Operations such as landing, conveyance to ultimate destination, etc., are in the hands of Indian officials. Even where the contract made by the Stores Department provides that plant and machinery shall be erected and set to work by the firm which supplies the goods the work in India is done under the control and supervision of the Indian authorities.

The functions of the Department in regard to supplies may be divided into three main sections, purchase, inspection, and shipment. In connection with these functions, the Department also carries on extensive correspondence with the indenting officers, the receiving officers at the Indian ports, contractors, and with government departments, both Home and Indian. Correspondence with the Government of India is conducted by means of Stores Despatches through the Secretary of State.

Procedure preliminary to purchase.

2. Indents are received at all times of the year. Annual indents from the main consuming departments, *e.g.*, Army (including Ordnance Factories and Arsenals, Supply and Transport, Clothing and Medical), Telegraph, Stationery, Marine, State Railways, are by arrangement sent at different times of the year so as not to cause congestion in the work of the Department. It will be explained later why it is not generally found advantageous to attempt to combine the demands. These annual indents comprise the bulk of the items purchased each year, but very numerous supplementary emergent and isolated demands are received in the form of indents, letters, and telegrams which, in the aggregate, form no mean part of the total. In recent years, a vastly increased use has been made of the telegraph for preferring urgent demands which have become very numerous.

When a demand is received, the items are divided by the Stores Department into groups (called draft orders) each suitable for a separate contract. The draft orders are referred to the technical officers, either the Superintendent of the India Store Depot or the Consulting Engineers, or the Naval Architect, as their nature warrants, for the necessary designs, specifications, drawings, and other information necessary for the guidance of firms to be invited to tender for their supply. Pattern numbers, when necessary, are also quoted, so that tenderers may see at the pattern room the precise article required.

The draft orders when thus completed are returned to the Director General of Stores and are then ready for the invitation of tenders.

While action as described above is being taken, the indent, with an estimate of the cost of the stores, is submitted to the Secretary of State in Council for sanction to comply with the demand.

Experience has shown the advantage of dealing with manufacturers direct, thus avoiding the payment of middlemen's profits, and the preparation of draft orders is carried out with this in view. The Department being a large buyer obtains the best trade terms from manufacturers for even small orders in consideration of the large orders which are placed from time to time. Accordingly it is not considered advisable to arrange for all indents to come in at one time with a view to combining demands for similar items in one contract. Such a procedure would tend to congestion of work in the Department at the time when the indents were received and the purchase of many items would inevitably be delayed. Unpunctuality in arrival of some indents would tend to delay action on others and if demands from two or more departments were included in one order questions would often arise as to which should receive the first deliveries.

Seeing that technical officers are always at hand to advise the purchasing officers it is not found necessary that the latter should possess much technical knowledge of the stores they deal with. The enormous variety of the stores renders such knowledge impractic ble in their case. What they need most is good business ability and experience in making contracts.

Purchase.

3. The next step is to invite tenders for the stores required.

There are three ways in which tenders are obtained :—

(1) By advertisement ('open tenders').

(2) By invitation to a limited number of firms ('limited tender').

(3) By invitation to one firm only ('single tender' or private purchase).

It is left to the discretion of the Department to decide which of these three ways shall be adopted, as explained in the following extract from a minute by the Under Secretary of State, dated the 9th December 1885.

"In 1874 a Committee of the House of Commons (of which Mr. Holms was Chairman) sat and reported on the purchasing departments, War Office, Admiralty, India Office, etc. They made no special recommendations with respect to the India Office but on the general question they were of opinion that it would be 'unwise to restrict the purchasing officer to any one of these modes of purchase' (*viz.*, open tender, limited tender, purchase by broker, or private purchase) 'to the exclusion of the others. In all cases' they say 'where the circumstances will admit of it, public tender is the best and safest mode of buying, but the Committee are not prepared to recommend any restriction upon the discretion of the heads of the purchasing departments. To enable them to buy to the fullest advantage they must within certain limits be left untramelled. The practice of purchasing privately does not prevail to any great extent in any department. The purchasing officers appear to be aware of the danger of indulging in it when it is not necessary; but to prohibit it absolutely under all circumstances your Committee would deem to be unwise.' These remarks apply to the present system."

'When 'limited tender' is adopted the names of the firms to be invited are as a rule determined as follows :—

A register is kept under the various heads of supply, of firms known to be willing and able to execute contracts. Every effort is made to have full and at the same time, efficient lists and every encouragement is given to firms desirous of being recorded but before noting new firms in the register inquiry is made by reference to other government departments, or to a large private firms to ascertain the ability of the applicants to execute contracts satisfactorily. In many instances the firm is also asked to send samples of its work for examination and its works are visited. Firms also are required to give an undertaking that they will comply with the terms of the Fair Wages Resolutions of the House of Commons dated 13th February 1891 and 10th March 1909. When thought necessary, names are removed from the register.

From this register the names of firms to be invited are selected by the Director General of Stores or the Deputy Director General.

Competitive tenders are generally invited except in the case of :—

(*a*) patents and specialities ;

(*b*) comparatively small supplies;

(*c*) highly finished work such as surgical and scientific instruments.*

For these it is not unusual to invite single tenders from thoroughly reliable firms, as it has been found by experience that competition is liable to result in lower prices at a sacrifice of quality. Single tenders are opened, as received and, if considered reasonable and satisfactory are accepted, subject to the rules as to acceptance shown below.

Competitive tenders are appointed to be sent in by a fixed day and hour. They are opened under the supervision of the Director General of Stores, or the Deputy Director General, and of an Upper Division clerk. Each tender received is initialled by both the officers, and a list enumerating the tenders received is submitted to the Under Secretary of State, with a certificate from them that the tenders named were opened under their supervision at the appointed time, and that no others were received.

The quotations having been checked, an abstract of each set of tenders is prepared. Many tenders can be dealt with having regard to the price alone, *i. e.*, when articles are to be supplied to sealed pattern or departmental specification and no technical point arises. Others, owing to a proposed deviation from the sealed pattern or specification, or because tender is made to a sample submitted with the tender, or because the tenderer or tenderers have been asked to submit a specification of what they offer, have to be referred for report to the technical (*i. e.*, the inspection) branch, or to the Consulting Engineers, and the acceptance will depend not only on the price but also on the suitability of the article offered. The price must also be compared with the indent estimate of cost. In every case the Director General of Stores or his Deputy decides which tender shall be accepted or recommended for acceptance subject to the rules stated below :—

(I) If the tender to be accepted is the lowest which complies with the requirements of the Stores Department and of the indenting department :—

(*a*) When the amount involved does not exceed £2,000 the tender is approved and accepted by the Director General without further authority.

(*b*) When the amount exceeds £2,000 the tender requires the further approval of the Chairman of the Stores Committee* before acceptance.

(*c*) When the amount exceeds £2,000 and less than four firms have been invited, the tender is submitted for the approval of the Secretary of State before being referred to the Chairman of the Stores Committee. (This rule does not apply to cases in which the stores tendered for can only be obtained from one or other of the firms invited).

(II) If the tender to be accepted is not the lowest complying with the requirements of the Stores Department and of the indenting department :—

(*a*) When its acceptance in preference to other lower tenders can be justified on such grounds as superior quality, superior trustworthiness of the firm tendering, greater facility of inspection, quicker delivery, etc., the acceptance must be approved by the Under Secretary of State as well as by the Chairman of the Stores Committee; and the action taken is afterwards submitted for the sanction of the Secretary of State in Council.

(*b*) In all other cases the sanction of the Secretary of State in Council must be obtained before the tender is accepted.

For the purpose of (I) and (II), lowest tender means, in the case of divisible tenders, the combination of items which gives the lowest aggregate price for the whole supply.

* The Stores Committee is a Committee of the Council of India appointed for the consideration of stores questions and to advise the Secretary of State thereon.

Whether tenders shall be divided depends upon a variety of considerations, including the undesirability of spending time on the division of an order for many items each of a trivial amount, the convenience of the indenting department, fairness to the tendering firms, the effect of division on the cost of inspection, arrangements for transport and date of delivery, and possibly others. It is for the Director General of Stores to decide whether or not tenders are to be divided in cases in which he is authorised to accept tenders without further authority and to note his reasons for not proposing a division when recommending their acceptance to higher authority.

Special regulations have also been laid down to govern the acceptance of foreign tenders. These have been laid down mainly to ensure that important orders shall not be placed abroad without the personal knowledge and approval of the Secretary of State.

When no member of the Stores Committee is at hand, *e. g.*, during Christmas, Easter, and Whitsuntide holidays, urgent tenders may be accepted by the Director General of Stores, or the Deputy Director General in anticipation of approval by the Chairman of the Stores Committee.

All contracts are made on behalf of the Secretary of State for India in Council and are signed by the Director General of Stores or other officers authorised by the Secretary of State to sign on his behalf.

The firms whose tenders are not accepted are informed to that effect.

When the tender has been accepted, copies of the order are passed to the technical branch of the Department (or to the Consulting Engineers) so that action may be taken for the inspection of the stores when ready. The original contracts are retained at the India Office and certified copies are furnished to the Accountant General who eventually makes payment to the contractors.

Delivery under each contract is watched to its completion. If delay occurs or is likely to occur in delivery a watching file is started and the contractor is written to and sometimes visited with a view to hastening supply. Often damages for delay are inflicted under the provisions of the contract, though this has rarely been practicable or even permissible during the war. Sometimes it is necessary to cancel the contract and buy against the defaulting contractor.

It should be noted that the responsibility for accepting tenders or recommending their acceptance to higher authority rests with the Director-General of Stores and not with the Consulting Engineers or other technical officers. A weekly list of the contracts entered into is submitted for the information and approval of the Secretary of State.

For reasons of policy, convenience and economy, the following stores are obtained through, or with the assistance of, other government Departments :—

Warlike stores proper, such as guns, rifles, ammunition, etc.	War Office.
Battery jars	General Post Office.
Lighthouses and lighthouse stores ...	Trinity House.
Some miscellaneous stores for the Royal Indian Marine and Royal Navy Vessels ...	Admiralty.
Chronometers and ships' compasses ...	Astronomer Royal.
Stamps and stamped papers	The India Office makes the contract and places the orders under it but the supervision of manufacture and inspection are under the control of the General Post Office.

Inspection.

4. Certain stores mainly those required for railways, such as locomotive engines, rolling stock, bridgework, permanent way materials, special machine tools and plant (but not as a rule ordinary plant and machinery tools or general stores) are inspected by the Consulting Engineers. Vessels and their structural outfit and machinery are inspected by the Naval Architect. All other stores when not obtained from, and inspected by, another government department are inspected by the staff of the Department under the Superintendent of the India Store Depot.

Miscellaneous articles of comparatively small bulk and weight and certain special stores, *e.g.*, cloth, are inspected at the India Store Depot. All other stores are inspected at the contractors' works.

Inspection by the Superintendent of the India Store Depot.

5. Inspection at the Depot is done by a staff of inspectors working under the eye of the Superintendent and his Deputy who go round the warehouse everyday to supervise the work. Inspection at contractors' works is done by inspectors residing in the chief industrial centres in Great Britain. These submit samples and reports to the Superintendent who decides whether the goods shall be accepted or rejected. The inspectors in the provinces send each week to the Superintendent of the Depôt a programme of their work during the ensuing week.

Inspection under the Consulting Engineers.

6. Inspection under the Consulting Engineers is done by their inspectors who examine the stores at the contractors' works and furnish reports and certificates as to the progress made with the orders. Copies of these documents are sent to the Director General of Stores where a record of the progress is kept.

Inspection by the Naval Architect.

7. The inspection by the Naval Architect relates mainly to vessels under construction or machinery for vessels, and is carried out at the ship-yards or at the engineering works.

Disputes.

8. No material deviation from the contract specification can be allowed by any of the inspecting authorities without the approval of the Director General of Stores. Disputes arising between the inspecting authority and the contractor which cannot be satisfactorily settled by them are referred to the Director General of Stores to whom the contractor is responsible for the due execution if the contract.

Packing.

9. When the stores have passed inspection, they are packed or prepared for shipment, either at the India Store Depôt when examined there, or by the contractor at his own works, where the packing is done under the supervision of the inspecting officer, but on such cases the contractor is held responsible under the contract for the packing being sufficient to ensure the safe arrival of the stores at their destination in India. Should damage in transit occur recovery cannot be made from the contractor unless proof is forthcoming that the damage was due to insufficient or faulty packing. For stores packed at the India Store Depôt, cases and crates are made there by contract, but the timber for them, and tin linings, where necessary, are provided by the Department which maintains a saw mill for cutting the wood to size. This system is found to be much cheaper and more convenient than having the cases, etc., made by contract outside the Depôt. Drums and similar packages are purchased. Bales, etc., are made up at the Depôt under hydraulic pressure.

Shipment.

All stores, from whatever source obtained, are shipped by the Stores Department which engages the necessary tonnage by direct contract with the shipowners. As soon as packing of the stores has sufficiently advanced shipping particulars are got out either by the contractors or the staff at the India Store Depôt and tonnage estimates are prepared by the Department. These show the amount of tonnage, dead weight and measurement, for which freight must be engaged to carry the stores, from the various ports in Great Britain to the various ports in India, the former being generally those at which delivery is cheapest, and the latter those best situated for the ultimate destination of the stores. Tenders for freight are then obtained and considered in consultation with the Shipping Agent, who is paid a fixed salary by the India Office for his services. Acceptance of freight tenders is subject generally to the same rules as those governing the acceptance of tenders for stores.

The shipping documents such as bills of lading, packing accounts, etc., are prepared at the India Store Depôt and are sent to the receiving officer in India, if possible, by the first mail after the sailing of the vessel. Invoices showing the cost of the stores (including packing and freight) are also prepared at the Depôt and sent out as soon as possible. A separate invoice is prepared for each head of service, *e.g.*, Ordnance, Marine, Telegraph, Railway, etc. The packing accounts which show in full detail the

stores which have been shipped are sent in duplicate and in due course; the duplicate copy is returned from India showing the extent to which the stores have been safely received, and bringing to the notice any loss or damage which has occurred, together with survey reports thereon. Where the shipowner is held responsible for the loss or damage, recovery of the value is ordinarily made from the steamer's agents in India, and similar action is taken if a railway company or carrier in India is responsible; but in case of dispute with the steamer's agents the matter is referred Home for settlement with the shipowners in Great Britain. When the packing is at fault, particulars of the fault are, or should be, given and the matter is taken up either with the Superintendent of the India Store Depot or with the contractor for the supply of the goods as the case may be.

The terms obtained by the India Office Stores Department for overseas freight to India are, owing to the magnitude of its shipments, much more favourable than the usual commercial rates. Moreover owing to the exclusion from the India Office bill of lading of the clause, always inserted in commercial bills, which exempts the shipowner from liability for loss or damage to cargo, even when due to the negligence of the ship's officers, recovery has from time to time been made by the India Office of large sums which would otherwise have had to be borne by the revenues of India.

The returned packing accounts are passed to the Auditor for Indian Home Accounts who is thus able to satisfy himself that the stores ordered and paid for have reached their destination.

Returns are sent to the indenting officers at regular intervals showing the progress made in complying with indents.

Payments.

10. When stores have been delivered and approved, the contractor submits his claim for payment and this, if correct as to quantities, is passed to the Director General of Stores with a certificate from the Superintendent of the Depot that the stores claimed for are satisfactory and have been delivered and taken into store preparatory to shipment, or have actually been shipped. The Superintendent notes on the claim the delay if any which has occurred in delivery, and states whether such delay is due to fault or omission on the part of the contractor, and whether or not remission of penalties for delay is recommended. The Director General decides whether or not to enforce the penalties if the case lies within the sanctioned limits of his powers. If outside these limits he decides whether to recommend to higher authority that the contract time for delivery be extended or that the penalties incurred be not enforced, and if so on what grounds. The claim is passed with an appropriate certificate by the Director General to the Accountant General who checks the rates from the copies of the contracts furnished to him and after calculating and deducting any penalties due pays the claim. Instalment payments are made as delivery proceeds provided that the instalment claimed is not unreasonably small. Sometimes instalment payments in respect of large installations of plant are made on the certificate of the inspecting authority that the work done and the materials provided justify such payment. In that case an undertaking is first obtained from the contractor that he will hold the stores as the property of the Secretary of State in Council and that in the event of delivery not being made in accordance with the contract he will on demand refund the amount paid.

Value of stores provided through the India Office Stores Department.

11. The value of the stores supplied during the years 1904-5 to 1917-18 through the agency of the Stores Department of the India Office is given in Table VI Appendix D.

12. The sanctioned establishment of the Department at present is as follows :— Establishment and cost of the Department.

India Office Branch.

1 Director General.
1 Deputy Director General.
4 Senior clerks.
4 Junior clerks.
3 Staff clerks.
25 Second class clerks.
7 Assistant clerks.
3 Special clerks.
2 Boy clerks.

50 at a total cost in the year 1919-20 of £13,349.

India Store Depôt Branch.

1 Superintendent.
1 Deputy Superintendent.
1 Assistant to Superintendent.
10 Supervisors.
20 Second class clerks.
8 Assistant clerks.
5 Boy clerks.
11 Higher technical staff.
37 Inspectors.
1 Shipping Surveyor and Adviser.
1 Assistant Shipping Surveyor.
1 Surveyor of shipments at Glasgow.
1 Examiner of Surgical Instruments.
1 Examiner of Medical Stores.
1 Medical Officer.
1 Engineer.
2 Messengers on the permanent staff.

103 at a total cost in the year 1919-20 of £26,811.

There is also employed at the India Store Depôt a normal staff of 146 artificers, labourers and charwomen at a total cost in the year 1919-20 of £26,642. The number of these varies somewhat according to the volume of work in hand.

India Office Stamp Branch.

1 Supervisor of Stamps.
1 Assistant Supervisor of Stamps.
1 Senior Examiner of Stamps.
9 Examiners of Stamps.
1 Forewoman.
1 Senior Teller.
34 Female Tellers.

48 at a total cost in the year 1919-20 of £3,484.

The Consulting Engineers are paid at fixed salary of £1,000 a year in addition to a due proportion of the salaries, travelling expenses, etc., of the firm's clerical and inspecting staff. The total amount paid to Consulting Engineers has in recent years averaged about £2,000 annually.

The Naval Architect is paid on a commission basis which includes the expenses of his office and staff of inspectors, etc The rate of commission varies on a sliding scale from 5 per cent. in the case of small orders to 1½ per cent. in the case of large orders.

APPENDIX F.

Note by Mr. M. J. Cogswell, C.I.E., Controller of Printing, Stationery and Stamps.

At the request of the Stores Purchase Committee I submit the following note, which summarises briefly the views I expressed in reply to questions addressed to me in regard to the purchase, inspection and distribution of paper and stationery articles.

I need not perhaps detail much of the earlier portion of the examination which I underwent at the Committee's hands, as this was largely in the nature of general explanation of the present system of dealing with stationery articles. A more detailed description of the system is given in Mr. Daltry's note of 1st December 1919 and in his replies to the Committee's questionnaire. The answers which I gave were, I think, aptly summarised by Mr. Lalji Naranji when he said that the Stationery Department in its present shape appeared to be a self-contained central purchasing agency, on lines the applicability of which to other classes of goods it was the business of the Committee to report upon.

In my opinion there are advantages to be gained by the extension of the present operations of the Stationery Office so as to make it definitely a central purchasing agency for government paper and stationery throughout India. The general nature of these advantages is well expressed in the report of Mr. Heseltine's Committee of April 1916, wherein it is pointed out that "the Controller of Stationery possesses expert knowledge, has at his disposal a trained staff and the necessary testing apparatus, is in touch with the paper market and in constant communication with the agents and managers of the paper mills." (As the Stores Committee are aware, the principal paper mills have their offices in Calcutta, and their factories within easy reach of that city.)

I do not think that there will be any commensurate advantages in installing an inspecting and examining staff controlled by an authority other than the purchasing officer. If complaints are to be found with goods purchased by the purchasing officer (who for convenience sake I will continue to call Controller in this note) these complaints might, I suggest, be addressed to the Board of Industries under whom the Controller has now been placed.

I do not think that it will be practicable entirely to divorce the Controller from the duty of distribution in the matter of paper and stationery. As already pointed out, the principal paper mills are located in the neighbourhood of Calcutta and it would be, I submit, waste both of time and materials, and an unnecessary duplication of offices to maintain a separate imperial stationery distributing agency in Calcutta. The Government of India presses, the contractors for printing, the Government of India secretariats and departments, the political offices and the Army throughout India would have to get detailed supplies from some source, and it would introduce innumerable complications, both practical and financial, to make that source a provincial one. Calcutta remains in my opinion the only reasonable headquarters for a Controller of Stationery, since it produces not only the bulk of the paper made in India, but also a very large number of the miscellaneous stationery articles which come within the operations of the Stationery Office, and if present indications may be relied upon, is likely in the future to produce a still larger number and a greater variety of these. And so far as imported goods are concerned, Calcutta is the port best serving many parts of the country. Whether, given an imperial distributing depôt in Calcutta, it would be reasonable to establish a separate provincial distributing depot for Bengal would, in my view, require proof.

The presence of a distributing branch of the Stationery Department in Calcutta need not, however, prevent the maintenance of stationery depôts in other centres. Whether these depots in other provincial centres should be definitely provincial institutions, so far as storage and distribution are concerned, only receiving their stocks both of country-made and imported goods by the agency of the Controller, is a matter for the consideration of the Committee and others. In any case, as it seems to me, the Controller must at all times have right of access to such depôts in order to see that the goods with which they are stocked are in fact those which he has purchased and of the quality for which he contracted.

My own personal view, already expressed unofficially some considerable time ago to the Government of India, and demi-officially to the Madras Government, is that the present stationery offices in Madras and Bombay, together with any other issuing offices that may conveniently be established in other centres, should be branches of the one central stationery department. This is the English system. The Home Stationery Office has branches at Manchester, Edinburgh and Dublin, but these are not separate and distinct institutions, but are controlled and inspected by the Central Stationery Office in London. I do not suggest that in view of the trend towards "provincial autonomy" in India the analogy is complete but it may perhaps be surmised that even provincial autonomy is not desired solely for the purpose of creating new and redundant establishments.

In this connection it is perhaps permissible to mention that the Madras Government, having obtained sanction to amalgamate the posts of Superintendent of Stationery and Superintendent of Printing, is now faced with considerable difficulty in bringing the scheme into being, and I have been asked to go to Madras to advise further. The Burma Government also, having been impressed by the amount of money expended by local officers in purchasing locally articles which, it was stated, could not be got in time from the Calcutta Stationery Office, proposed that the Controller should stock a small subsidiary depot at the Rangoon press. This scheme was approved a year ago but I have now learned that it is held up pending the decision on the matter of the purchase of stores generally.

Calcutta in my vision would be at once the headquarters of the purchasing and inspecting staff, a central clearing house for goods purchased, a distributing agency in bulk (by written instructions to the buyer in England in some cases and by actual handling in others) and a distributing agency in detail for such territories and offices as were not served by other existing depots, or any hereafter to be established.

To me the idea of creating separate *purchasing* officers in every province is unthinkable. I can see many disadvantages in such a course and not one single advantage, beyond perhaps that it might give a sop to the *amour propre* of some individuals.

Supposing, however, that it were decided that each major province should have a *distributing* stationery office of its own and under its own control, I do not think there will be any insuperable difficulty in fitting these in with a central purchasing agency, by the adoption, with modifications, of the system at present obtaining in relation to the purchase of stationery by the State railways. The contracts for paper required by the railways are made by the Controller. The railways are informed of the prices and of the sources of supply. Thereafter they now place their own orders with the mills in the quantities required; and they ordinarily send samples of the supplies received to the Stationery Office for examination. When supplies received are obviously in general conformity with the originally approved samples, this course is sometimes omitted, but the Stationery Office is not left long without knowledge when the mills send goods that are not considered to be up to sample. This part of the business would probably require modification and some tightening up. Indents for imported stationery goods and articles of local manufacture are submitted to the Stationery Office by the railways and goods are supplied in bulk to the railway stores.

This question of having independent provincial distributing depots is a matter for discussion. My own experience inclines me to the opinion that the maintenance of branches of one central stationery office would be probably the more satisfactory and certainly the more economical course. There is something to be said on both sides. The Controller under such a system would stand to be shot at by every dissatisfied and aggrieved client of the provincial depot of an imperial department: whereas if the head of the provincial depot were an officer of the local Government, these complaints would be disposed of locally. On the other hand, one great advantage which suggests itself to me in having the distributing depots all as definite branches of one imperial department

is that it would make it much simpler to consolidate and place orders for particular descriptions and sizes of paper, and to meet possible depletion of stock in one depot by transfer, if need arose, from another. And being in direct touch with the operations of the depots the Controller would be able to obviate delays to work in the presses which might be caused by temporary shortages of paper in a provincial depot by substituting other paper either from stock in Calcutta or from orders already with the mills.

Though perhaps the matter does not fall entirely within the four corners of the Stores Purchase Committee's enquiry, it is necessary to point out that the present Controller of Stationery is also Controller of Printing and Stamps. As Controller of Stamps he works under the Finance Department. So far as stamps are concerned, there are five central depots, namely, at Calcutta, Madras, Bombay, Karachi and Rangoon. The Calcutta Stamp Office consolidates the indents for postage stamps for all India (in co-ordination with the Director-General of Posts and Telegraphs) and also consolidates the indents for the distribution of all other classes of stamps on the lines prescribed by the Finance Department, The Calcutta stamp stores, being the largest, is the "mother ship" for all the other depots. It also makes detailed supplies of stamps to treasury officers and others within the radius appointed for its operations, namely, Bengal, Bihar and Orissa, Assam, the United Provinces and partially the Central Provinces. Whether it would be possible as a permanency to retain the union of stamps and stationery if the functions of the Controller were extended on either of the lines under discussion, might perhaps be left for decision until some experience had been gained. Personally I do not think that the two offices would be an intolerable burden to one man.

But I do not think that with an enlarged stationery office whether or not with stamps attached, it would be possible for one man efficiently to undertake also the duties of a Controller of Printing, specially on its administrative side as regards the Government of India presses. Whether the duties of that office should be discharged by a separate technical officer, or whether the Superintendent of Government Printing, India, should be brought into direct communication with the Board of Industries, the duties of inspecting and advising all presses being again committed to the Examiner of Press Accounts, with a strengthened staff including trained technical assistants, is probably a distinct matter for discussion in the proper quarter.

APPENDIX G.

Shipbuilding Rules.

(Appendix VI to Marine Regulations, India, Volume III.)

Rules defining (*i*) the procedure to be observed in respect of the provision of new vessels other than launches for the Royal Indian Marine, Departments of the Government of India and Local Governments and Administrations, and (*ii*) the financial powers of Local Governments and Administrations in regard to the construction and repair of vessels required for inland navigation, and for use at ports, etc.

(i) *Procedure governing the provision of new vessels, etc.*

1. The following procedure has been laid down in order to ensure that the designs of vessels should embody the latest and most economical improvements introduced in shipbuilding in the United Kingdom, it being considered desirable that, with a view to obtaining the best results, the same procedure should be followed by all departments in India.

2. When a Local Government or Administration, or a Department accepts the necessity for the construction or purchase of a new vessel, it should send the necessary design of the vessels to the Director, Royal Indian Marine, who will forward it to the Director-General of Stores, India Office, for reference to the Consulting Naval Architect at the India Office, with full particulars of all requirements which the new vessels should meet, and with the request that the Director-General of Stores may send out a specification, drawing and estimate of cost of the proposed vessel.

3. On the receipt of the above Director, Royal Indian Marine, will if he considers that there are any points which require modification, return the specification and drawings to the India Office with his remarks.

4. When the points at issue have been settled, the accepted specification and drawings will be returned by the Director, Royal Indian Marine, to the Local Government or Administration, or Department, concerned with an intimation whether the proposed vessel can be built with advantage and economy at either of the Royal Indian Marine Dockyards at Bombay and Calcutta. Final orders as to the construction of the vessel will then be issued by the Local Government or Administration or Department, in question, or the sanction of the Government of India obtained should such be required [see (*ii*) below].

5. The procedure laid down above will not be applicable in the following cases :—

(*a*) Sea-going vessels of 120 feet length and under, irrespective of the method of propulsion. Proposals for such vessels will be sent to the Director, Royal Indian Marine, who will use his discretion as to the necessity for reference to the Director-General of Stores, India Office.

(*b*) All vessels for inland water, except such special ones as dredgers, or those in which there is novelty of design or construction, either in hull or motive power. The procedure in respect of such special vessels will be that laid down in clauses 2-4.

6. The Director, Royal Indian Marine, will, however, be at liberty to refer any case he may consider advisable to the Director-General of Stores, India Office, for reference to the Consulting Naval Architect for plans, specification and estimate.

(ii) *Financial powers of local Governments and Administrations in regard to the construction and repair of vessels, etc.*

7. Local Governments and Administrations are empowered to sanction the construction or purchase at the cost of Provincial revenue of all vessels that may be required for inland navigation and for use at ports, provided :—

(*a*) That, without the previous sanction of the Government of India to be obtained through the Marine Department, the cost shall in no case exceed Rs. 1,00,000.

(*b*) That the advice of the Director, Royal Indian Marine, as regards the type and cost of the vessel shall invariably be obtained, and shall be adopted on all material points.

(*c*) That without the previous sanction of the Government of India in the Marine Department no vessel shall be built otherwise than at a Government Dockyard.

8. The preceding rules do not apply to non-sea-going vessels of any kind other than those driven by engine power.

9. The Railway Department (Railway Board) of the Government of India are allowed a free hand in the matter of having vessels constructed at the Government Dockyards, subject to

the condition that, when new types of river steamers are required for use in connection with State Railways worked, or under construction by the State, the Railway Board, before concluding a contract for their purchase, will ascertain, from the Director, Royal Indian Marine, what would be the cost of obtaining similar vessels from the Royal Indian Marine Dockyards.

10. Local Governments and Administrations have full power, without any limit to cost, to sanction expenditure on repairs to all vessels required for inland navigation and for use at ports.

(iii) *General.*

11. All communications from Local Governments and Administrations, relating to works of construction or repairs to be undertaken for them in Government Dockyards should be addressed to the Director, Royal Indian Marine, if the work is to be done at Bombay, and to the Captain Superintendent, Royal Indian Marine, if at Calcutta.

Estimates for Imperial Marine Works to be undertaken in the Kidderpore Dockyard, costing over Rs. 1,000 are to be forwarded to the Director, Royal Indian Marine, who will deal with them as laid down in paragraph 8 clause (*i*).

12. In all estimates for new works submitted to the Government of India due allowance is to be made for contingencies, and the estimate is to be carefully scrutinized to ascertain whether it has been made out in good faith, and correctly shows the expense that is likely to be incurred. Once the work is sanctioned and a specific sum allotted for it, the amount should not be exceeded without the previous sanction of the Government of India.

204BM—3500—29-8-20—GCPS.

PURCHASE COMMITTEE

PPENDIX

TO THE

REPORT

OF THE

CHASE COMMITTEE

VOLUME II.

MINUTES OF EVIDENCE

Taken at Calcutta, Rangoon, Madras, Bombay, Nagpur, Cawnpore, Lucknow, Lahore, Delhi and Simla

WITH

APPENDICES.

CALCUTTA
SUPERINTENDENT GOVERNMENT PRINTING, INDIA
1921

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LIST OF WITNESSES EXAMINED BEFORE THE COMMITTEE.

At CALCUTTA, Wednesday, 17th December. 1919.

W. F. Marchinton, Esq., Deputy Controller of Munitions, Bengal 1

At CALCUTTA, Thursday, 18th December, 1919.

J. F. Lewis, Esq., Manager, Carriage and Wagon Department, Messrs. Burn and Co. Ltd., Howrah . . 5
J. G. Fulton, Esq., Manager, Bridge and Structural Department, Messrs. Burn and Co., Ltd., Howrah . . 7

At CALCUTTA, Friday, 19th December, 1919.

H. Burkinshaw, Esq., Consulting Engineer with Messrs. Bird and Company, Calcutta . . . 7

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MINUTES OF EVIDENCE

TAKEN BEFORE THE

STORES PURCHASE COMMITTEE

At Calcutta, Wednesday, 17th December 1919.

PRESENT:

F. D COUCHMAN, Esq., M.I.C.E. (*President*).

A. W. LODS, Esq.
H. N. HESELTINE, Esq.
Lieutenant-Colonel C. C. H. HOGG, C.M.G., R.E.
Brigadier-General H. A. K. JENNINGS, C.I.E.
Rai Bahadur LALA MILKI RAM.

And the following Co-opted Member :—

D. B. MEEK, Esq., M.A., B.Sc., Director of Industries, Bengal.

J. C. HIGHET, Esq. (*Secretary.*)

W. F. MARCHINTON, Esq., A.M.I.C.E., A.M.I.E.E., A.M.I.M.E., Deputy Controller (Munitions), Bengal Circle, Calcutta.

Note on proposed Stores Organisation.

From the points of view of economy and efficiency, I consider that a highly centralised form of purchasing organization, conducted more on business than on orthodox Government lines, will be the best to adopt. As, however, one of the principal aims of the proposed stores organization will be the development of Indian industries by the purchase of Indian manufactured articles in all cases where price and quality permit, a highly centralised organization will not be, for obvious reasons, the best to adopt to promote this end. The following reasons, which apply mainly to comparatively small orders, may be mentioned :—

(*a*) insufficient knowledge of various provincial manufacturing resources ;
(*b*) tendency to starve out the small manufacturer due to (*a*) ; or,
(*c*) the small manufacturer will quote to middlemen who will combine these quotations and quote Government for large supplies at a proportionately higher rate ;
(*d*) will lead to a tendency to depend more on imported articles rather than those made in the country.

Bearing the development of industry in mind and also that Government should, in common fairness, receive adequate value for money spent, I think that the future stores organization should be as outlined in paragraph 197 of the Indian Industrial Commission's Report, with the exception that the various purchasing and inspection branches to be located in the provinces, should be independent of the provincial industrial departments and directly under the Controller-General, as explained below :—

Each province should have a stores branch which for the first two years, say, should be placed under the Controller-General and should not form part of the provincial department of industries. If this plan is adopted, it will, I feel sure, lead to a more expeditious handling of indents, particularly those that have to be transferred to the Controller-General. It will also ensure better purchasing and tend to promote a more uniform development in the department as a whole. The policy of each branch should be to place orders only in the province in which it is located, thus giving the manufacturers of the province an opportunity of supplying their own local Governments precisely as laid down in paragraph 197 of the Indian Industrial Commission's Report but introducing more direct competition due to the information available regarding prevailing prices in other provinces as mentioned below. In practice, information regarding the manufacturing capabilities of any province could, in case of necessity, be readily obtained from the provincial director, but the purchasing officers themselves will, in time, become familiar with the capabilities of the provinces wherein they are situated. Each branch should furnish the Controller-General with regular reports showing clearly the prices paid for, and full description of, all goods ordered. The Controller-General should then scrutinise and compare these prices with those paid in other provinces and, if necessary, issue instructions accordingly. He should also regularly tabulate and combine these branch reports and circulate a combined report periodically to all branches. This will assist in readily making known to all concerned the cheapest market for any class of goods with prevailing rates and foster competition and, at the same time, enable branches to decide immediately, in the majority of cases, whether to purchase in their own province or not. The Controller-General should also be able to collect from these reports valuable data with a view to standardizing certain leading classes of goods and fixing running contracts for same. The inspecting staff should, as already stated, be inde-

pendent of both the purchasing branch and the provincial department of Industries.

With the exception of the above modifications, I am in agreement with paragraphs 197 and 198 of the Report. My reasons for desiring to exclude all purchasing and inspecting staff from the provincial departments of industries are as follows:—

(1) The directors of industries in the larger provinces will, if local Governments look ahead and do not adopt too parsimonious an attitude, have an immense task facing them, and I think they will be better able to assist and promote industries if their function is a purely advisory one, rather than a combination of two totally distinct ones. The purchase of stores, more especially in a province like Bengal, will be no light task; further, as Calcutta is one of the chief importing and manufacturing centres in India and as for some considerable time orders for imported articles will constitute a considerable proportion of the total placed, it follows that a large proportion of the buying for other provinces will have to be handled by the Bengal branch. To deal with this work, a comparatively large staff will be required and if a portion of the director's time is to be devoted to the stores organization in directing its policy and general administrative work in connection with it, as it necessarily would to justify the system, then, I am afraid, very little time will be left for his other multitudinous duties. The other officers who will be attached to the industrial department will also be fully occupied in industrial work and the above remarks apply equally well in their case also.

(2) It is impossible to expect officers attached to the various provincial industrial departments to have an expert knowledge of all the various classes of stores required, the best market in which to buy and the prevailing market-rates; hence, it follows that if they are expected to devote a portion of their time to the purchase and inspection of stores they will not be purchased to the best advantage, *i.e.*, economically.

(3) The time of the various provincial industrial officers will, as stated above, be fully occupied with duties other than the purchase and inspection of stores and, therefore, if the provincial industrial departments are to purchase stores, their staffs will need augmenting, in which case it will be better to appoint expert officers with a knowledge of markets, prices, etc., and let them devote their full time to the purchase of stores. If this be conceded, then the case for attaching the purchase of stores to the provincial department falls through. It is assumed, of course, that there will be a free interchange of information between the industrial departments and stores branches.

(4) The standardization of certain articles, the reduction in the numerous heads, and the elimination of unnecessary types will be facilitated because of the more direct and freer connection between the branches and headquarters.

(5) A uniform procedure could more easily be developed and mistaken or short-sighted methods of office procedure, the keeping of incorrect ledgers, etc., would be avoided.

(6) A uniform procedure in inspection could be developed more readily, thus tending to reduce a frequent source of friction between suppliers and inspectors.

At the end of two years the whole stores organization should be reviewed and, as at that time, both this and the various provincial industrial departments will be in working order, it will be a matter for consideration whether, in the light of experience gained, it is desirable to transfer the various branches to the appropriate industrial departments concerned. If, however, this is attempted at the outset, I anticipate that each will be a drag on the other with a consequent decrease in joint efficiency. Further, development will not be uniform in the various provinces and there will be unnecessary variations in methods of work with an all-round loss of efficiency.

The qualifications essential in a Controller-General should be exceptional powers of organization, general business experience and engineering experience. If he possesses specialised experience in any particular line, so much the better; but the foregoing qualifications, especially the first, are indispensable. In order to secure a first class officer, on whose selection the success or otherwise of the organization will greatly depend, I think that a salary higher than the proposed one of Rs. 2,750 will probably have to be offered. The duties of the Controller-General are fairly well defined in paragraphs 197 and 350 of the Industrial Commission's Report and, among his chief cares, emphasis ought to be laid on the importance of fixing running contracts and the standardization of certain articles required in large and regular quantities. If standardization is properly carried out, there should be a great reduction in the numerous types of any particular class of articles with a corresponding reduction in price and, further, this may be calculated to encourage manufacturers to lay down plant to cope with such work as offers.

The qualifications essential in deputy and assistant controllers should be general engineering knowledge, organizing and business abilities and expert knowledge of the particular group of articles which they will have to purchase. In the case of Deputy and Assistant Controllers (Inspection), similar qualifications, with more stress laid on engineering knowledge, will be necessary, but not necessarily with expert knowledge of any one group of materials. The war has, I think, given the engineer his proper status and I have no hesitation in saying that, in my opinion, an engineer will make an all-round better job of both buying and inspecting any article whatsoever than an officer lacking such training. No matter which form of organization is adopted, it may be safely assumed that each province will have a purchasing branch and the Industrial Commission's Report, in paragraph 318, suggests that a senior office assistant on Rs. 500 or thereabouts will be able, among other things, to supervise the office work in connection with the checking of indents and the purchase of stores. I regard this as totally inadequate. No details appear to be given in the Industrial Commission's Report of the necessary staff that will be required for provincial purchases except that, in paragraph 197, it is stated that "in the major provinces, *at any rate*, an experienced officer would be required who should be responsible for local purchases and should utilise the staff of the department as far as possible for inspecting and testing the goods supplied through him." In the case of Bengal alone, no matter which system is adopted, I consider that at least one deputy and two assistant controllers will be required for the purchase of stores for use in Bengal, and also for those unprocurable in other provinces; also one deputy and two, possibly three, inspectors. This staff may have to be enlarged, but until the precise organization and allocation of functions is settled and fuller particulars are known regarding the probable requirements, it is impossible to say.

The inspection branch should, as already mentioned, be under the imperial department, and I think it should remain so permanently. It should be responsible for all inspection even if eventually it is decided that the purchasing branches should become part of the provincial industrial departments. This will render easier the introduction and standardization of one set of rules applicable to all branches and thus assist in the attainment of consistency and uniformity in inspection. It will also tend, as already stated, to reduce a lot of the petty an-

noyances and inconsistencies that firms usually complain about in connection with government departments.

There is one other officer who will play an important part in the organization of the new department and that is the Supervisor of Contracts. His qualifications should include engineering and commercial knowledge. The title is self-explanatory and it only remains to add that his principal duties will be in the headquarters of the department. He should be consulted in connection with all proposed office procedure.

Integrity of conduct is of the utmost importance. This applies to both officers and subordinates and, in the selection of all, the most rigorous scrutiny of the past history and general reputation borne by candidates should be made and the utmost attention paid to keeping up the reputation of the department for honest and straightforward dealing.

If the new department is to be reasonably efficient, it is necessary, in my opinion, for the officers to have more control over the subordinate staff than is usual in permanent government departments, and powers should, therefore, be delegated whereby an officer of the rank of deputy controller could dispense with the services of an unsatisfactory clerk, if necessary. Fair treatment must, of course, be guaranteed to all subordinates, but a break away from the orthodox government system is very necessary to ensure maximum efficiency. Usually, it is exceedingly difficult to get rid of an unsatisfactory permanent government clerk and the utmost that can generally be done is to postpone an increment for one year. This, naturally, does not tend towards efficiency and the getting together of a competent staff; hence ordinary business methods ought to be introduced.

The system of provident funds, as administered on state railways and in certain special government posts such as electrical inspectorships, should be introduced both amongst officers as well as subordinates. This would, I think, make for increased contentment and efficiency in the department.

The provincial governments concerned should be debited with the whole expense of the upkeep of the stores branches maintained within their provinces. The cost of the headquarters staff of the stores organization should be met from imperial revenues.

One very important matter is that of prompt payment for all stores purchased. It is a general complaint among firms supplying government departments with goods that considerable delay invariably occurs before payment is received; in fact, some firms wax very eloquent when this subject is broached. It goes without saying, of course, that cheap buying and prompt payment go hand in hand and, therefore, every effort must be made to adopt procedure ensuring this. I am of opinion that it can best be arranged by each branch having a stores depôt. All easily handled goods should be forwarded to this depôt and there inspected and clearance certificates given upon which the suppliers should be able to obtain payment. All goods should be despatched to their ultimate destination from this depôt except in the case of goods produced locally and destined for local indentors in which case, on the score of economy, direct delivery may be made.

It will be necessary to provide testing facilities and I think that the existing Alipore Government Test House should be able, with augmented staffs, to cope with most of the testing required with the exception of Madras and Bombay; for these two latter places, other facilities will be required and it will have to be decided whether some existing organization cannot be utilised for this work.

To ensure efficiency, a proper system of registers and ledgers should be provided and it should then be possible to tell the exact position of an indent from day to day. Records will necessarily play a more important part in the proposed organisation than they would in the case of a private firm, but if a fairly flexible system is adopted, this fact need not necessarily cause delay anywhere.

The above represents my views on the proposed new organization. I regret that, due to pressure of other work, it has been impossible to go more thoroughly into the matter and perhaps, due to this cause, it has not been arranged as well as it might have been.

[*Replies to questionnaire written after witness had appeared before the Committee.*]

In replying to the questionnaire, the following definitions have been adhered to:—

(1) By central agency is meant an agency under the control of the Government of India with, if necessary, branches located in the various provinces.

(2) By local agency is meant an agency under the control of a provincial Government.

Question 1. Yes, my reasons are as follows:—

(*a*) Such an agency would render possible the combination of separate indents for similar stores and their purchase in bulk with resultant economy.

(*b*) Any tendency of prices to firm up due to the possibility of several departments simultaneously calling for quotations for large quantities of stores would be eliminated.

(*c*) The standardisation of numerous classes of stores and the elimination of unnecessary types would be facilitated and thus tend to:—

(*i*) reduce the amount of capital locked up in carrying stocks, due to reduction in the number of types of similar but interchangeable articles;

(*ii*) effect economy because articles of any particular type will be required in larger quantities, thus obtaining the advantage of bulk purchase; and

(*iii*) for the reasons stated in (*ii*) the local manufacture of numerous stores in regular demand will be stimulated; and

(*iv*) an incentive to British firms to establish branches and ultimately works in India will be given, as the value of such stores will be more in evidence.

(*d*) The scrutiny of home indents referred to in question 16 will presumably be carried out by this department and, assuming this, it should be in a position to promptly decide in all cases whether to arrange for stores to be obtained from abroad or in India.

(*e*) Promotion and exchanges of staff with the various branches would be facilitated and the block in, or absence, of promotion that would occur in a number of provincial agencies independent of each other would be avoided.

Question 2. Apart from adequate precautions to ensure that the article under supply complies with the specification and terms of the indent, that the quality is correct, and that the price paid is reasonable, I do not think that any special arrangements are necessary.

Question 3. I do not see that any advantage would accrue by the central agency purchasing such things as brooms, sand, straw, lime, etc., and certain articles, occasionally required in small quantities. It will be necessary to allow most government departments to make emergent purchases direct and I would suggest, therefore, that as complete a list as possible of such articles as those indicated above be drawn up and that all consuming departments be permitted to effect their own purchases of such stores and any others required urgently, subject to a certain maximum monthly or yearly value. Periodical returns of all such purchases, giving full details of rates, quantities, etc., should be furnished to the central agency, which should then carefully tabulate such results and if, in the course of time, it be found that any economy would accrue by transferring the purchase of any article to the central agency, steps to effect this should be taken.

Question 4. (*a*, *b* & *c*). Yes, for the reasons stated in reply to Question 1.

Yes, all bodies purchasing through the proposed central agency should contribute towards its maintenance.

Question 5. Yes. I propose that there should be a central stores department with headquarters at Calcutta. It should have both purchasing and inspecting branches in each province. These branches should be independent of each other and of the provincial departments of industries. With the exception of indents for the articles referred to in my reply to question 3, they should receive all indents from imperial and provincial government departments situated in their province. They should make all purchases for, and the inspection branches all inspections of, stores to be procured in their own province, irrespective of their ultimate destination. Each branch should regularly furnish headquarters with reports showing clearly the prices paid for, the quantities involved and a full description of, all goods purchased. These should be utilised to draw up general reports which should indicate clearly the cheapest markets for most classes of goods and the capacity of each. Such reports should then be regularly circulated to all purchasing branches.

It may perhaps be argued that an organization such as the above would not permit a provincial department of industry sufficient control over the purchase of stores required by its own Government. Such an objection, if raised, could be met by the indenting department indicating on an indent any source in the province from which it desired to be supplied. The purchasing branch would then endeavour to meet such wishes by limiting the purchase to that particular province, even if, by so doing, a slightly higher rate had to be paid and provided that any useful purpose was achieved. Such occasions ought, however, to be of comparatively rare occurrence and the general policy should be to buy in the cheapest market consistent with quality because such a policy would stimulate manufacture and competition.

Question 6. If, by this question, agencies under local Governments are implied, my reply is that, as I do not favour the formation of such agencies, I have no views to put forward.

Question 7. No, beyond, the system adopted in the electrical and mechanical branch of the Indian Munitions Board, which did not possess any unusual features. I would suggest, however, that full specifications, defining clearly the chemical and physical properties of the articles required and the tests that will be applied, should be incorporated in all cases for tenders, and that no other considerations but price, quality, origin and time of delivery should be taken into account in accepting offers.

Question 8. Yes. Simultaneous tendering is very desirable in the case of large contracts and would ensure fair prices being quoted.

Question 9. The consuming department should undoubtedly be in a position to stipulate what is required and to refuse to accept articles not in accordance with their demands, *but* the necessary steps to ensure that they obtain the article demanded should be taken by the industrial department. Hence, the actual *policy of inspection* should be laid down by the department responsible for the industrial development of the country as thereby more uniform development and progress will be attained. In the case of articles in regular demand, I think that standard specifications (as stated in the reply to question 7), should be drawn up by the industrial department in consultation with the various consuming departments. After these have been drawn up to the satisfaction of all concerned, the duty of the inspecting staff will be clearly defined.

Question 10. Certainly. To enable this to be done properly, it will be necessary to establish inspection branches in all the larger provinces.

Question 11. This is somewhat difficult to answer in the absence of particulars regarding the qualifications that will be insisted upon in the inspecting staff. I do not think, however, that any departments, except those responsible for medical stores and perhaps certain ordnance stores require special inspection organizations, *if* the inspection staff is recruited from men with a good technical training and is provided with laboratory facilities for the carrying out of any necessary chemical and physical tests.

Question 12. The reply to this hinges upon the qualifications of the inspection staff, as referred to above. If technically trained men are recruited, they should, as a body, be capable of ascertaining the suitability of all classes of articles with the exceptions referred to above. If, however, it is decided not to recruit such men, then I consider that, for structural, mechanical and electrical stores specialised inspection will be desirable.

Question 13. I do not contemplate the formation of local agencies if agencies under the local Governments are referred to and, therefore, this question does not arise. As stated in reply to question 10, it will, however, be necessary to establish inspection agencies in the provinces under the direct control of the central stores department.

Question 15. In all cases in which such a procedure would result in favourable rates being obtained in India, due regard of course, being paid to quality. Also in those cases where serious inconvenience would be caused by waiting to obtain an article from England in the usual way.

(*a*) It would tend to induce firms to hold larger stocks than at present, but this, in turn, would have a tendency to increase prices due to the locking up of capital.

(*b*) It would greatly stimulate manufacture in India.

Question 16. Most decidedly: provided that such scrutiny is carried out by men possessing an intimate practical knowledge of the stores under scrutiny. Such scrutiny would ensure the inclusion of all essential data, thus preventing unnecessary references and consequent delay. It would also ensure that no indents for stores obtainable in India at reasonable rates and in sufficient quantities were sent home.

Question 17. Means of obtaining up-to-date records of Indian prices have been indicated in the reply to question 5. In the near future, it may be possible to obtain English prices within a week or so by aerial mail, but until such is possible, I can only suggest that priced lists of all articles in usual demand be drawn up and that the India Office Stores Department send telegraphic advices (in code) to the central stores department of any variations in rates for articles specially liable to fluctuation. For all other articles, the ordinary mail should provide sufficiently up-to-date information. Such information, upon receipt, should be incorporated in the reports referred to in the reply to question 5 and then circulated not only to the scrutinising department, but to all purchasing branches. Any branch should then be able to decide:—

(*a*) whether to purchase in its own province or not;
(*b*) whether to transfer to another province for supply; or
(*c*) whether to transfer direct to the central department for transmission to England. This latter decision, of course, will be confirmed by the scrutinizing department.

Question 23. Yes, by the means outlined in the replies to questions 5 and 17.

Question 25. No: because the only change involved would be the substitution of new purchasing agencies in place of the present ones.

Question 26. The staff should be recruited in this country as far as possible because a knowledge of Indian conditions is highly desirable and would be particularly so when the initial attempt at organising is made. In view of the fact that a considerable portion of the purchase of the new department will be of an engineering nature, whether manufactured in the country or not, I think that the staff should be recruited from men with an engineering training because, in my opinion, such a man would make a better all round job of the purchase of any class of stores than one without such a training.

Integrity of conduct is of the utmost importance and, in the selection of candidates, a rigorous investigation of their past history and general reputation should be made.

In view of the fact that the salaries suggested by the Industrial Commission were on a pre-war basis, I consider that they should be revised to meet the present higher

cost of living. For instance, the pay suggested for the Controller-General is Rs. 2,750 which I regard as totally inadequate and I think that Rs. 4,000 would not be too much to pay.

With a view to promoting efficiency and maintaining strict discipline, it should be possible for any superior officer to dismiss any of his subordinates on his own judgment, subject to a clear report of any such incident being filed for reference.

In lieu of pension, a system of provident funds, as administered on state railways and in certain government posts such as electrical inspectorships, should be introduced.

Question 27. Yes.

Question 29. So far as an efficient audit is concerned, the chances appear to be equal in either case.

It would be possible to ensure fuller compliance with rules in a central stores rather than in a local stores department.

Question 30. Most decidedly, as such a procedure would be mutually advantageous.

At Calcutta, Thursday, 18th December 1919.

PRESENT:

F. D. COUCHMAN, Esq., M.I.C.E. (*President.*)

A. W. DODS, Esq.
H. N. HEXELTINE, Esq., C.I.E.
Lieutenant-Colonel C. C. H. HOGG, C.M.G., R.E.
Brigadier-General H. A. K JENNINGS, C.I.E.
Rai Bahadur LALA MILKI RAM.

And the following Co-opted Member —

D B. MEEK, Esq., M.A., B.Sc., Director of Industries, Bengal.

J. C. HIGHET, Esq. (*Secretary.*)

Mr. J. F. LEWIS, Manager, Carriage and Wagon Department, Messrs. BURN & Co., LTD., Howrah, called and examined.

(*Witness was not asked to submit a written statement.*)

Witness had had about 28 years' experience in the design, construction, running and maintenance of railway vehicles. He had spent about 14 years on the Great Eastern Railway in England and about 14 years in India, of which 13 years were with the Great Indian Peninsula Railway. He joined Messrs. Burn and Company in March 1919 as Manager of their Carriage and Wagon Department.

Inspection was, of course, necessary, but he considered that some allowance should be made for Indian workmanship and that inspection tests should be applied less rigorously to work done in India than to similar work done in England. He was referring particularly to "finish." As far as strength of any particular article was concerned no relaxation could be expected, but inspectors should have in mind the particular purpose for which the article was required. In his experience inspectors were too apt to insist unnecessarily upon the exact degree of finish of similar articles from England. India would not have a fair chance if, to begin with, articles were rejected merely because of their inferior finish. Cases had occurred within his knowledge in which a particularly accurate degree of finish was required simply because inspectors would not usually exercise any discretion. His experience was that railways were satisfied with a lower finish in work done in their own shops than in work done for them by private firms. He thought that this might be partially accounted for by railways knowing their own material and having them made under supervision throughout. After all it seemed natural that any one making a table for himself would seldom attempt to obtain the finished appearance which he would naturally expect in a table purchased from a cabinet maker. Of course, it depended to some extent upon the nature of the article. For instance, an equally high finish would be insisted upon in both cases for, say, axles; but railways were satisfied to use buffers of a very much rougher finish than they would accept from firms.

In the course of his railway service, he had inspected work done by private firms and would admit that he himself had felt constrained to insist on a higher standard of finish than was absolutely necessary, notwithstanding that he knew what was essential. In many cases he had used his discretion and given way, but he had known men who would not in any circumstances condone any deviation, however unimportant, from the specifications or drawings. Specifications and drawings could generally be read in various ways. A little sympathy was required between inspectors and manufacturers. The inspector should be an officer of experience, who knew exactly how the article would be used and, therefore, the exact degree of finish necessary. Some parts may demand great accuracy of finish and for others some latitude may be quite permissible. He thought that inspectors frequently insisted on a better finish than the consumer would consider necessary and that this was chiefly due to want of practical experience on the part of the inspector in respect to the use to which particular articles would be put. His main point was that inspectors should be practical men.

Items should be classified and standardised and inspectors should possess expert knowledge of the particular class which they had to inspect. A man competent to inspect boilers might not be competent to inspect wheels and axles. If the manufacturer thought that the inspector was insisting on an unnecessarily rigorous test he should have the right to appeal for a reference to the consumer. The decision as to what was merely finish and what was essential should rest with the consumer and not with the inspector.

At present the manufacture of articles for the state-worked railways was watched practically continuously by an inspector under the Superintendent of Local Manufactures; but some of the other railways had articles inspected only when completed or permitted despatch without inspection. Speaking generally, the inspection required by the state-worked railways in India was severe as compared with what company-worked railways required. Yet notwithstanding this inspection on the one hand and the lack of inspection on the other, the standard of work done for company-worked railways was the same as that done for state-worked railways.

If inspection were done away with altogether deterioration in the quality of the product might result in time. Surprise tests by an inspector would serve to maintain the standard equally well as constant supervision. It would not pay a manufacturing firm to allow the quality of their work to drop. Inspectors did not seem to realise this. It would probably take longer to turn out a bad job than a normal job.

Company-worked railways seemed to trust firms more than the state-worked railways. He referred mainly to orders for wagon details, such as buffers, couplings, etc. Some company-worked railways employed the Superintendent of Local Manufactures, but many branch line companies ordered and accepted complete railway vehicles without special inspection.

What he desired to emphasize particularly was that inspectors should be practical men who would know what was required and be allowed a certain amount of latitude in interpreting specifications.

Inspection should be carried out by the central agency to secure uniformity. As a matter of convenience both inspection and purchase should be under the one control. All cases of rejection should be on record with the purchasing authority. Each case should be carefully investigated to determine whether the manufacturer was hopelessly incompetent or whether his failure was due to slight error. The inspecting staff should be independent of the purchasing staff, but there should be free consultation between the two.

The final decision as regards suitability should rest with the consumer, who might be perfectly willing to accept an article which the inspector would not be prepared to pass on the specifications supplied to him. The point he wished to emphasize particularly was that inspectors must have practical experience not only of manufacture but of use, so as to be able to judge the effects of divergencies from the specifications.

He considered that specifications were unnecessarily elaborate and meticulous, and it would be to the advantage of all parties if they were worded in a more general form.

Mr. J. G. Fulton, Manager, Bridge and Structural Department, Messrs. Burn & Co., Ltd., Howrah, called and examined.

(*Witness was not asked to submit a written statement.*)

Witness had been with Messrs. Burn & Co., Howrah, for about 14 years, during which time he had spent seven years as Manager of the Bridge and Structural Department. During this time he had fabricated many important girders and steel-framed structures for railways, both state and company-worked, for the Public Works Department and other government departments.

There was practically no difference between the specifications of state-worked and company-worked railways. Both required the material to be subjected to test. He had no complaint against the specifications to which he was required to work and thought them quite reasonable. Specifications for structural steel work in India were not more lenient than for similar work in England.

He considered that it was unnecessary to insist upon physical tests for structural steel which was guaranteed by test certificates to be of a recognised quality. His firm's representatives in England witnessed the tests on which such certificates were granted, and the standard of quality of steel manufactured in India was certified by the government Metallurgical Inspector. Test certificates were required from even the most reputable manufacturers. He had known a few cases in which imported rolled sections of guaranteed quality had been rejected in India, but these were light sections whose behaviour under physical tests was always uncertain. Once the use of a certain rolled section had been objected to by an inspector because of an irregularity in shape, though this in no way affected its strength.

He had no experience of casting, nor of the tests prescribed for such work.

The East Indian Railway did their own inspection and testing; other railways generally employed the Superintendent of Local Manufactures.

Some of the inspectors of structural steel work with whom he had come in contact had had no practical engineering training, and on occasions he considered that he had had good cause for complaint against the work of an inspector not because of a difference of opinion as to the interpretation of the specifications, but simply because of the inspector's lack of practical experience. Such instances had not, however, been frequent.

Inspectors must be practical men and should not insist on a higher standard of work than the consumer was prepared to accept. The staff which made analyses of the material should be separate from the inspecting staff. The inspecting staff should be independent of the purchasing staff, but under the same administrative control. In his opinion inspectors of structural steel work must have been trained in practical work and would be recruited preferably from recognised structural firms in England. They should also possess a certain amount of theoretical knowledge on the subject. Men who had been engaged in erecting bridges and other important structural work in India would be suitable, but he would give preference to men possessing Home experience as well.

At Calcutta, Friday, 19th December 1919.

Present:

F. D. COUCHMAN, Esq., M.I.C.E. (*President*).

A. W. Dods, Esq.
H. N. Heseltine, Esq.
Lieutenant-Colonel C. C. H. Hogg, C.M.G., R.E.
Brigadier-General H. A. K. Jennings, C.I.E.
Rai Bahadur Lala Milki Ram.

J. C. Highet, Esq. (*Secretary.*)

Mr. H. Burkinshaw, Consulting Engineer with Messrs. Bird & Co., Calcutta.

(*Witness was not asked to submit a written statement but questions in the questionnaire were put to him orally.*)

Witness had been in India for nine years, for the first six of which he had been General Manager in India of Messrs. Siemens, Electrical Engineers. He had then been attached to the Military Works Services in India before being appointed to the Indian Munitions Board as Controller of the Electrical and Mechanical Branch.

On termination of his services with the Munitions Board he had joined Messrs. Bird and Company as Consulting Engineer and had been with this firm for about 12 months.

Question 1. A central purchasing agency was undoubtedly a very good idea, provided the actual purchasing was done by suitably placed branches in charge of officers who possessed a special knowledge of the possibilities of their own circles and who had been furnished from the central agency with information regarding resources of all the other circles. It should not be necessary for each local branch to have to solicit information from other branches. A central agency with special buying branches suitably placed was desirable subject to the evolution of a suitable system for the distribution of orders.

Question 2. As far as he knew no special arrangements would be necessary for particular departments of the Government of India.

Question 3. A central agency could purchase stores of all classes. There were, however, certain very special articles such as precise tools, instruments and apparatus generally of that nature in buying which the purchasing officer should not be allowed to exercise any discretion to depart from the expressed wish of the indentor either as to type or maker.

Question 4. Local bodies, etc., would probably find it advantageous to obtain their supplies through a central government agency. They should then contribute towards the maintenance of the central agency by a percentage charge which he thought would be preferable to a fixed annual lump-sum payment.

Question 5. There should be one purchasing body only in each centre and this should be under the Government of India.

Question 7. He had some experience of the present government system of calling for tenders, but only during the abnormal conditions caused by the war when quick supply was the chief consideration. It was most desirable to allow plenty of time for the preparation and submission of tenders. While purchasing for Government he had felt himself constrained invariably to accept the lowest tender for articles of equal quality although such tender might be for a small portion only of the total supply called for. This resulted in considerable office work as during the war many very small concerns had sprung up which were willing to sell what they had at a very small profit. He would urge strongly that orders for any particular item should not be split up amongst too many firms. When tenders were called for, it should be clearly stated what minimum percentage of the total demand for any one item would be accepted from any one supplier. He did not think that this would lead to larger concerns buying up the small stocks held by small dealers and tendering the same raticle to Government at a higher price. There would be sufficient firms tendering for more than the minimum percentage.

Question 8. It would be desirable for the central stores agency to arrange for simultaneous tenders in India and in England.

Questions 9 and 10. He was most strongly of the opinion that the purchasing agency should be responsible for the inspection. It was imperative that the purchasing officer have expert knowledge of the class of stores he had to purchase. It was most desirable that he acted both as purchaser and as inspector. The inspecting staff should be an integral of the purchasing staff. He saw no reason why the inspecting staff should be independent of the purchasing staff. The consumer must be protected against careless inspection and the manufacturer against the idiosyncrasies or inconstancy of the consumer. The consumer must be required to specify exactly what he wants; but, before proceeding to purchase, the purchasing officer should satisfy himself that the specifications can be worked to in all respects. If not, and if the consumer would not agree to any modification, the purchasing officer should refuse the order.

Question 12. All inspectors should be experts in the class of articles they were called upon to pass.

Question 13. There should be a centralised inspection agency. If the purchasing officer were also the inspector, this would enforce the appointment of an expert to the charge of each branch of purchase.

Question 15. The purchase of European stores through established branches of British manufacturing firms in India should be permitted without restriction. This would probably induce firms to hold larger stocks and so enable the consumers to receive quicker delivery and also reduce prices. He did not think that this would adversely influence the establishment of factories in India. This was purely a question of competition. If firms found it more economical to manufacture their products in India, they would do so.

Question 16. He was most decidedly in favour of the scrutiny before transmission of all home indents by a central authority in India as this would enable orders to be consolidated, and the information collected in the process would be of great value to Indian enterprise in considering the establishment of industries in this country.

Question 18. For the present, at any rate, all classes of stores which had to be obtained from abroad should be obtained through the Government of India agency in London not only because London was in closer touch with the rest of the world, but because it would be found easier to make arrangements for inspection with representatives in London than elsewhere.

Question 19. He did not recommend the formation of central stock depôts by the Government of India.

Question 23. The chief function of a central agency would be to collect and disseminate up-to-date and reliable information regarding the capabilities of firms and the comparative prices of locally produced and imported articles.

Question 25. If local bodies, etc., elected to employ the government purchasing agency, small established mofussil businesses might suffer.

Question 26. The central purchasing agency should be split up into certain well defined divisions. The head of each division should be an expert in the particular class of articles that his branch has to purchase and have assistants similarly qualified. It was more important that recruits for the purchasing staff should be technically expert than commercially expert. The technologist would automatically acquire a knowledge of prices, etc., whereas no one could become a technologist without a special training. He considered that posts in the central stores agency would best be filled with men possessing some Home experience.

Question 30. The free interchange of personnel was very desirable, but between India and Home, and Home and India, the transfers should not be for long periods, as all that was necessary was that there should be mutual realisation of each other's difficulties.

At Calcutta, Monday, 22nd December 1919.

PRESENT:

F. D. COUCHMAN, Esq., M.I.C.E. (*President*).

A. W. DODS, Esq.
H. N. HESELTINE, Esq., C.I.E.
Lieutenant-Colonel C. C. H. HOGG, C.M.G., R.E.
Brigadier-General H. A. K. JENNINGS, C.I.E.
Rai Bahadur LALA MILKI RAM.

And the following Co-opted Member:—

D. B. MEEK, Esq., M.A., B.Sc., Director of Industries, Bengal.

J. C. HIGHET, Esq. (*Secretary.*)

The Hon'ble Major-General W. H. B. ROBINSON, C.B., K.H.S., I.M.S., Surgeon-General with the Government of Bengal.

Written Statement.

Question 1. Yes, a central agency would allow for wholesale purchases, one general indent, centralisation of stores, indents, and stocks, and fixed responsibility for supplies, and control of issues; also allowing for the lowest tenders, and the best supplies from selected tenders.

Question 2. A central agency should have medical control of a department of medical and surgical supplies, with chemical examination of the quality of supplies.

Question 3. Only such classes of stores as can be obtained direct (of the best quality) from Indian firms, equal to the English market, or very much cheaper, eliminating the middleman. Such stores as gauzes, bandages and dressings may be obtained cheaper by local purchase, from small local shops.

Question 4. Yes, advantageous; and they should contribute towards maintenance of the central organisation, the percentage charged being best if low and equitable.

Question 5. Yes, suitable; decentralisation could be effected by local stores which merely hold stocks from the central agency and only purchase according to paragraph 3.

Question 6. Local agencies not advocated, see paragraph 5.

Question 7. No experience.

Question 8. Yes, if sufficient notice were given to the tenderers.

Question 9. The policy of inspection should be dictated by the consuming department to ensure quality of supplies.

Question 10. By a central agency, with members appointed by the consuming department independent of, but working under the same control as the agency for the purchase of stores.

Question 11. Yes, the Medical Department needs a chemical examiner, or analyst.

Question 12. Yes, as for paragraph 11 (medical stores).

Question 13. Local inspection agencies would be cheaper.

Question 14. Unable to say.

Question 15. Conditional on the elimination of the middleman and cost of transit or freight charges if excessive and the non-deterioration of stores in the Indian climate:—

(*a*) stocks held would be larger;
(*b*) manufacture in India probable.

Question 16. Yes, to save possibilities of duplication, excess and ignorance of local supplies, though the scrutiny might cause delay.

Question 17. Lists of such prices might be prepared quarterly by the India Office and the Government of India, and supplied to the scrutineers.

Question 18. Not applicable to medical stores.

Question 19. Yes, central stock depôts by Government of India, or one central stock depôt.

(*a*) Government departments should only hold small stocks for emergent requirements.

(*b*) Private firms would only be affected if they were selected tenderers, according to quantities required.

Question 20. One central stock depôt in the Central Provinces for Indian and imported stores.

Question 21.

Year.	(*a*) Value of stores purchased abroad.	(*b*) Value of imported stores purchased in India.	(*c*)* Value of Indian stores purchased.
	Rs.	Rs.	Rs.
1910-11	38,045	71,605	2,02,135
1911-12	23,147	49,371	2,23,454
1912-13	39,863	93,337	2,35,388
1913-14	95,174	1,18,762	2,36,310
1914-15	43,436	1,41,581	2,37,071
1915-16	35,947	1,29,482	2,43,114
1916-17	38,078	1,12,166	3,26,151
1917-18	21,183	1,20,149	3,11,906
1918-19	30,199	1,50,574	3,30,584

* Includes total cost of diet, clothing and beddings, country medicines and liveries.

Question 22. (*a*) Invoices of stores supplied from time to time to hospitals received through the Accountant-General, Bengal, and copies kept.

(*b*) *Nil.*

Question 23. Yes.

Question 24. Does not concern this department.

Question 25. Not applicable.

Question 26. Medical stuffs from the medical services.

Question 27. Yes.

Question 28. Bills for local purchases sent by the Superintendents of Hospitals, etc., direct to local audit officers.

Question 29. Yes (Central Department).

Question 30. Yes (Home and Indian).

The Hon'ble Major-General W. H. B. Robinson, called and examined.

Witness explained that under the present system civil and military officers were required to obtain their requirements (drugs, medical appliances) as far as possible from the medical store depôts maintained by the Government of India.

By 'medical control' in his written reply to question 2 he meant that the officer responsible for the purchase of medical stores should be a fully qualified medical man. This would not be essential provided *expert* inspection was provided for medical stores. He would recommend that the inspecting officer should also be a medical man.

At present considerable freedom in purchasing locally was enjoyed by medical officers in charge of the larger hospitals and medical institutions. This liberty should not be wholly removed as it might often be cheaper to purchase from small local shops or manufacturers as required.

For articles in large demand it might be advantageous if a central agency arranged running contracts.

For civil medical institutions he preferred purchase from firms to the present system of supply from medical store depôts as these were maintained primarily for military requirements and the military institutions received the pick of the stock.

It was not usual to advertise for tenders as medical officers knew very well which firms were able to supply articles and drugs to the required standard. With increase in the number of drug manufacturers it might be advisable to invite tenders. He agreed that it would be desirable to investigate a firm's capability before permitting it to tender.

The analysis and testing of drugs could be done in a central laboratory. At present inspection and testing were carried out in the medical store depôts; more elaborate tests were made by the Government Chemical Examiners.

He had recommended the Central Provinces as the best location for a central stock depôt on account of the climate and central position, but he doubted the advantage of a central stock depôt: stocks could be had at larger ports.

The figures in the statement of purchases included articles of diet.

J. J. Meikle, Esq., o.b.e., v.d., Superintendent, Government Printing, India.

Written Statement.

Question 1. I would advocate the formation of a central agency for the purchase of stores required by the Government of India, if run as a separate agency on purely business lines, and having practical and technical, as distinct from theoretical, experts in charge of each department.

My reasons:—

(*a*) Indents would pass through quicker.
(*b*) The purchasing and inspecting would be done by experts.
(*c*) Prices would cheapen owing to purchases being on a larger scale.
(*d*) Supplies would come to hand quicker, thus obviating the need of holding such large stocks by consuming departments.

Question 2. With a properly organised department it would not appear necessary to make special arrangements for any particular department of Government.

Question 3. All stores should in my opinion be purchased by, or with the knowledge or sanction of, the central agency.

Question 4. I do not think any advantages would be gained by local bodies, company-owned railways, etc., making their local purchases through a central stores agency. If they do so, they should certainly contribute towards the maintenance of the agency.

Question 5. Yes—At present all the presses under the local Governments and Administrations, with the exception of those under Bengal, Bombay, Madras and Burma, obtain most of their supplies through my office, and these together with the presses in the provinces mentioned above, can well be served by a central purchasing agency. Each province should have a branch agency and stores with an experienced officer and staff in charge.

Question 6. The Central Controller would be in close touch with his branch controllers, and if favourable, would place orders for the whole of India in one or other of the provinces.

Question 7. Yes—Tenders for local supplies are invited annually in prominent newspapers one month in advance. Samples of the principal items are called for and after examination are selected, and all things being equal, contracts are entered into with the lowest tenderers either for all, or any portion, of the scheduled items. The system has always worked satisfactorily. Copies of the schedules are attached.*

* Not reproduced.

Question 8. It should be possible for the central stores department to arrange for simultaneous tendering in India and in England for important contracts.

Question 9. The policy of inspection should, in my opinion be dictated by the consuming department, and not by the department responsible for the industrial development of the country.

Question 10. Inspection should be carried out always by the central agency responsible for the purchase of stores.

Question 11. Failing an expert on the store purchase staff, the Printing and Stationery Department.

Question 12. Yes—Paper, type, type metal and other specialised printing materials.

Question 13. Should be carried out by the local inspection agencies under the control of the central inspection agency.

Question 14. No modifications of the Stores Rules appear necessary at present so far as press requirements are concerned with the exception of the removal of the financial limit.

Question 15. Under the conditions that simultaneous tenders are called for in India and in England, that the actual cost of the goods offered by the branch firm is as low as that at which the same make can be obtained elsewhere and that in the case of plant and machinery the branch firm is sufficiently equipped to erect the same and make them over in working order.

(*a*) A larger and more varied stock would be held by the branch firm.
(*b*) If sufficient business offered, there would be a possibility of the firm establishing manufacture in India.

Question 16. It depends on the qualifications of the scrutinising officers in the central department.

Question 17. Getting all possible catalogues and price lists from home and Indian firms, obtaining copies of running contracts and complete lists of specifications from the Director-General of Stores at home, maintaining a list of current prices, and getting into personal touch with the larger supply agencies.

Question 18. I am not aware of any.

Question 19. Yes—Central stock depôts should be formed.

(*a*) The stocks now held could be considerably reduced.
(*b*) A large and more varied stock would be imported and held by the firm.

Question 20. At the principal ports—Calcutta, Bombay, Madras, Rangoon and Karachi. They should be maintained for Indian as well as for imported stores.

Question 21. Please see the following statement:—

	(a) Stores received from abroad.	(b) Imported Stores purchased in India.	(c) Indian Stores purchased in India.	Stores obtained from R. I. M. Dockyard.
	Rs.	Rs.	Rs.	Rs.
1910-11 .	1,02,645	10,301	28,221	374
1911-12 .	90,030	9,560	23,912	4,073
1912-13 .	78,455	4,442	41,729	1,217
1913-14 .	73,455	3,389	45,185	3,245
1914-15 .	88,545	17,670	41,207	1,451
1915-16 .	1,01,085	26,391	49,945	1,129
1916-17 .	1,24,800	10,483	42,580	1,284
1917-18 .	47,370	35,412	50,650	971
1918-19 .	63,315	1,84,353	64,475	3,448

In addition to the above during the year 1918-19 indents for paper and binding materials were submitted to the Controller of Printing, Stationery and Stamps, to the value of 31 lakhs of rupees.

Question 22. (*a* & *b*). All stores are obtained under contract, and schedules of rates, as also the names of all the successful and unsuccessful tenderers have been maintained for the past 17 years.

Question 23. I consider it feasible.

Question 24. I cannot say.

Question 25. I should consider it would constitute an interference with the legitimate sphere of private enterprise.

Question 26. The recruitment should be restricted to practical and technically trained men, well versed in the best European and American methods of business. The organisation of the staff must depend on the amount of business to be carried on by the respective departments.

Question 27. Yes.

Question 28. The bills are first checked with the contract schedules by the accounts branch of the press, and then sent to the Accountant-General, Central Revenues, for audit. In the periodical general audit by the Auditor General's staff of the Examiner, Government Press Accounts, the stores ledgers are examined, and with them the bills undergo a further scrutiny.

Question 29. It should do so.

Question 30. I consider it most desirable to arrange interchanges of personnel between the Home and Indian stores departments, or at least to enable the Indian officer to go Home for a period to bring his knowledge up-to-date.

Mr. J. J. MEIKLE, called and examined.

Witness had served an apprenticeship of seven years to William Cooper and Nephews, Berkhamsted, England.

His Indian experience included:—

Manager, Whiteaway's Press, Calcutta;

Superintendent, Printing and Stationery, Bengal and North-Western Railway;

Superintendent, Pioneer Press, Allahabad;

Deputy Superintendent, Presidency Jail Press, Calcutta, February 1902;

Superintendent, Government Printing, India, July 1904 and December 1905 to date.

He purchased articles required for the working and maintenance of the Government presses throughout India with the exception of the chief provincial government presses. His call for tenders was published in Calcutta papers only. Paper was obtained through the Controller of Printing, Stationery and Stamps and ink from the Richardson Printing Ink Company, Howrah.

An indent for the articles required from England was prepared annually and transmitted through the Controller of Printing, Stationery and Stamps, who however, did not make alterations in it. In recent years his indents had been examined by the Indian Munitions Board before transmission to the Director General of Stores, India Office. Only a few items had been deleted by the Munitions Board and for most of these the orders had eventually to be allowed to go forward.

The presses maintained by the local Governments in Bengal, Bombay, Madras and Burma made their own arrangements for indigenous and imported stores.

It was very necessary that officers responsible for the purchase of stores or for the scrutiny of indents should have practical knowledge of the class of articles with which they had to deal. In reply to a question witness said that he had heard of an indent which had been sent to England, from a press that at the time was in charge of a non-technical man, and which was reputed to have caused consternation in the London printing world as it included a demand for sufficient type of a particular description to last a large printing press for about 4,000 years.

At present he maintained a stock of stores for general requirements which he would value at between two and three lakhs of rupees. Every Government press had to maintain some stock. Some reduction in the total stock might be feasible if one stock depôt were established in each province. Even if running contracts were made some stock would have to be held. He favoured the establishment of government stock depôts at the principal ports for both imported and indigenous articles in general use.

He did not think that local bodies, etc., would find it advantageous to buy stores through the government agency. His own impression was that Government generally was expected to pay more for large orders as well as small and that very few government officials were inclined to trouble about obtaining reductions in rates. The quotation of higher prices to government than to private concerns was not due to any difference in quality. He would be surprised to learn that any private company obtaining supplies from another private company stipulated that price should be a fixed amount above the price paid by Government to the same firm for similar articles.

The branch agencies of stores in provinces which he recommended in his written reply to question 5 should be controlled by a central agency and not by provincial Governments.

At present he inspected all local purchases himself. In the event of a central purchasing agency being established his staff would not be able to undertake the inspection work. In his opinion a whole time inspector of printing press stores, which required expert inspection, would find himself fully occupied.

He had not yet come across any Indian with the practical experience and personal qualifications which he would require from a purchaser or inspector of printing press stores.

The war had caused a considerable increase in the quantity of paper manufactured in India, but the quality had deteriorated. As the raw materials available were the best in the world, the inferior quality of the paper could only be ascribed to the use of old and antiquated machinery and indifference on the part of the manufacturers.

Rai A. C. Banerji Bahadur, Nominated by the Bengal National Chamber of Commerce.

Written Statement.

Question 1. A central agency with provincial branches will be able to obtain Government requirements of stores, both imperial and provincial, conveniently and at uniform rates, and will further be able more fully than hitherto to utilise the resources of the country. The scheme of the central agency should be strengthened for the matter of purchase with imperial and provincial boards formed with the representatives of the leading commercial and industrial associations of the different provinces. This course is absolutely necessary on the following amongst other grounds :—

(*a*) It will make the agency posted with all up-to-date information regarding the market conditions of the stores.

(*b*) It will minimise the chance of error or unfairness in making purchases.

(*c*) It will effectively help government requirements being quickly translated into industrial activities and thus stimulate the growth and development of industries in India.

Question 2. Besides the association of a specially qualified expert with the central or provincial agency when making purchases for any special department no other special arrangement need be made.

Question 3. It does not strike me that there is any class of stores which should not be purchased by the central agency.

Question 4. For the time being besides the company-owned railways, other parties mentioned in the question under reply, should make their own purchases. If asked, the central or a provincial agency, as the case might be, might render assistance to such bodies in the matter of their purchases.

Question 5. The local Government should be generally free to make all its local purchases through the provincial agency constituted under the Industries Department with a board of representatives of the leading commercial and industrial associations of the province. But all inter-provincial or foreign purchases should be made through the central agency.

Question 6. With regard to any stores in which a province might have the practical monopoly, the central agency might advantageously utilise the services of the local agency of the province concerned in obtaining such stores for the Government of India.

Question 7. From our experience in the coal trade, we find that the purchases are now being made almost as recommended by a single government expert. No improvement is possible unless the trade is represented in the purchasing board. Under the present arrangement both the Government and the trade suffer.

Question 8. Issue of simultaneous tender for the purchase of European stores is quite practicable and will be necessary ; but then the function of the Director-General of Stores in such cases will be that of an adviser, the actual purchase being made by the central agency.

Questions 9 and 10. The policy of inspection should better be dictated by the department responsible for the industrial development of the country and conducted by an agency dependent on and controlled by the store purchasing agency.

Questions 11 and 12. Cases where special inspection is necessary for special purposes, it should be done by specially qualified experts who might in special cases, be nominated for the purpose by the consuming agency.

Question 13. There need be no multiple establishment, central and provincial, for the purpose of inspection. One agency will be quite enough.

Question 15, (a) and (b).—For the purpose of purchasing European stores the best course seems to be to make such purchases as far as possible in India, provided the rates and quality of the articles are not unfavourable. It is not desirable to grant concessions to the firms here for the purpose of purchasing European stores through them. Such a course will adversely affect their holding stocks and also establishing manufactures in India.

Question 16. All home indents must be scrutinized by the central agency before their transmission to the Director-General of Stores.

Question 17. If the store purchasing agencies, central and provincial, be strengthened with boards of representatives of commerce and industry, they will always remain posted with up-to-date information of the prices of articles obtainable in India and abroad.

Question 18. In the matter of purchasing articles in the production of which certain countries are specially noted and in which there is no proper British competition, the central agency should be allowed directly to make purchases of such articles without reference to the Director-General of Stores.

Question 19, (a) and (b). It is very desirable that the Government of India should have a central stock depôt. Such a course will advantageously minimise the holding of stocks by several departments much in excess of their immediate requirements. The nature of supply in the central stock depôt will determine the nature of holding stocks by private firms. If the Government would make their purchases not with a long interval, it may reasonably be expected that the holding of stocks by private firms will be sufficiently large.

Question 20. The central stock depôt should be situated in Calcutta and should be maintained for Indian as well as European stores.

Rai A. C. Banerji Bahadur, called and examined.

Witness stated that the Bengal National Chamber of Commerce included many merchants who had produce and stores to sell, and a few who had manufactures to sell.

The organisation he recommended was a central agency with the Government of India with branches in the various provinces under the local Governments, but at the same time controlled and directed in some way by the central agency. He could not suggest how the functions of control should be divided between the imperial and local Governments.

His main reason for suggesting the formation of boards of representatives of the leading commercial and industrial associations was to ensure that the government agency would be in close touch with the trade of the country. These boards need not necessarily be given any executive power, but they should be at least advisory and be consulted at regular intervals. The formation of local boards of industries from representatives of the various local associations, who would be able to supply the purchasing agency through a government department with full information regarding local industrial developments, would meet his requirements. Government could, if they desired, obtain the same information at present by addressing Chambers of Commerce and other commercial associations separately, but he thought that a board of representatives would be able to supply the information more quickly and in a more concise form. It would be a part of the business of the imperial board to put forward suggestions regarding the general policy which Government should follow in the purchase of stores.

As long as the central agency kept itself up-to-date with information from the local agencies, it was immaterial by which orders for Government of India were placed, but the advice of the local agencies must be freely sought by the central agency. He did not, however, advocate the appointment of two distinct purchasing agencies, the one under the local Government, and the other under the Government of India.

He could only speak with experience of the system followed by Government when calling for tenders for the supply of coal. In his opinion the present system was not to the ultimate benefit of the country as it induced suicidal competition between colliery agents.

If European articles had to be obtained they might be purchased from firms in India provided they were actually in stock and price and quality were favourable. If, however, the articles had to be imported, Government should arrange the purchase and not employ a firm in India as agents.

As the establishment of government purchasing and inspection agencies was presumably intended to assist the industrial development of the country by private enterprise he did not see how it could be regarded as interference with private enterprise if local bodies, etc., chose to employ the government agencies.

He was not aware that Government had to pay higher prices than private concerns for the same articles. This was not so, at any rate, for coal, regarding which he was only qualified to speak.

At Calcutta, Tuesday, 23rd December 1919.

PRESENT:

F. D. COUCHMAN, Esq., M.I.C.E. (*President*).

G. H. Collier, Esq., O.I.E.
A. W. Dods, Esq.
Lieutenant-Colonel C. C. H. Hogg, C.M.G., R.E.
Rai Bahadur Lala Milki Ram.

And the following Co-opted Member:—

D. B. Meek, Esq., M.A., B.Sc., Director of Industries, Bengal.

J. C. Highet, Esq. (*Secretary*).

Mr. J. M. Bates, Shipyard Manager, Messrs. Burn & Co., Ltd., Howrah, called and examined.

(*Witness was not asked to submit a written statement*).

Witness had been with Messrs. Burn and Company 12 years; five years as Naval Architect and seven years as Shipyard Manager. Previous to this he had been eight years with a shipbuilding firm on the south coast of England engaged on Admiralty work. He was certificated by the Marine Department of the Government of Bengal to act as a marine surveyor in the port of Calcutta. He had had experience in the design of steel, composite and wooden craft, varying from the small motor launch to vessels 225 feet in length, and had prepared designs for vesse's up to 4,000 tons deadweight. His work in India had consisted mainly of vessels for Indian inland water; but latterly his firm had built ocean-going vessels and at present had only under construction, for the British Indian Steam Navigation Company, a vessel of 1,600 tons displacement. These vessels were built from imported raw materials. At present the sectional raw materials were obtained from Tatas which had passed British standard tests. In the near future Tatas would be rolling plates and then India would be practically self-contained in materials both for the hulls and for machinery and boilers.

Vessels for inland waters were invariably of light draft and as such they were specially designed. His firm based the scantlings, as far as possible, on one of the classification societies—such as Lloyds—and he thought that this was the procedure followed by all firms. At present his firm could build ships up to 3,000 to 4,000 tons deadweight and providing there was a demand in India for such craft, he thought all shipbuilding firms would set themselves out to tackle vessels of any size that might come along. Until the Indian Rivercraft Board came into being, the ability of private firms in India to supply craft for Mesopotamia had been ignored, but upon the formation of the above Board all the private yards were utilized for the construction of all kinds of rivercraft and he was of the opinion that the work had been turned out expeditiously and sound.

Enquiries were frequently received from government departments, but he found that, after going to considerable trouble in preparing designs, specifications and even taking the government officials for trial trips on launches which his firm had built, the work was given to the Royal Indian Marine Dockyard at Kidderpore without his firm even being given a chance to quote or receiving any recompense for their trouble. The government departments actually requiring the vessel would be keen enough to place the order but had to refer the matter to the Marine Department who appeared to have the final say as to where the boat should be built, and as a result most of the building was done in the Royal Indian Marine Dockyard. He believed the Dockyard method of costing was to add the cost of all materials to the cost of all labour and then ten to fifteen per cent. on the total to cover on-charges. In his opinion this was not a fair method of costing and no private firm could expect to exist on such a system. In reply to a question witness stated that the Royal Indian Marine Dockyard had once tendered for a landing stage for the Botanical Gardens, Calcutta, in competition with private firms and had been given the work.

He was under the impression that, when Government required any large craft constructed, outline particulars were forwarded to the India Office who instructed their Naval Architects to prepare designs and specifications, and then called for tenders from home firms. Indian firms were never asked to quote. The Naval Architect to the India Office when designing a vessel would no doubt base his scantlings on Lloyds or British Corporation Rules bearing in mind the special work for which the vessel was intended. All that there would be special in the design would be the internal arrangements. Naval Architects in India would be just as conversant with the latest practice in the science of marine engineering, which could be incorporated in such vessels, as the Naval Architects at Home. His firm were the Indian representatives for the Parsons turbines and, just prior to the outbreak of war, designs were prepared for a cargo steamer fitted with Parsons turbines but owing to the war the construction was not proceeded with. A resident Naval Architect in India on behalf of Government could prepare all designs, specifications, quantities, etc., necessary to allow tenders being called for from firms in India.

He understood that Tatas were already in correspondence with Lloyds regarding the testing of materials and, no doubt, when they commenced to roll plates, arrangements would be made to produce sectional and

plate materials which would pass Lloyds tests and so be up to the standard of home materials.

The Marine Department had officers who had passed a course under the Board of Trade in England and in normal times there were three such officers in Calcutta, *viz.*, the Chief Engineer and Shipwright Surveyor to the Government of Bengal, and a Second and a Third Surveyor. These officers were versed in naval architecture and marine engineering and would be the department under which government vessels could be constructed. There were also in Calcutta Lloyds and British Corporation surveyors, all experts in ship structures.

He considered that the standard of work turned out from Indian yards compared very favourably with the home production. In light plating from $\frac{1}{4}$" thick downwards the Indian workmanship was not quite so good, but from $\frac{5}{16}$" thick and up he considered the work turned out in India was in every way as good as that done in Great Britain.

Lieutenant-Colonel C. E. G. Schrottky, R.A., Inspector of Gun Carriages and Vehicles, Jubbulpore.

Written Statement.

Question 2. A liaison officer for each of the great purchasing departments of the Army, such as the Ordnance Department, the Military Works Department and the Supply and Transport, would, I think, be necessary. These officers should, of course, have a general expert knowledge of the requirements of the service in general and their department in particular. They should be invaluable in affording the Controller-General ready assistance where for instance, stores of a certain standard cannot be obtained, as to how far specification may be relaxed, or by giving definite reasons why an apparently unnecessarily high standard must be adhered to.

They know whom to consult and are obviously in a better position to obtain this information expeditiously and accurately from the experts of their own departments than officers of an independent department, who would have to go through the usual red-tape routine of painfully extracting information through various officers.

Question 9. As far as Army departments go, it is unlikely they will allow the policy of inspection to be dictated by any one excepting themselves, as consumers.

"Policy" is rather a wide term, and includes the standard of any particular store. It is quite reasonable to assume that a department, which is responsible for industrial development, if allowed to carry out its own policy of inspection, will set its own standard and will at once come into conflict with the consumer, whose standard may be very different. This is a certainty where the Ordnance Department is concerned. Our standards for stores are considerably higher than similar standards for commercial purposes, and the necessity for the severity of our specifications is not yet fully grasped by contracting firms. This is, of course, due a great deal to natural ignorance on their part of the amount of rough usage and exposure Army stores in the field have to undergo, apart from other considerations, one of the most important of which is interchangeability of components.

The above refers of course only to what might be termed for sake of clearness special man-killing munitions of war and their accessories, and might not affect mechanical and electrical appliances, hardware, metals, textiles, oils, paint, cement and miscellaneous articles, for which it is highly probable that purchasing departments would be only too glad to avail themselves of the advice of the industrial development department, both in setting a standard and inspection.

This opens out another sphere of usefulness for the liaison officers—*vide* query 2.

Question 10. Yes. Manufacture and inspection must go hand in hand, working towards the same common goal. Anything that tends to separate the two functions into water-tight compartments is much to be deprecated.

It leads to ignorance of manufacturing methods and the consequent difficulties manufacturers have to contend with on the part of the inspector, does not promote the sympathy and trust that should exist between both, and tends to destructive rather than constructive criticism by the inspector.

This last point is one of the pitfalls that exist when an inspector has little or no knowledge of manufacture. It is easy enough to pull a thing to bits, but it is one of the principal duties of a good inspector, when he has done so, to help the manufacturer put it together again, and this point will have to be watched in selecting a staff of inspectors.

Question 11. It may be taken that the Ordnance Department will always require a special inspection organisation of its own.

Question 12. I presume by this question a class of technical experts are meant, who are not commonly met with in business or commercial circles. The following articles would have to be dealt with by such :—

(*a*) all man-killing munitions of war and their accessories;
(*b*) steel, in the shape of ingots, bars, etc., and other metal for above;
(*c*) wood.

The inclusion of wood is perhaps not as apparent as the other two. The fact, however, is that there is a great deal of ignorance prevailing as regards this article. Sâl wood from Nepal is a magnificent wood, and sâl from other parts of India is not to be compared with it. To most timber buyers, however, the two are identical. So it is with specifications for wood, which are very severe. We all know it is impossible to get timber in any quantities "free from all shakes, knots, cracks, etc.," and yet this is what specifications require.

The specialised inspection consists in knowing the properties of each wood, when told where grown, and in being able to buy timber with the certainty that though not free from the above defects, it is going to be utilised by large wood consumers like the Gun Carriage Factory, and not rejected by them, as has been the case frequently during the war.

Question 13. Even assuming that local purchase agencies will not be established, I consider there should be a local inspection agency in every large manufacturing centre.

These local agencies would carry out the executive part of the inspection, and be administered by a central inspection agency.

To take the local agencies first. Suppose none such exist. This means that purchased stores have to be sent to the central agency for inspection. Result—loss of time, loss of freight to manufacturers in case of rejections, loss of money to Government, as a central inspection would necessitate enormous buildings for storage of articles under inspection, whereas by a system of local agencies, manufacturers are only too glad to place a building at the disposal of the local inspector. It further means greatly increased correspondence. The inspectors are out of touch with the manufacturers. The manufacturers have no one to turn to in their hour of need, and get nervous. Mistakes are committed, which would have been avoided through the timely intervention of a local inspector, and so forth.

A central inspection agency is of course imperative. I have definite views as to the formation of such, and the duties of officers comprising it, but as perhaps the Board is not asking for suggestions I will say no more on this point.

Without this central inspection agency you will find it impossible to set the same standard throughout India,

and one of its most important functions, after setting standards, would be to see, by frequent tours, that subordinate officers are maintaining it.

Another function would be to collate reports, etc., from outlying agencies, and so keep the central purchasing agency and the Controller-General fully posted as to the execution of orders.

Question 23. Yes. Through the above medium of central inspection agency, which would include a small department for "intelligence."

The providing of the details required are within the scope of any intelligent and energetic local inspectors, and this should form part of their duties.

Lieutenant-Colonel C. E. G. SCHROTTKY called and examined.

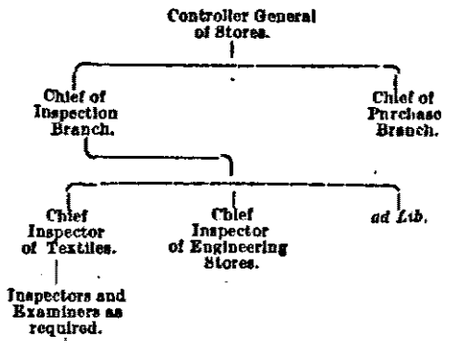
Witness had been for many years Inspector of Small Arm and Gun Ammunition at Dum-Dum and Cossipore; he had also considerable experience of inspection of shells made in railway workshops and private firms during the war.

He was of the opinion that, in view of the fact the food and fodder were outside the scope of the proposed Store Department and that material required by the Military Works was similar to that required by the Public Works, the proposed department could purchase stores for all departments including the Army and that in the circumstances one liaison officer—preferably of the Ordnance Department—would be sufficient. Witness pointed out the great benefits to be derived from the appointment of a military liaison officer who would be in touch with and would know to whom to apply for information or opinion on requirements peculiar to the Army. He laid stress on the point that a very high standard was required in many articles required for the Army owing to the very rough usage they were liable to be subjected to on active service.

Witness gave a general description of inspection work as carried out in ordnance factories. He pointed out that no one less than a gazetted officer was authorised to reject work finally. He laid great stress on the necessity for inspectors having a practical working knowledge of the process of manufacture. It was a comparatively easy matter to reject a manufactured article by comparison with a sample, or by reference to the terms of a specification, but the essence of inspection was sympathetic treatment and help to the manufacturer. It was therefore helpful to the inspector to have a severe specification to work to. He considered it essential that inspection should be carried out by a central department in order to secure a uniform standard.

Inspection should entirely be separate from purchase, although both should be under the same co-ordinating head. The ideal system was one in which the Chief of the Inspection Branch and his chief inspectors for the various trades—textiles, leather, etc.—were all situated at one headquarters. The Chief of the Inspection Branch should be an administrative officer and should not ordinarily interfere in technical points with his chief inspectors or issue orders on such points over their heads. These latter should be in complete executive charge of all the inspection work in their respective branches. They should deal with their subject in whatever part of India contracts were placed and should post their staff as required.

The organisation he recommended would be as below:—



It was not necessary that manufacturers should know how to inspect, but it was essential that inspectors should be fully acquainted with the method of manufacture. The inspection staff should all be under the one central authority and independent of local Governments. The inspecting staff should never be asked to ascertain prices from firms. Their intelligence work should be restricted to reporting on the capabilities of firms.

In reply to a question as to whether in view of the assistance rendered to Government by railways and private firms during the war in the manufacture of shells it would be advantageous to Government if small running contracts for shells were given to qualified firms to enable them to keep in touch with the latest developments and admit of quick expansion in case of war, witness agreed that it would. He was, however, not in favour of financial subsidies in any form to firms to maintain a reserve of machinery to meet the emergencies of war.

At Calcutta, Friday, 2nd January 1920.

PRESENT:

Sir FRANCIS COUCHMAN, K.B.E. M.I.C.E. (*President.*)

G. H. COLLIER, Esq., C.I.E.
A. W. DODS, Esq.
H. N. HESELTINE, Esq., C.I.E.
Brigadier-General H. A. K. JENNINGS, C.I.E
LALJI NARANJI, Esq.
Rai Bahadur LALA MULKI RAM.

And the following Co-opted Member:—

D. B. MEEK, Esq., M.A., B.Sc., Director of Industries, Bengal.

J. C. HIGHET, Esq. (*Secretary*)

J. N. GHOSH, Esq., nominated by the Bengal National Chamber of Commerce.

Written Statement.

I am much in favour of the establishment of a central agency for the purpose of purchasing stores for Government, with branches in different provinces. The purchasing agencies, both central and provincial, should be boards formed with the representatives of the commercial and industrial associations presided over by a Controller of Stores in the case of the central agency and by

the Director of Industries in the case of the provincial branches. This will effect economy in the purchase and utmost utilisation of the stores that might be in hand.

The formation of the boards on the lines suggested above will go to eliminate changes of error arising from want of fuller information of the market and also from individual aberration, and will specially go to stimulate the growth of industries of this country.

All purchases should be made by the Board, associated with one or two experts, while making purchase for any special department or any special kind of stores. Purchases for company-owned railways might be made by the government boards, but public bodies and the Colonies, etc., should be left free to make their own purchases—the boards might render assistance by supplying information.

A local Government should be left free to make its purchases through its own provincial agency, when such purchases are locally made, in other cases its purchases should be made through the central board.

The policy of inspection should be determined by the department responsible for the industrial development of the country. But the inspecting agency should be under the control of the purchasing board. There need be no different inspecting agency, one central and the other provincial. One agency would do quite well enough.

Purchases of foreign articles should be made so far as practicable in India, provided the quality is suitable and the rates are not abnormally high. It would be inexpedient to make such purchases through private firms in India, as such a course will go to minimise the chance of industries for such articles being started in India and in restricting the holding of stocks in India of such articles by private firms. All indents as might be required to be sent home must, in the first instance, be thoroughly scrutinised by the central agency. In the case where a country is noted for the production of any special article, the central Board should be free to make purchases of such article direct without any reference to the Director-General of Stores.

I am in favour of the establishment of a central stock depôt. It will help to make the utmost use of the Government stores and minimise the necessity of various departments holding stocks much in excess of their present requirements. If the central agency would make purchases at reasonable intervals, private firms here will naturally hold stock in sufficient quantity. The central stock depôt should be established in Calcutta and should be for Indian as well as European stores.

Mr. J. N. GHOSH, called and examined.

Witness owned collieries in Jerria and an Iron Foundry in Howrah.

The boards which he recommended would consist partly of government officials and partly of representatives nominated by commercial and industrial associations. The latter should be in the majority because of their superior commercial knowledge. The non-official members would not be paid. The Board would consider and decide all indents and tenders. A member would be excluded from the discussion and decision of the board while any items in an indent or tender in which he was personally interested were under consideration. The description in the indent should be sufficiently clear to enable the Board to decide what would best suit the indentor.

He was unable to define exactly the relation between the provincial directors of industries and the central agency. The provincial agencies should be branches of the central agency. The Director of Industries in each province would be the local administrative officer of the central purchasing agency. The Director of Industries should also receive indents direct from his own province. Each province should give preference to its own manufacturers.

By policy of inspection he understood the degree of severity of inspection. Too high a standard should not be expected from Indian manufacturers at the beginning.

All inspectors should belong to a central agency and be posted to, and transferred between provinces as required.

Purchase of imported articles in India should be restricted to articles which were actually in stock, otherwise firms would be encouraged to maintain stocks of imported articles to meet Government requirements and there would be less incentive to start new lines of manufacture in India.

He suggested direct purchase from foreign countries noted for the production of special articles as he thought this would be quicker than purchase through the Director-General of Stores in London but he was not able to explain how India would be in a better position than London to secure the information necessary preliminary to concluding purchase.

G. WELLS, Esq., Controller of Stores, East Indian Railway.

Written Statement.

In inviting individual opinions and replies to the various questions contained in the questionnaire, I presume it is not the wish of the Committee that the witness shall consider the question of the establishment of a central agency from a general point of view, that is, whether it is to the interest of the several government departments of India to have such an organisation, but rather whether, in his opinion, the establishment of such an agency will be beneficial as regards himself, his business, his department or his firm, as the case might be. On this assumption, I have in many cases based my remarks on how I consider the proposals would affect the East Indian Railway.

2. That a central agency such as is proposed will, if properly organised, be of considerable service to certain government departments I do not for one moment doubt, but I am unable to say to what extent, if any, it will be beneficial to the East Indian Railway until I know more about the proposed scheme.

3. I am not clear as to what are the intentions regarding imported stores. The agency will either import many descriptions of stores direct from home and store same against the requirements of government departments, or they will make purchases from local merchants, European and Indian. They may do both, *i.e.*, certain plant and material which are not usually considered as "stock" may be imported, whilst all articles which are in general and common demand and which can be termed "stock articles" will be purchased locally from merchants.

4. If the agency imports ordinary "stock articles" from home, it can only be in competition with, and to the detriment of, Calcutta merchants. By purchasing from home, not only can better terms be obtained, but merchants or middlemen's profits will be saved and departments obtaining their requirements through the agency should, so far as local purchases are concerned, materially benefit, *i.e.*, they should obtain their supplies on better terms than if they dealt direct with the merchants, otherwise nothing will be gained by the establishment of the agency.

5. But is it the intention of Government that the agency shall, either directly or indirectly, compete with merchants? I understand such is not the intention. If

purchasing departments are going to benefit assuming that supplies will be obtained from merchants, it follows that the agency must make terms with them, for instance, by obtaining specially favourable rates or discounts. The rates must be so favourable that by adding the agency charges (*i.e.*, for purchasing, storing and delivering from the agency depôt to the railway stores depôt) to the purchase price the cost will still be less than if a purchase be made direct from the merchants. Will the agency be able to make such terms and how will they enforce them? An inspection of invoices is no criterion, as merchants will never divulge their arrangements with the Home manufacturers. Better terms can only be obtained if the agency makes very much heavier purchases in India than government departments do at present.

6. With regard to articles of "country origin," the central agency should be of real service in fostering and extending industries and encouraging enterprise. So far as the East Indian Railway is concerned, I think I may safely say that the home Board of Directors are in no way averse to making use of anything produced locally so long as it is advantageous to purchase such articles. At present the Railway uses Indian fire-bricks and fire-clay, Indian graphite, padlocks and various locks made in Calcutta and Aligarh, large quantities of paint made from metallic oxides obtainable in the country, glassware of various sorts made at Allahabad and Jubbulpore, earthenware articles made in Calcutta, brushes of sorts, pig iron steel rails, many steel sections, buckets, copper lead, and so on all of which used to be imported on home indent but which so far as possible have been deleted, and this will be extended as India produces other articles or materials which can be made use of. The policy of the Railway for a long time past has been to give anything and everything brought to its notice a fair trial, and I know of no reason why this policy should be discontinued. On the central agency being established, the officers concerned would no doubt keep the Railway Company fully informed of developments as they occur, and I am sure that the Company will, with the assistance of the agency, join in fostering and encouraging Indian manufactures, as they have already done to some considerable extent.

I should like it to be clearly understood that the foregoing replies are my own personal views, and are not necessarily the views of the home Board of Directors or of the Agent or Heads of Departments of the East Indian Railway. The extremely short time available for the preparation of the replies gave no opportunity for discussing the numerous points with responsible officers of the Company. The Company is therefore not committed in any way by replies given to the questions contained in the questionnaire.

Question 1. I consider it likely that for certain government departments the establishment of a central and local agencies will prove beneficial, but I doubt if any great benefit, with a few exceptions, would be enjoyed by the East Indian Railway by such agencies. The Committee will probably receive representations from government departments, hence I will confine my remarks as to what extent the agency, if established, will prove useful to the Railway.

The central agency will, as at present proposed, be established in Calcutta. In view of the fact that the purchasing officer of the Railway is also in Calcutta, and in telephonic communication with every firm of standing it follows, I think, that nothing is to be gained, so far as time is concerned, by purchases being made through the central agency. As regards prices, the Railway avails itself of the same competition as would be available to the central agency, and unless the central agency make some special arrangements with firms, as is suggested in paragraph 5 of above, there is no reason to expect that firms would quote the Railway unfavourable rates as compared with those quoted to the agency. So far as the East Indian Railway is concerned, I am unable, without further information, to advocate the establishment of a central agency. The East Indian Railway is favourably placed as compared with some government departments. Its Store Department is in Calcutta with an efficient staff for the purchase and inspection of stores, it has experienced officers whose services are utilized when the inspection of materials requires expert and technical knowledge, it has testing machines and a permanent Metallurgist and Chemist with a well-equipped laboratory, at its locomotive works at Jamalpur, hence the services of the various Deputy Controllers, and the Inspecting Officers proposed by Mr. A. C. Coubrough and Mr. D. L. McPherson in their notes, would not be required except in the special cases mentioned in my reply to question 2 of the questionnaire.

If, however, the agency be established, the Railway would like to have the privilege of its assistance when it will be in its interests to do so; for instance, the purchasing capacity of the agency will probably be such that in some industries they will be able to command the full outturn of the several firms throughout India manufacturing a particular commodity and until developments occur there will be nothing left for any department outside the scheme. I refer to such manufactures as Portland cement, pig iron, steel rails, and any other items the demand for which far exceeds the supply produced in India. In such cases the East Indian Railway would like to participate and could undertake to make all its purchases through the agency, it being understood, of course, that the agency would supply those materials at less rate than the cost of imported materials.

Question 2. If the central agency be established, the East Indian Railway could, *vide* preceding answer, purchase through the agency such articles as Portland cement, pig iron (a running contract with the Bengal Iron and Steel Company for their No. 3 and No. 3-F., already exists, but other brands are also purchased), steel rails, steel sections and perhaps cast-iron chairs, cast-iron plates and jaws for special sleepers used on this Railway, cast-iron pipes and a few more items. This is probably the extent to which the Railway could avail itself of the assistance of the agency. Of the articles specifically mentioned, it would be essential that the agency's inspecting officer be responsible for the inspection, testing, or analysis of the articles before they leave the manufacturer's premises. Pig iron is the only exception, as it would be subject to the analysis of the Railway Company's Metallurgist and Chemist and if found not in accordance with requirements would be rejected. Special conditions would have to be made when purchasing pig iron for the Company stipulating the contractor's responsibility regarding rejections.

Question 3. I have already enumerated the articles which the East Indian Railway would probably obtain through the agency; all the remaining requirements would be obtained in accordance with the present procedure, *viz.*, English purchases by indent on the home Board, and all Indian purchases, except those specially mentioned in the preceding answer, through the Railway's Stores Department.

Question 4. I think it would be distinctly advantageous for many local and *quasi*-public bodies, especially those in outlying districts, to make their purchases through a central stores agency. The same remark applies to British Colonies and Protectorates which buy stores in India. To my mind the central agency in India should, to a large extent, be in a similar position to Colonies and Protectorates as are the Crown Agents for the Colonies in London. The Crown Agents for the Colonies receive requisitions from various colonies and protectorates and arrange for their compliance. I have already replied as to what extent the East Indian Railway can participate in the scheme.

Any and every colony, railway, public body, etc., etc., making purchases through the agency should certainly contribute towards the maintenance of the organisation, and I would suggest that the simplest method of securing the support is to make a percentage charge on orders placed with them. Percentage charge—otherwise commission—should be tabulated; it should not be a constant but should vary according to the amount of work involved—for instance, it would hardly be fair to

charge, say, two per cent. on the purchase of 1,000 tons of pig iron as the work involved is very small, but it might be a fair charge to make when purchasing a lot of small miscellaneous items. In any work requiring the services of an expert and technical inspector, a separate percentage charge should be made for inspection—for instance, if ordering 10,000 tons of rails one and a half per cent. might be fixed as purchasing commission and one and a half per cent. inspection charge. In the event of the agency assuming the role of the Crown Agents for the Colonies, there may be cases where consulting engineers' fees will have to be added—they would be secured by a further percentage charge. Whatever percentage charges may be decided upon, they should be sufficient to make the agency self-supporting, and leave a balance for reserve to meet expenditure which would be incurred in excess of receipts during slack periods.

Questions 5 and 6. I am not in a position to reply to either of these questions.

Question 7. I have no knowledge of the existing system by which Government calls for tenders for the supply of stores. I have had considerable experience in London, however, with the late Sir Alexander Rendel, Consulting Engineer to the India Office and various Indian Railways, and also with the Crown Agents for the Colonies, prior to joining the East Indian Railway. If the Committee require any information regarding these, I shall be happy to reply to any questions they may ask.

Question 8. I do not see how the establishment of a central stores department with the staff as proposed will assist in the introduction of simultaneous tendering in India and England for important contracts on behalf of Government.

As "important" contracts are referred to the specification, conditions of contract and drawings connected therewith would, in most cases, be prepared by the Consulting Engineers engaged by the India Office, who would, in due course, furnish their recommendations on the tenders received. To enable them to make their recommendations it would be essential that they have all tenders, both home and Indian, before them, and to obtain the latter must necessarily occupy several months.

Simultaneous tenders are quite possible, and without considerable loss of time, and it could apply to many contracts which might be described as "important," if the specification, conditions of contract, and drawings were prepared in India, but so far as I can see, the proposed constitution of the central agency does not include any officer or officers with the necessary qualifications, and the engagement of consulting engineers would therefore be essential. If Consulting Engineers were engaged in India, particulars of contracts could be handed to Indian firms at the same time as they were posted home for the invitation of home tenders and the same date for the return of tenders could be fixed in both countries. The Home Consulting Engineers could cable to the consulting engineers in India, giving particulars of the most favourable tender received, and that could be compared with the local tenders. So far as I can see, the only way to obtain simultaneous tenders is the engagement of consulting engineers in India, but to the best of my knowledge there are very few consulting engineers of standing in India.

Question 9. The policy of inspection should be dictated by the consuming department, and not by the department responsible for the development of the country.

It should, and no doubt will be, the policy of the latter department to keep consuming departments fully informed regarding developments, and the consuming departments will, wherever possible, assist in making use of developments, but the responsible officers of consuming departments will undoubtedly object to having forced upon them articles of which they do not approve, and this can only be expected in view of the fact that the consuming officer is held personally responsible for the efficiency of his department.

Question 10. Yes, but the inspection department should be actually a part of, and not independent of the central agency, I have already indicated (*vide* paragraph 2 above) to what extent inspection will be necessary so far as purchases by the East Indian Railway are concerned.

Question 11. No; not so far as the East Indian Railway is concerned.

Question 12. Inspectors of considerable experience and suitable qualifications are essential for the inspection of materials already mentioned as likely to be purchased by the East Indian Railway.

Question 13. I would suggest that the case would be met by the appointment of resident inspectors, *i.e.*, inspectors, would be resident in centres of industry. These inspectors would be under the control and supervision of the chief inspector, who would be permanently stationed in the offices of the central agency.

It is not absolutely essential that an inspector shall possess expert knowledge of everything he inspects. For instance, an inspector with expert knowledge of steel work can inspect paint, of which he might know little. In the case of the latter he merely sees that the colour is good and uniform before taking samples from the bulk and sending same to the chief inspector, who in turn sends them to be analysed. If the result is satisfactory the inspector is instructed by the chief inspector to accept the supply.

An inspector need not necessarily be a member of the staff of the central agency. In places where there would not be sufficient work to fully employ a full-time inspector, a man holding the necessary qualifications might be found to undertake inspection work on a percentage basis.

Question 14. The East Indian Railway rules are not identical with the government Stores Rules of 1913.

The Board of the East Indian Railway would no doubt willingly modify standing rules if they were satisfied that the Company would be equally well served by making certain purchases in India instead of in England. The extent to which the East Indian Railway would participate in the scheme depends entirely on what may be decided upon as the policy of the central agency.

Question 15. Purchases of European stores in India should not be confined to the Indian branches of British manufacturing firms. Very few British firms have Indian branches, whilst many have agents. For instance, Messrs. Heatly & Gresham are agents for a number of British firms, none of which have Indian branches. Other British manufacturing firms have no specific agents, but their goods are imported into India and sold by any firm wanting that line of business.

The only condition under present arrangements upon which purchases in India should be sanctioned is urgency—and provided, of course, that the material to be purchased is up to British standard of quality, such as the requirements of British standard specifications, Admiralty or Board of Trade tests, and so on. Bazar quality or measure should be strictly barred.

It is not quite clear what is meant by "stores." If "stores" in everyday demand and of which there is continuous and general consumption is meant, I doubt if any British firms manufacturing such articles have Indian branches, except a few electrical firms whose main object is not the storage and disposal of petty electrical items such as switches, plugs, coils of wire, lamps and the like.

If Government intimated that they did not intend in future to import any consumable stores and that they would rely on merchants and importers meeting all requirements, I consider much better terms would be obtained than at present, although I would never expect to get things from merchants as cheaply as under the present procedure. Under the present practice departments send Home heavy indents; when their requirements have been underestimated and their stocks exhausted, they turn to the merchants: in other words, they make a convenience of the merchants and they can hardly expect to get good prices. If home indents for consumable stores were dispensed with, merchants would import bigger quantities; they would get better terms from the manufacturers; they would have a quicker turnover and should be able to sell at a much lower profit than at present. It would not be necessary to prepare

huge indents for submission home, twelve months' stock would be avoided, and the interest on stores balances would be reduced. If merchants could be made to see the matter in the proper light, they should be prepared to supply stores at a very low margin of profit, and the stocks held by railways and departments could be reduced so considerably that a very appreciable saving on interest on stores balances could be effected—so much so that the difference in price between the directly imported article and the same article purchased locally, would be, to a large extent, counterbalanced by the saving in the interest at present paid.

I do not think any alteration in procedure is likely to induce any firm to establish manufacture in India : the alteration in procedure does not mean that larger quantities will be imported—they come to India now—it simply means that they come through another channel.

Question 16. I do not approve of the scrutiny by a central department in India of all or any home indents before their transmission to the home Board of the East Indian Railway (the Director-General of Stores does not deal with the Company's indents).

The preparation of the usual annual indents on Home involves a great deal of time and trouble—during their preparation every individual item is seen and considered by the officer responsible for the submission of the indent in its final form. If any article can be equally well purchased in India as in England it is deleted from the indent. It would be one of the duties of the central agency to keep the Railway fully advised of developments, so that as many items as possible would be deleted. To submit indents to a central department in India would only cause loss of time and perhaps a deal of correspondence. The department would possibly want to delete items which the railway officer would object to, and so on. Whatever organization is established and regardless of the qualifications of its various officers, it must be accepted that the railway officers have a more thorough knowledge of their requirements and what is most suitable, than any independent organisation can possess.

Question 17. I do not advocate the establishment of a scrutinizing department—such a department is quite unnecessary so far as regards the East Indian Railway.

Question 18. I do not know what stores "obtainable from abroad" are dealt with by the Director-General of Stores.

The only stores obtainable from abroad which occur to me and of which this Railway consumes considerable quantities are block tin, copper ingots, lead, zinc, mineral oil, kerosene oil, methylated spirits, turpentine. If these are the stores to which the question refers, they should not be obtained through the Director-General of Stores, as they are all obtainable in Calcutta through their respective agents or merchants.

Question 19. I would advocate the formation of stock depôts by the Government of India ; but if it be the intention that the central agency make all their purchases in India, I do not think it necessary to establish such central or important stock depôts as are suggested by Mr. Coubrough. Stock depôts in the mofussil which would meet the requirements of departments inconveniently placed, would in all probability prove to be a boon.

Mr. Coubrough apparently intends that large quantities of stores shall be imported direct by the central agency, and he adds : "Imported articles would naturally be stocked at the main ports—Calcutta, Bombay, Madras or Rangoon." As I have already remarked, this can only be done to the detriment of merchants, and which, I understand, is not the intention. If it should be decided that stores be imported as at present, except that they will be purchased by the central agency, then very extensive stores maintaining large stocks will be necessary at the several ports. I fear that merchants will have serious grounds for complaint as, under prevailing conditions they transact a great deal of business with departments but with huge government stocks close at hand, their transactions are likely to be very seriously reduced.

If stores are not imported by the central agency, but merchants and agents relied upon to meet demands, nothing will be gained by the establishment of stores depôts at the several ports. Their erection, upkeep and cost of establishment, will run into many lakhs of rupees, the value of their stocks will be enormous and interest on same will be very heavy.

Question 20. See previous reply.

Stock depôts in the mofussil should maintain stocks of both European and Indian origin. Three months' consumption of any item should suffice as a maximum, as the stock of any article could be recouped very quickly from merchants' stocks or from the central agency stocks at the several ports, as the case may be.

Question 21.—

Year.	(a) Value of stores purchased through the Board of Directors, East Indian Railway, London.	(b) Value of imported stores purchased in India.	(c) Value of stores of Indian origin purchased in India.
	R	R	R
1908	33,84,699	47,30,821	1,74,81,612
1909	33,47,348	35,65,794	1,38,17,630
1910	29,88,394	43,00,710	50,49,255
1911	38,03,123	57,43,565	70,53,799
1912	37,41,370	52,57,211	1,13,43,569
1913-14	28,89,940	66,42,109	2,14,04,987
1914-15	23,66,037	87,41,749	3,32,24,081
1915-16	32,05,081	61,32,813	80,54,060
1916-17	41,59,679	69,09,432	35,74,348
1917-18	41,76,953	76,83,093	21,32,775
1918-19	45,91,427	90,23,490	30,18,628

Question 22. The Audit Department of the East Indian Railway maintains priced ledgers—all debits are raised and credits afforded according to those ledgers. The Stores Departments maintain registers giving prices of all stores and material imported through the Home Board, and similar registers are maintained wherein particulars of every Indian purchase made is entered. The registers are strictly kept and are constantly being referred to. A number of clerks are solely engaged on maintaining them and furnishing information regarding prices.

We have a list of contractors. When a firm applies to be put on our list, enquiries are made as to their standing. Their premises, godowns and such like, are inspected and, if considered necessary, they are asked to produce invoices to show that they are direct importers. If the enquiry proves to be satisfactory, their name is placed on the list of contractors.

If a firm fails in a contract or if, for any other reason, they are not considered satisfactory, their name is removed from the list. We do not keep a record of the successes of firms ; we kept a record of their failures.

Question 23. The suggestion is not only feasible but would in many cases prove useful to purchasing officers.

I do not think that to be informed of prices is essential. They could be ascertained by purchasing officers sending the firm tenders upon which to quote. What purchasing officers frequently desire to know is the name of reliable firms to carry out specific work, the equipment and capacity of such firms, and what is the quality of material and workmanship of their manufactures.

Too many firms in India will submit quotations and if they secure an order, they scour the bazar to enable them to comply with the order. Purchasing officers prefer to deal with actual makers, but it is often difficult to find out who they are.

Question 24. Nil.

Question 25. Whether the purchase and inspection of stores for company-owned railways by a central government agency would constitute any interference with the legitimate sphere of private enterprise depends entirely on the procedure adopted by the agency. If the agency decides to import direct from home and maintain huge stocks at the several main ports, I consider that such would be direct interference with private enterprise. I have already made mention of this in replying to preceding questions.

Question 26. In my opinion it is of the first importance that the responsible officers of the central agency shall have had both actual workshop experience and considerable business training. An officer with only theoretical or office or even college training cannot possibly be an efficient officer, as so many questions of a practical nature arise or questions which before they can be settled require some practical training on the part of the officer dealing with them.

Question 27. Please see my reply to question 4.

Question 28. No system is in force for auditing purchases such as I believe exists on state railways. The system in force on the East Indian Railway for the payment of bills is as follows:—

A store order is issued against every order placed.

Upon delivery of the goods the receiving officer grants the suppliers a receipt for the goods actually received, and he sends a copy of that receipt to the Audit Department of the Railway.

The bill is in due course presented to the Stores Department, duly supported by the store order and the original receipt. It is checked by the Bill Branch of the Stores Department and then forwarded by the Audit Department. There it is again checked and the original receipt is compared with the audit copy of the receipt, and if in order the bill is passed on to the Treasurer for payment. Every precaution is taken to make sure that no payments are made except and until the goods are actually in the possession of the Company.

Question 29. I am not aware of the prevailing conditions and hence cannot say to what extent, if any, the establishment of central or local stores would improve auditing facilities.

Question 30. I do not see that any material advantage will be gained by any interchange of staff between home and Indian stores departments or between the Indian stores department and any of the local purchasing departments.

Mr. G. WELLS, called and examined.

After passing through a three years' course at a technical college, witness was apprenticed to the Great Eastern Railway locomotive works at Stratford, London, serving four years in the several workshops—he was then transferred for twelve months to Harwich and was engaged on marine engine repairs and millwrights work. After being a few months in the drawing office at Stratford he joined the staff of Messrs. Rendel and Robertson, Consulting Engineers of Westminster, where he remained for three and a half years, leaving there to take up an appointment as Assistant Engineer in the Works Department of the Crown Agents for the Colonies where he remained until August 1906, when he joined the East Indian Railway, Calcutta, as Deputy Controller of Stores. Since then had held charge of the Stores Department for periods aggregating three and a half years.

All stores purchases were made by him except very petty items which he delegated to his deputy to purchase. All articles purchased in India had to be delivered, inspected and accepted at the main Stores Depôt at Howrah, except certain articles made up country and required at out-stations, such as the firebricks for Jamalpur, which were normally purchased subject to inspection and acceptance on delivery at the principal consuming stations. The East Indian Railway had its own laboratory attached to the locomotive shops at Jamalpur in which metals and oils were tested. The 'brand' on an article was frequently accepted as sufficient guarantee of quality; but tests were occasionally made. A government test house in Calcutta could be made use of but at present he generally found it quicker to send samples to the laboratory at Jamalpur. Speedy reports were specially necessary for oils as to eliminate leakage losses from oils, which were usually supplied in casks, practically no stocks were held by the railway, requirements for a month at a time being taken from the supplying firms.

A list of approved suppliers in India was maintained. Applicants to be placed on the list furnish particulars regarding their business, after which proper investigations are made to ensure only *bonâ fide* manufacturers or merchants being added.

The main Stores Depôt of the East Indian Railway was situated at Howrah. There was a branch depôt at Jamalpur which held locomotive spares and dealt with the output of engineering materials such as cast iron sleeper plates, switches, crossings, signal fittings, etc., etc., from locomotive workshops there. Small depôts also existed at Allahabad, Khana, and at Baniadih for the colliery department of the railway. All purchases were, however, made through the Controller of Stores. The ledgers of the Howrah Depôt included about three thousand five hundred headings excluding locomotive and with a few exceptions, wagon spares, and of these about a thousand were 'stock' items which except articles of country origin were normally recouped by home indent or if the supply from England was delayed by local purchase. The rules governing the purchase of imported stores in India were not elastic. Miscellaneous stores were classified as far as practicable—and endeavours were made to have the indent for each class despatched by a regular date annually. It was not usual to advertise for tenders for petty miscellaneous country stores.

All Home indents were sent to the Board of Directors in London, who purchased on the advice of the Consulting Engineers to the undertaking. The annual indents for miscellaneous stores took from six to eight months to prepare and the first supply was not usually looked for until about nine months after the transmission of the indent. The necessity for looking so far ahead militated against the purchase of surplus stores from other railways, as though another railway administration might have surplus stores of the kind required by the East Indian Railway when the annual indent was being prepared, the East Indian Railway might at that time have in hand a sufficient stock or expected on an indent of the particular item for some months' consumption and was therefore not disposed to purchase from the surplus stock of the other railway at the moment; while on the other hand the railway with the surplus stock would not earmark the articles against a possible enquiry from the East Indian Railway, say six or nine months hence.

He considered that a central agency for the purchase of *all* stores for government departments and for concerns in which Government had a large financial interest would require to be so extensive as to be unwieldy and impossible to control properly. In support of this opinion he quoted the number of orders with which the Stores Department had to deal during the year 1913-14.

The total number of orders placed by him during that year was 21,586, many of which contained several items. Of these Howrah Stores would receive and check materials delivered against about 19,000 orders. Only 2,364 orders were placed for the recoupment of stock at Howrah Stores—the balance were special purchases, the bulk consisting of orders for small items of which stocks are not held. A large proportion of these would not be sufficiently important to obtain through the central agency, and hence some 12 to 15 thousand orders would still remain to be placed by him as it would be impracticable for the central agency to stock such a variety of articles as the orders covered.

His prime duty to his employers was to purchase in the cheapest market bearing in mind that quality was usually cheapest in the long run. He would therefore be disposed to make use of the government purchasing agency only if thereby what he required could be obtained more cheaply. Any running contracts which might be made by the central agency should therefore provide for the supply, if desired, to company worked railways, public and *quasi*-public bodies and institutions as well as to government departments.

Theoretically the effect of the East Indian Railway buying independently the same class of articles as Government might seem to be a higher price to both. In practice, however, in normal times it was his experience that the supply forthcoming of all stores was large enough to cause competition amongst sellers rather than between buyers. Even during the war, he could frequently have purchased the same article cheaper than could the purchasing agency created by Munitions Board to eliminate competition. To have to purchase everything through the central agency would only result in delays and increase correspondence considerably.

The home demands of all departments of the East Indian Railway were examined by the Controller of Stores and these were compared with the past consumption. An explanation was required for all demands exceeding the average consumption during the preceding two years by over ten per cent. and if necessary a reference was made to the Agent of the East Indian Railway before the indent was finally prepared.

He was strongly opposed to the scrutiny before transmission of the East Indian Railway's indents by a central government agency. If the central agency kept railways posted up-to-date regarding the developments in manufactures in India, the railways themselves were in the best position to decide whether the Indian produced article was suitable or not. He would willingly supply to anyone interested any information at his disposal which might assist in the industrial development of India. The advantages of being able to purchase in India were so great that railways would give preference to Indian made articles of proved suitability and quality.

He agreed that the policy of inspection might be regarded from two aspects—suitability and quality. It was for the consumer to decide whether an article was suitable or not for his particular purpose, and to this end it was necessary that the specification should be drawn up either by the consumer himself or—should the consumer be incapable of describing accurately in the correct technical phraseology exactly what he wanted—by his consulting experts and in cases where the consumer was satisfied that an article produced in India would be suitable to his requirements, there would be no objection to the inspectors who were acquainted with the capabilities of the local manufacturers being consulted. A specification when once decided on should be so framed as to allow an inspector the minimum discretion in respect to quality.

As a result of his discussion with the Committee, witness was prepared to admit that a central stores agency would be more useful to the East Indian Railway than he had thought when preparing his written statement, provided of course, that the central agency were successful in making such arrangements as were contemplated.

Purchasing officers as well as inspecting officers should have had a workshop training and home experience.

He did not think that transfers between the Indian and home establishments would serve any useful purpose.

At Calcutta, Saturday, 3rd January 1920.

PRESENT:

Sir FRANCIS COUCHMAN, K.B.E., M.I.C.E. (*President*).

G. H. COLLIER, Esq., C.I.F.
A. W. DODS, Esq.
H. N. HESELTINE, Esq., C.I.E.
Lieutenant-Colonel C. C. H. HOGG, C.M.G., R.E.
Brigadier-General H. A. K. JENNINGS, C.I.E.
LALJI NARANJI, Esq.
Rai Bahadur LALA MILKI RAM.

J. C. HIGHET, Esq. (*Secretary.*)

H. F. DAVY, Esq., Officiating Superintendent of Local Manufactures and Government Test House, Alipore.

Written Statement.

The questions on which I feel most competent to give an opinion are the inspection of materials and manufactured articles and testing. Testing, whether physically or chemically, is an integral part of inspection and any separation in the organization of these two essentials to the purchase of stores and plant can only lead to inefficiency.

On the inspection side I have under me at present three European inspectors, one for castings such as pipes, sleepers and machine parts, one for railway rolling stock, etc., and one for machinery, plant and steel structural work, such as bridges and girders. These men all inspect orders during manufacture at the works.

Portland cement factories are inspected by the Superintendent of Local Manufactures or the Deputy Superintendent, and the daily products of the works are examined in the laboratory.

On the testing side there are—(1) the physical laboratory which deals with the mechanical testing of structural material of all sorts, metals, limes and cements and lubricating oils; (2) the chemical laboratory, which examines manufactured stores of all kinds, such as soap, chemicals, ink, vegetable oils, paints and varnishes, boiler water, metals and coal (this latter principally for the Mining Engineer), to name some of the more important items. Both for inspection and testing our services are available to public bodies and firms and considerable advantage is taken of the facilities offered. The drawing up of specifications naturally forms part of our work.

Work carried out for government departments, other than the Indian Munitions Board, and private bodies is paid for, the former by book transfer at a special rate, the schedule of charges for inspection work being based on a percentage of the value of the contract.

Two distinct classes of inspected articles and stores.—Inspection work falls naturally into two rather distinct classes—

Class (1), articles which require close inspection during the course of manufacture, and
Class (2) includes (*a*) repetition articles which may be examined when complete by reference to a standard, or (*b*) stores which may be sampled

and tested either by comparison with a standard sample or to a specification.

In class (1) come (*a*) machinery and plant, (*b*) bridges and structural work generally, (*c*) railway rolling stock, (*d*) points and crossings, (*e*) cast-iron piping and the larger fittings, (*f*) steel sectional material. In these cases the articles are either of such a nature that exchange is impossible, or when passed they may be stamped by the inspector himself at the works. He obviously cannot be responsible for packing, which is done by the firm and delivery is made direct to the ultimate consignee. Inspectors for this class of work require to be trained men experienced in manufacturing processes and must be paid accordingly. The articles which come into class (1) are, in the Public Works Department, more frequently ordered by executive officers direct than by the stores department. Under the new scheme, such articles would be bought through the purchasing organization of the stores department, indents being received from executive officers for compliance.

Inspection of articles of the second class is rather different, and is best carried out either at an inspection depôt to which the suppliers send them when complete or at a stores depôt. This work does not require so much expert knowledge of manufacturing processes. In the case of say, ammunition saddle frames, dog spikes or water taps, comparison may be made with a sealed sample and the number checked. In the case of stores like lubricating oil or blacking, for example, samples may be taken from the bulk and examined by the laboratory staff. In both cases the inspecting staff should be responsible for the packing and should themselves despatch the goods when passed to the consignee.

Naturally between the two classes there are intermediate articles, such as Portland cement, leather goods, furniture and hardware, where inspection or testing of the finished article requires to be supplemented by occasional visits to the works by experienced men to ensure the requisite standard quality being maintained.

The work of my department was intended to be confined to the first class of articles, i.e., those which have to be inspected by experienced men at the works; but more recently, owing to the absence of any inspection depôt for stores except those for the Military Department (Inspector of Munitions, Hastings), we have had to send men to inspect articles of the intermediate and second classes. Such inspections entail waste of time on the part of experienced men, both in travelling to the firm's workshops and in actual inspection. As the inspector cannot be responsible for packing and correct despatch of the articles when passed, the situation is most unsatisfactory from all points of view and calls for immediate remedy.

The Inspector of Munitions, Hastings, inspects articles in class (2) at a properly organised depôt, but only I believe for the Ordnance Department. He sends us by post or messenger samples which require chemical, mechanical or physical examination, the results of which we report to him. There is no common direction or other connection between us, and interchange of staff is impossible. It is not improbable that his required standard of workmanship differs materially from ours.

The great defects of the system of inspection as it exists at present, are that it is both partial and optional.

I have said that articles of class (2) are not supposed to be handed over to us for inspection. Neither are they, I believe, examined systematically by anyone else. There exists no properly organized staff in the railways or Public Works Department for examining stores for quality when received. Sealed samples are sometimes kept by the Controller of Stores and a rough examination of the first supplies may take place accordingly. Controllers of Stores may or may not submit samples for test; they may send samples from bulk for confirmatory test if they wish, but in any case we have no control whatever over the placing of contracts and we are seldom told the tendered price.

In the case of major articles of class (1), inspection may be requested of us by the ordering officer or not. Whatever the reason, a large amount of work done in firms for government departments does not find its way on to our books, and on enquiry we are frequently informed by the staff of the firm, perhaps with a note of satisfaction, that such and such an article is "nothing to do with your department."

Organisation of the Inspection Department.—I have said enough to show that in connection with all branch purchasing departments there should be a properly organized, coherent and uniform system of compulsory inspection by a staff independent of the purchasing department. In centres where the amount of work justifies its formation, there should be a laboratory suitably equipped, both as regards apparatus and personnel for examining materials. It seems to me to be essential for the laboratory to be under the head of the inspection section of the particular centre. I am convinced that only in this way can proper cohesion be obtained. Lack of cohesion spells delay and unnecessary correspondence with its attendant expense. The formation of small laboratories in connection with each provincial stores organization is not to be recommended, at all events at present. The work of testing and analysis is highly technical, demanding the employment not only of skilled but experienced men or none at all. Apart from questions of expense, suitably qualified men like plenty to do as well as a suitable salary and reasonable prospects.

In Bombay as well as Calcutta there is ample scope for a large mechanical and chemical laboratory. Other centres would, at all events for the present, continue to use the one at Calcutta (or Bombay if nearer). In some cases where a suitable laboratory belonging to the Customs or Industrial departments existed close at hand, advantage could be taken of the fact.

Testing laboratories in Calcutta and Bombay should be part of the inspection organization and the staffs subordinate to the head of the inspection department of a particular centre. Individual officers of the inspection department would, however, be members of the Engineering, Industrial, Chemical or other services deputed to a particular appointment. At present men in departments like mine have to be very unambitious to be contented with their visible prospects.

The Industrial Commission does not seem to have appreciated the intimate connection between inspection and testing and appears to have overlooked the fact that both the Metallurgical Inspector's department at Jamshedpore and my department at Alipore combine inspection with testing. The staff outlined in the Commission's report as being considered suitable for inspection and the scale of pay suggested for the inspection staff appear to me alike unsuitable.

For the inspection of articles for class (2) in a depôt a staff of stores inspectors and despatchers on salaries ranging between Rs. 150—400 a month, under a chief inspector of stores, is required. The assistant inspectors suggested by the Commissioners are presumably young men of gazetted rank; but the maximum pay possible to officers of this branch of the department, viz., Rs. 1,200 a month, is not good enough to attract or retain the class of men required for the work. I notice that the pay of the inspectors suggested in the Commission's report is the same for inspecting as for purchasing officers, although the technical qualifications required for inspectors are necessarily much greater than is necessary for a purchasing officer. Notwithstanding this the prospects of purchasing officers are superior.

For the inspection of articles of class (1), men of the educated foreman or covenanted Upper Subordinate class are required, who have had some years experience previous to their employment as inspectors, as well as higher trained men of gazetted rank. Some difficulty is experienced at present in obtaining suitable men for these posts, partly on account of the low pay offered and also because of the indefiniteness of their future

prospects. From my experience I suggest the following grades:—

	Rs.
Inspectors of Manufactures, grade II	360—20—460
Inspectors of Manufactures, grade I	480—20—600

with the prospect of attaining to gazetted rank as Assistant Superintendent of Manufactures on the scale Rs. 600—50—1,000. These men have to deal with the heads and departmental managers of manufacturing firms; their work is difficult and tiring, requiring knowledge, experience, tact and more than ordinary conscientiousness. Their pay and prospects must at least be equal and should be a little better than that of the men of the same type employed in the works they visit. In addition to this salary special allowances should be given or quarters allotted to married men employed in the presidency towns. The work of these men should be supervised, as at present in my department, by Superintendents of Manufactures, who are able to see that their work is thoroughly done and to settle the inevitable disputes which arise between the inspector and manufacturer.

It is probable that general opinion will be in favour of the formation of stock depôts in large centres. It being necessary to inspect articles of class (2) in depôts, the stores depôt would, of course, serve as an inspection depôt also. I agree with the view that Directors of Industries should not be purchasers in the stores department. I think their time will be fully occupied in stimulating production, in giving assistance to would-be manufacturers and co-ordinating allied departments. It being as I believe unadvisable and impracticable for Directors of Industries to be also efficient purchasing officers, the creation of an imperial stores purchasing department for all government stores and plant, having provincial heads, seems to follow as the natural organization for Indian purchases.

Inspection should, in my opinion, be carried out by a single organization, having sections in all the provincial centres. If it be decided to have a central purchasing agency under a Controller-General of Stores, the inspecting organization should be united with the purchasing department under him. It is, of course, necessary that under the Controller-General of Stores the inspection section should be entirely independent of the purchasing section.

In the event of purchase being decentralised and vested in the provincial Directors of Industries, I still think that inpection should be organised into one imperial department. An imperial inspection department, providing as it does a compact body of inspecting officers of the various kinds, offers the best, probably the only, method of obtaining uniform procedure, standardization of specifications, samples, etc., and at the same time offers a wider field for men working it. An imperial inspection department which I hold is essential, would appear to be easier in connection with an imperial stores purchase organization than with a decentralised system.

The organization of the inspection section on a provincial basis would, I think, be a great mistake. It would mean in some provinces a very small section, isolated for all practical purposes from other sections; differences in procedure and standard would creep in and there would be no uniformity or solidarity. Our experience in the Indian Munitions Board under the Bengal Circle has shown that it makes for delay, inefficiency in dealing with work and has nothing to recommend it from the inspection and testing department point of view. The few matters referred to us direct by the Controller of Munitions would have been dealt with in exactly the same way had we been independent, and in all other matters his office served merely as a channel for correspondence.

I suggest, therefore, the following organization for inspection. Under the Inspector-General of Manufactures there should be Superintendents of Manufactures in each province, who would be responsible for the inspection and testing of all manufactures and stores in the province, whether actually manufactured or purchased from imported stocks. Under them would be the Inspectors of Manufactures [articles of class (1)], each dealing with his particular class of work, in Bombay and Calcutta at all events the testing laboratory staff, and the officer in charge of the inspection depôt. In the depôt articles of class (2) would be inspected, passed and despatched.

I think it would be advisable to exclude the word "stores" as far as possible from the designations of all but those officers actually purchasing or inspecting what are generally known as stores. Most of the men employed in the stores inspection depôt passing articles of class (2) need not be highly trained men and should be styled Inspectors of Stores. Men employed in laboratories or in the inspection of articles of class (1) at the works should individually be styled Inspector of Structural Work or Machinery or Chemist, as the case may be, and collectively as either Inspectors or Superintendents of Manufactures, according to rank. The organization I suggest appears in Appendix A.*

Co-operation between the Inspection and the Industries Department.—A considerable amount of close co-operation is called for between the inspecting section with its technical staff and the Directors of Industries. For example, the services of the oils and paints chemist in the inspecting department laboratories should be at the free disposal of Directors of Industries for offering advice in connection with manufacture. On the other hand, the inspection sections would require the services periodically of specialists attached to the provincial industrial section in connection with certain purchases. By close co-operation, efficiency should be possible without the duplication of appointments.

Separate inspecting organisations for different departments.—I do not consider it necessary that any department should have inspection organizations of their own for dealing with purchases made in the open market. I am not aware that the stores dealt with by Inspectors of General Stores of the Ordnance Department are of a special nature which a central organization could not suitably inspect.

Articles which are only bought by one department or group of departments, such as for example permanent way material or rolling stock by railways can be dealt with by the general inspecting department, men having the necessary experience of the particular classes of work being either obtained on deputation from the department or from outside sources. My present Inspector of Rolling Stock was an officer of the Carriage and Wagon Department of the Eastern Bengal Railway; another man at present on service had obtained his experience principally in rolling stock works at home. In special cases the indenting officers might be present at the final inspection of a particular and exceptional article and would give his approval before despatch. Such cases would be very rare and might safely be dealt with on individual merits. My experience of the Ordnance Department during the past few years does not suggest that it requires a separate organization of its own. My own department was originally confined to railway work, but since the opening of our doors to other departments, *quasi*-public bodies and the public generally, the variety of work has not materially increased nor have we been troubled with the differences in standards of quality in different departments.

Indentors or Industries Department, the arbiter of quality.—Although I think the indentor must be considered to be the ultimate arbiter of quality, at the same time it must be admitted that departments' requirements as indicated by their specifications often vary considerably from the article with which they are perfectly satisfied. In many cases the article required is a better one than the specification indicates, in others the specification is much too rigid, not infrequently an impossible one to

* Reproduced below.

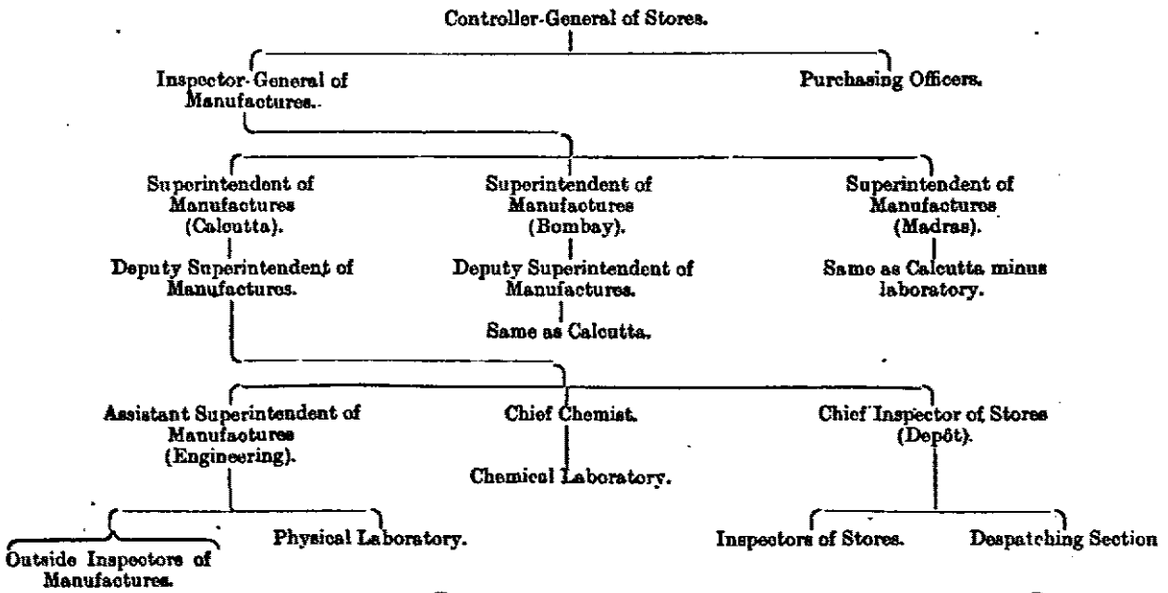
work to. These inconsistencies arise from the fact that the specifications are badly drawn up. The question of specifications is one with which the inspection department should be called upon to deal. It is between the consumer on the one hand and the department responsible for the industrial development of the country on the other that the inspecting department can exercise the useful function of connecting link. The Inspectors of the inspecting department would know what quality was obtainable. Inspectors frequently know more about an article than the actual user. At all events the opinion of the inspection department might be expected to receive the respect which unbiassed judgment deserves.

Difference between the standards of quality required by different departments will not, I think, be found to give much difficulty to a central inspection department.

Direct purchase of European stores.—In the course of an enquiry concerning this question in 1915 I understood from various heads of branches of English firms who were referred to at that time that they were perfectly willing to enter into agreements to sell at British rates *plus* the cost of freight and insurance. The alteration of existing stores rules permitting the purchase of British-made goods direct through the Indian branch would undoubtedly lead to an increase in the number of British firms represented in India. These branches usually keep stocks of spares, and it would therefore not be necessary on the part of government officers to indent for a large number of spares at the time of placing an order as they are compelled to do at present owing to the length of time occupied in obtaining replacements through the India Office. Furthermore, indents on England contain proprietary articles for which there is no competitive tendering. In these cases it would be easy to obtain, where possible, direct from the Indian branch. For competitive articles direct purchase would limit the field of competition to those British manufacturers represented in India and would tend to raise the cost accordingly. It seems feasible for an intelligence department at home to keep purchasing officers posted with the current prices of many articles. On the other hand direct purchase of British-made goods would tend to lower the cost of Indian-made articles, which under present conditions may be purchased.

Scrutiny of home indents.—I think the experience of the past few years points clearly to the scrutiny of home indents. At the same time it does not at all follow that the Indian-made article is suitable in type or quality for the purpose. Consequently I hold that indentors should not be entirely at the mercy of the scrutinizing officer. Where prejudice exists it may be removed possibly by the submission of a sample and the inspection department could again be of assistance in advising indentors. The arbitrary removal of items from home indents does not seem to be any longer necessary, and scrutinizing officers cannot be expected to always have sufficient knowledge of type and quality to decide accurately in all cases.

APPENDIX A.



	Rs.
Inspectors of Stores, grade III	150—10—300
Ditto II	310—15—400
Ditto I	450—500
Assistant Superintendent of Stores (Chief Inspector of Stores)	600—50—1,000 (Gazetted Rank).

	Rs.
Inspectors of Manufactures, grade II	360—20—460
Inspectors of Manufactures, grade I	480—20—600
Assistant Superintendents of Manufactures	600—50—1,000 (Gazetted Rank).

Mr. H. F. Davy, called and examined.

Witness, whose substantive appointment was Deputy Superintendent of Local Manufactures, was appointed from England to the post in 1913. He had previously officiated as Superintendent in 1914 and 1916.

Theoretical training at City and Guilds Technical College; diploma in civil and mechanical engineering (corresponding to B.Sc. (Eng.) 1905). Elected A.M. I.C.E. 1908.

Practical training as pupil in the works of Messrs. Yarrow and Company, Engineers and Shipbuilders (three years). Assistant to the firm's engineer in charge of new works construction, Glasgow (one and a half years). Draughtsman, Messrs. Workman and Clark, Belfast. Draughtsman and subsequently Turbine Engineer, British Thomson Houston Co., Rugby, till date of appointment to India (three years).

It was essential to have depôts for the receipt, inspection and acceptance of the articles which he had described as class (2). These depôts should, of course, be located in the government stock depôts, if such were established, and should have convenient access by railway, and, in the case of Calcutta, by water also if possible. It ould be preferable to have the test house and laboratory adjacent to the Stock Depôts provided that this did not involve the removal of the Test House from Calcutta. The work of examining stores sent to the depôt would not be the most important item in the work of the test house and laboratory and it was necessary that they should be easily accessible to the commercial community and the Industries Department. The situation at Alipore where the Government Test House was at present located would not be a suitable site for a receiving and inspection depôt in Calcutta. The Test House could be retained where it was and the expansions required to it would absorb all the available land acquired for the purpose. Small test houses and laboratories scattered over the country would be useless. One properly equipped and staffed test house in Calcutta would serve all Eastern India.

It would be necessary to station a staff of outside inspectors at Asansol, and possibly at Jamshedpur where new works were springing up. The sub-offices would be in charge of an officer of the rank of Assistant Superintendent of Manufactures in the organisation suggested by him, who would exercise constant supervision over such outside Inspectors of Manufacture as the industries of the district might demand. Each sub-office would have a receiving and inspection depôt to deal with articles of class (2), if this class of articles were being produced in the district in quantity. It might occasionally be found that the expense of sending articles from outlying works to the government depôts, or alternatively of sending an inspector to outlying works, was not justifiable. In such rare cases the consumer could be asked to pick out samples at random on receipt of the goods for examination by the inspection department.

Given the staff, there was no reason why all ordinary army stores should not be inspected and tested by the same staff as was employed for stores of civil departments. In all cases there should be a specification based on the requirements of the consumer and modified if necessary as the result of experience. Specifications should ordinarily be drawn up by the inspecting department in consultation with the consumer and when once fixed no variations from specification should be allowed by inspectors in articles of class (2). In articles of class (1), such as for example girder bridges, there might be errors and oversights in the plans which an inspector, or his superior, was quite competent to, and should be permitted to, correct. Except in minor matters modifications would be referred back direct to the indenting officer; references would be made direct in order to save time and correspondence.

It was usually unnecessary to require samples to be submitted with tenders from firms with established reputations. When samples were sent for examination before purchase it was desirable that the testing officer should know the prices tendered for each of the samples he had to analyse as he would probably be better able than the purchasing officer to say which of the passable samples would give the best value. The purchasing officer need not necessarily be bound by the recommendation of the testing officer; in some cases considerations other than those of quality and price might make it desirable for the purchasing officer to accept a higher tender.

The Inspectors of Manufactures should be men of the foreman class, and must be well paid if they were not to be exposed to the temptation of increasing their income by improper action. The present rates of pay of his inspecting staff were inadqeuate. The scales of pay suggested by him were on the low side. Men in the inspection department should get rather more than their qualifications would secure for them in private employ. It was very important that such members of the staff as had to reside in Presidency towns should receive adequate additional allowances to compensate for the higher cost of living in them. This allowance should be ten per cent. of pay and married men should either be provided with suitable quarters on the usual terms or adequate house allowances should be given in lieu. For Calcutta he suggested the following:—

	Rs.		Rs.
Salary under:—	200	Allowance	25
	300	,,	50
	400	,,	100
	500	,,	90
	600	,,	80

He suggested Rs. 1,750 to Rs. 2,250 as suitable salary for the Superintendents of Manufactures whose work would be mainly administrative; and Rs. 1,100 to Rs. 1,600 for the Deputy Superintendents. Special allowances of ten per cent. of salary and either quarters or adequate allowance in lieu thereof should also, of course, be given to the gazetted staff.

He suggested the following for Calcutta house rent:—

	Rs.		Rs.
Salary under:—	800	Allowance	200
	1,500	,,	250
	2,000	,,	225
	2,500	,,	175

The present staff of the Superintendent of Local Manufactures comprised:—

Superintendent . .	1,000—50—1,500
Deputy Superintendent .	800—50—1,000
Chemist . . .	750—50—1,000
1 Inspector of Rolling Stock . . .	400—20—500
1 Inspector of Structural Work . . .	400—20—500
1 Inspector of Castings (Kulti) . . .	400—20—500
1 Physical Laboratory Assistant I . .	150—25—300
1 Physical Laboratory Assistant II . .	100—10—150
1 Chemical Laboratory Asaistant I . .	150—25—200
3 Chemical Laboratory Assistant II . .	100—10—150

Office staff, fitters, etc.

In addition to these was required immediately

1 Inspector of Castings

and in the very near future.

1 Assistant Laboratory Officer (Gazetted).
1 Assistant Chemist (Gazetted).
1 Inspector of Rolling Stock (Asansol District).
1 ,, Miscellaneous.

At present the post of Deputy Superintendent, his substantive appointment, was vacant, it having been found impossible to find a suitable man to officiate in the post during the absence of the Superintendent on furlough (medical certificate). With the present inspecting staff, leave could not be given to inspectors without loss of efficiency and he himself had been unable to take home leave since joining the department six years ago.

Indents had already been sent for the supply of 3-ton universal testing machine to supplement the present 100-ton machine, which was unsuitable for light sections, and for a machine for testing steam and water, pressure and vacuum, guages.

In order that the Test House might be of more assistance to government departments and the public in the development of industry generally, proposals had been made to instal a Metrology section and Mr. Musgrave was privately making enquiries at home concerning equipment. A high standard of engineering workmanship was impossible unless the accuracy of guages could be checked.

He agreed that it might be sufficient if the Superintendents of Manufactures were given a Personal Assistant drawn from the Assistant Superintendents in place of Deputy as shown in his suggested organisation, but in the case of Calcutta at all events it would probably be necessary to sub-divide the charges under two Deputy Superintendents.

He was in favour of the interchange of inspecting staff between the Indian and the Home establishments, if it could be suitably arranged. In this way officers of the inspecting department in India would have the opportunity of keeping up to date in methods of manufacture and the standards of workmanship ruling in England. He thought interchange of staff provided a better method of attaining this desirable object than deputing officers to study conditions at home. Moreover it appeared to be difficult for officers to obtain sanction for work of this sort.

At Calcutta, Monday, 5th January 1920.

PRESENT:

Sir FRANCIS COUCHMAN, K.B.E., M.I.C.E. (*President*).

A. W. DODS, Esq.
H. N. HESELTINE, Esq., C.I.E.
Lieutenant-Colonel C. C. H. HOGG, C.M.G., R.E.
Brigadier-General H. A. K. JENNINGS, C.I.E.
LALJI NARANJI, Esq.
Rai Bahadur LALA MILKI RAM.

J. C. HIGHET, Esq. (*Secretary.*)

M. N. CRAWFORD, Esq., Assistant to Chief Engineer, Telegraphs, Calcutta.

Written Statement.

Question 1. The formation of a central agency for purchases is not recommended, because the majority of the articles required by this Department are of a special nature and nothing is to be gained from the Department's point of view by purchasing such through any agency, as the Department itself is the only authority which knows exactly what is required and which is at present in a position to purchase and inspect such stores. I refer to such things as telegraph and telephone material, postal bags, motor mail vans, etc.

Question 2. Even if a central agency was established, the existing arrangements for the purchase of the special articles required by this Department would have to be maintained.

Question 3. Besides the classes of articles referred to above, I consider that the existing rules for petty purchases by local officers should remain in force, but I would suggest that should local purchasing agencies be established, officers who are authorised to make local purchases should only make them after enquiry from the local purchasing agency.

Questions 4, 5 and 6. Do not concern this Department particularly.

Question 7. No remarks.

Question 8. The only really important contracts for supplies for this Department are those that are made for wire, cables, insulators, iron sheeting, telegraph and telephone instruments. These are at present obtained through the Director-General of Stores, while other items, such as coal, pig iron, etc., are obtained locally. The items obtained from England are often only ordered after enquiry from the local agencies of home firms. It seems to me that, as far as this Department is concerned, the Central Store Department would in no way help in the matter of simultaneous tendering in India and England.

Question 9. For the inspection of such articles as are in general use I consider that the policy of inspection might be suitably dictated by the department responsible for the industrial development of the country. Provided that the articles supplied are in accordance with the specifications laid down by the consuming department the responsibility for obtaining articles suitable to its needs will then rest with the department drawing up the specifications. As regards such special articles as are only in use in this Department, the inspection should be made and the policy of inspection laid down by this Department.

Question 10. An independent agency for inspection appears to me essential, and I consider that, if centralised, the quality of articles purchased in different parts of the country will be kept at a higher and more even standard than otherwise.

Question 11. This Department will require to keep the same special inspecting organisation as at present for all articles which are only used by it in large quantities

Question 12. Yes, such articles as telegraph wire, cables, covered wire, insulators, instrument batteries, special electrical machinery, all require specialised inspection.

Question 13. No answer.

Question 14. Rule 3 (*a*) should, I think, be modified, so as to allow purchasing agencies in India an option of obtaining articles through the India Office or through the local representatives of a European firm even when the article is not in India at the time of order. This should perhaps be subject to the provision that a comparison of the prices on the lines of rule 10 is not unfavourable to the purchase through the local agency of the firm.

I consider that such purchases should only be made from firms who have established a local branch in India, and not through local commission agencies who may be representing such firms for the commission they can obtain on orders. Rule 5 would thus become unnecessary.

The Director-General of Posts and Telegraphs might be granted full powers under rule 13-A.

Question 15. This question has been partially answered above, and the procedure suggested should encourage English firms to maintain larger stocks and might, I think, lead them to establish manufacture in India.

Question 16. I approve of the scrutiny of such indents, but, to avoid delay, the scrutiny should be subsequent to their transmission to the Director-General of Stores. The Central Department would then be in a position to advise as to whether similar stores required subsequently are likely to be obtainable in India.

Question 18. Yes, certain special articles such as wireless telegraph and exchange telephone equipment should be procured on behalf of this Department by a special officer deputed from India for the purpose. This officer should be actually responsible for both the inspection and purchase, which might, however, be made through the ordinary channels of the Director-General of Stores' office. He would advise on any other purchases

made by the Director-General of Stores for this Department.

Question 19. I do not consider that the formation of central stock depôts of Government stores would be of any great value to this Department as its requirements are of a special nature.

Question 21. These figures are being supplied by the Director-General of Posts and Telegraphs to the Indian Munitions Board.

Question 22. (*a*) No special arrangements are in force, but purchasing officers keep on record the prices paid for previous supplies, and these records are always available for inspection by inspecting and controlling officers.

(*b*) The firms dealt with are not many in number and local officers are well acquainted with their equipment and capabilities.

Question 23. I think such information could be collected and would be of considerable value to purchasing officers. As a beginning for stores used by this Department, it would be possible to obtain from local officers a regular return showing the rates at which local purchases have been made, and this information could be made over to the central agencies.

Question 28. The following are the rules in force in this Department for the purchase of stores and the audit of purchased stores accounts:—

TELEGRAPH MANUAL, VOLUME I, PARAGRAPH 584.

For the general rules for the supply of articles for the public service please see Appendix No. 5 of volume III of the Manual.
Appendix No. 5 is the same as Appendix II of the questionnaire.

TELEGRAPH MANUAL, VOLUME I, PARAGRAPH 585.

In Calcutta, Bombay, Madras, Karachi and Rangoon, the Superintendents in charge of Divisions and other officers should not purchase locally articles of which a stock is kept in the Store Depôts. In Calcutta this applies also to articles which are manufactured in the Departmental Workshops.

TELEGRAPH MANUAL, VOLUME I, PARAGRAPH 586.

The following can never be purchased by any one without the previous sanction of the Director General:—
(*N.B.*—This prohibition applies also to requirements connected with military expeditions.)
Live stock.
Instruments exceeding Rs. 50 for each article.
Medicines.
Special articles of stationery for Field Service purposes.
Articles of stationery usually supplied by the Stationery Office.
Articles of European manufacture exceeding Rs. 250 in value in the case of Chief Storekeeper and Circle Officers.
Articles of food or clothing, such as tinned milk, waterproof sheeting, medical comforts, blankets, jackets, socks, shoes, puttles, etc.

TELEGRAPH MANUAL, VOLUME III, PARAGRAPH 372.

Inspecting officers will compare the entries of receipts with the invoices, a complete file of which must be produced, and with the entries of purchases in the Cash Book. The entries of expenditure on work will be examined as to their necessity and correctness, seeing also that the material which has been replaced has been accounted for, and the entries of issue will be checked by comparison with the file of receipts for stores issued, and with credits in the Cash Book for the value of stores sold. The balances will then be checked, and all irregularities will be reported to the Divisional Superintendent, and if important, to the Deputy Accountant General, Telegraphs. It should be understood that, in the absence of Stores Accounts to the Deputy Accountant General, these inspections are the real audit of the Store Accounts, and that the inspecting officer is responsible as an auditor, for this paragraph being fully complied with in each case, for the period between the last and the present inspection.

TELEGRAPH MANUAL, VOLUME III.

Purchase in India.

Paragraph 581.—The Chief Storekeeper passes and pays all vendors' bills for purchases. This is a very important duty, and in passing each bill he must satisfy himself from the challan accompanying the bills that all items of stores billed for have been duly brought on to stock. He should also see that the rates billed for are fair and correct.

Paragraph 582.—All officers in charge of depôts will carefully scrutinise their purchase diaries half yearly and report to the Chief Storekeeper, by the first week of May and November, all items which have been purchased in any quantity, with the quantities purchased. The Chief Storekeeper will, in case of stationery, carefully consider whether it would not be advisable to obtain these stores from the Controller of Printing, Stationery and Stamps.

Paragraph 583.—The Chief Storekeeper has authority to purchase stores with the exceptions detailed in paragraph 586, Chapter XII, Volume I, up to a limit of Rs. 500 in value for any one purchase; larger purchases require the sanction of the Director General.

NOTE.—The Chief Store keeper has authority to incur expenditure under the heads "Capital Account—Addition to Boats and Carts" and "Revenue Account—Renewals of Boats and Carts" up to Rs. 500, in any one case, subject to a limit of Rs. 200 for European articles purchased locally for any particular work and to the limit of his Budget allotment.

Paragraph 584.—The heads of circles have full powers to purchase country stores and Divisional Superintendents have authority to purchase stores, excepting those detailed in paragraph 586, Chapter XII, Volume I, up to Rs. 50 for each article. As regards furniture for all offices the head of a circle may sanction the supply of new articles, provided that the cost of any one article does not exceed Rs. 100, and the Divisional Superintendent up to Rs. 25 for each article provided that the Divisional Budget grant for local purchases is not exceeded. All purchases sanctioned by the Divisional Superintendents must be recorded in Form V-10. The powers given above must not be abused by sanctioning, under several different sanctions, articles which should have been included under one sanction.

Question 29. As far as this Department is concerned I do not think that outside Stores Departments would be in a position to advise or assist in the auditing of purchases of stores. The present system in this Department ensures compliance with the rules.

Question 30. Please see answer to question 18, which, as far as this Department is concerned, is all that is necessary.

Mr. M. N. CRAWFORD, called and examined.

Witness had had eighteen years' experience in the Telegraph Department in India and was at present Assistant to Chief Engineer, Telegraphs. His work included the disposal of all stores, questions on behalf of Chief Engineer such as final disposal of English indents and sanctions to purchase stores in India.

A special staff was employed in the Telegraph Yard at Alipore to test and adjust all instruments and apparatus received on indents from the Director General of Stores, India Office. This staff also tested the instruments which the Department made in India.

The policy of the Telegraph Department was to purchase as much as possible of Indian manufacture. Telegraph officials throughout the country were constantly on the lookout for suitable locally made articles and would certainly advise headquarters of anything new which came to their notice. Insulators of excellent quality had been made in India and the Telegraph Department had offered to take their full requirements but so far the manufacturing firm had not responded to the offer with any attempt to bring their outturn up to an appreciable figure.

The telegraph workshops made up the tubes for telegraph poles from imported sheets and galvanized them. A lot of casting work was also done. It had been found that the work could be executed very much cheaper in the telegraph workshops than private firms quoted. The workshop overhead charges had been very carefully investigated and fixed but he was unable to say off-hand what they were exactly.

All except petty purchases of country stores were made through the Superintendent of Telegraph Stores, Calcutta, who also prepared the combined home indents for general and construction stores for the Department.

The Superintendent of workshops made his own purchases of articles which were only used by him, and both he and Chief Electrician prepared home indents—the former for workshop stores and the latter for instruments. All indents are passed and signed by the Chief Engineer.

Witness agreed that the Posts and Telegraphs Department would probably find it advantageous to obtain all stores of a general nature through a central purchasing agency which would be able to secure the benefits of purchase in bulk. Special arrangements would, however, be required for the instruments, plant and cables peculiar to the Telegraph Department. The Telegraph Department was distrustful of inspection of such articles except by its own officers.

He understood that the arrangement of deputing an officer from India to assist the Director General of Stores, India Office, in the purchase of telegraph and telephone plant and stores for India was about to be given a trial. The climatic conditions in India were such that special apparatus, quite different to apparatus which would be satisfactory in, say, England, was often required.

District officers were allowed a fixed sum for clothing the employees in their respective circles. All the cloth was now obtained through the Indian Munitions Board. He thought that if a proper organisation was established which would supply uniforms in standard sizes for the Posts and Telegraphs Department as well as for the army, railways and police, the result would be the production of better, cheaper and equally well-fitting uniforms.

M. L. PASRICHA, Esq., Superintendent of Telegraph Stores, Alipore, Calcutta.

Written Statement.

Question 1. So far as the Telegraph Department is concerned most decidedly "No."

Firstly.—A very large portion of requirements of this Department is special and the central purchasing agency would merely mean the addition of another link and a useless link at that.

Secondly.—In the case of the few items which can be procured in the country the demand is usually of an urgent nature, and even supposing that the central purchasing agency is in a position to supply below market rates—less discounts usually allowed the delay of having to go through such an agency would probably outweigh any slight saving that might be effected. And if there is no saving it would only involve gratuitous delay.

Question 2. Except in the case of purchases of certain articles such as pig iron, coke, and mild steel sections for telegraph workshops, this Department should be exempt from making its purchases through the central purchasing agency.

Question 3. All telegraph and telephone instruments and material and plant for telegraph and telephone lines. All such purchases should be made either through the officer referred to in answer to question 30 or direct by the Department.

Question 4. No remarks.

Question 5. No remarks.

Question 6. No remarks.

Question 7. Have experience only of system under which this Department makes its local purchases in India and I have no criticisms or suggestions to offer.

Question 8. As far as this Department is concerned, India is not in a position to tender for the bulk of the Department's requirements.

Question 9. As far as this Department is concerned, policy of inspection should be dictated by ourselves.

Question 10. No remarks.

Question 11. Yes, the Telegraph Department is one.

Question 12. Yes, all telegraph and telephone material.

Question 13. No remarks.

Question 14. No remarks.

Question 15. It would be advantageous if spare parts for, and additions to, existing plant or equipment could be ordered through the local representatives of manufacturers who originally supplied the plant or equipment. It would save delay by having to go through the India Office. So far as this Department is concerned, this concession would not materially affect either the stocks held by the firms in India or the possibilities of establishing manufacture in India.

Question 16. No, not this Department's indents.

Question 17. No remarks.

Question 18. Yes. Material used by this Department supplied by manufacturers, who have not got branches in India, *e.g.*, Messrs. Elliots, from whom this Department gets large quantities of apparatus. The Department should be able to obtain these by placing the order either direct with the manufacturers or through the officer referred to in answer to question 30 instead of going through the Director-General of Stores.

Question 19. (*a*) So far as this Department is concerned, the formation of any central depôt will not materially affect the stocks held by us.

(*b*) No remarks.

Question 20. No remarks. Please see reply to question 19.

Question 21. Figures are being furnished by the Deputy Accountant General, Posts and Telegraphs, Telegraph Branch.

Question 22. Prices paid are recorded in the several Purchase Diaries maintained by the store depôts, and the equipment and record of success of the comparatively few firms dealt with are generally known to purchasing authorities.

Question 23. No remarks.

Question 24. No remarks.

Question 25. No remarks.

Question 26. Only business men and technically trained men should be employed.

Question 27. No.

Question 28. Rates for articles purchased are scrutinised in the office of the Director-General of Posts and Telegraphs, and accounts are audited by the Deputy Accountant General, Posts and Telegraphs, Telegraph Branch.

Question 29. No. As far as this Department is concerned, the present procedure is efficient as regards audit and already fully complies with the rules in force for the purchase of stores.

Question 30. I consider it necessary that a representative of this Department should be attached to the office of the Director-General of Stores, India Office, London, to assist that officer in placing orders for the highly complicated telegraph and telephone apparatus suitable for Indian requirements and to make full enquiries into developments in telegraphy and telephony.

Mr. M. L. PASRICHA, called and examined.

Witness had a total service of eighteen years and three months. During the last two years and six months, he had held charge of stores. Remainder of his service he had been in charge of Telegraph Engineering Sub-Divisions and Divisions.

The Superintendent, Telegraph Workshops, purchased all his own expendable stores, such as coal, coke, and pig iron. All other stores purchases in India for the Telegraph Department were made by witness. These amounted to about 5 lakhs annually. He also prepared the annual home indents for construction and general stores for the Department. Indents for instruments and cables were prepared by the Chief Electrician. The Superintendent, Telegraph Workshops, prepared his own indents for stores required for consumption in the Workshops. Indents for wireless stores were prepared by the officer attached to the Department for wireless work. Indents prepared by witness are chiefly based on the average consumption during the preceding three years and took about a month to prepare. No additional clerical staff was engaged for the purpose.

Then main stores depôt was at Alipore. He had branch stores depôts at Bombay, Madras and Rangoon; and another at Karachi which was shared with the Indo-European Telegraph Department. These received imported stores, except instruments, for their respective areas direct, and were fed with locally made telegraph stores from Alipore. He received stock returns from these branch stores depôts quarterly and was therefore always in a position to know from which depôt short-

ages in another depôt could be made good. Instruments were issued only from Alipore and none were ever issued without being tested. A staff of experts was maintained who inspected and tested all the instruments made in the telegraph workshops and also every instrument and cable imported. The re-test in India before issue of imported instruments and cables which had already been tested by the staff of the Director General of Stores, India Office, was essential as in the case of instruments adjustments, and frequently repairs, were found to be required after the handling undergone on the journey out and in the case of cable to clear any damage done in transit. Sample lengths from each consignment of wire received at different depôts were sent to Alipore for test. Very occasionally the sample tested had been found to be below the specification and this fact was brought to notice of the Director General of Stores in each such case. To his knowledge, on consignment had ever been rejected in India.

He agreed that if the central purchasing agency had at its disposal a staff similar to the present purchasing and inspecting staff and laboratories of the Telegraph Department, it would be quite capable of dealing with all requirements of the Telegraph Department; but the Department would still have to retain its own separate staff on very similar lines. He would modify the assertion made in his written reply to question 1. So long as the Telegraph Department was allowed to retain the purchase of all telegraph instruments and apparatus, there was no reason why the purchase of general stores which represented in value probably one-third of the total purchases of the Department should not be made through a central purchasing agency organised on *efficient* lines.

If the requirements of the Telegraph Department were made more widely known, he thought that agencies of Indian and British manufacturing firms might keep larger stocks to meet these requirements. The Telegraph Department had offered to purchase all insulators required in India but so far the local manufacturers had not attempted to work up to the demand. They possibly found it more profitable to make such articles as teapots and china figures.

He advocated the interchange of inspecting staff between India and England.

E. DALTRY, Esq., Officiating Controller of Printing, Stationery and Stamps, Calcutta.

Written Statement.

Question 1. I do, for this reason, that this office has a long experience of centralised purchases in stationery, and it is a fact that it has been successful in regard to obtaining stores of suitable quality and at lower rates than could have been the case if many departments had been in the market and possibly and probably competitors, and lacking in expert knowledge.

Question 2. I should think the departments concerned are best fitted to answer the question, though I may add that as regards paper for the State Railways, this office calls for tenders and arranges the contracts with the Indian Paper Mills.

Question 3. The central agency as regards paper and stationery purchases particularly should be this office. The Controller is an expert, as well as his Deputy and Assistant, with a practical chemist as Stores Examiner.

Question 4. No remarks, except that some *quasi*-public bodies now obtain their stationery from this office, as they find it is more economical to do so.

Question 5. Yes, as regards paper and stationery.

Question 7. This office calls for tenders for supplies of miscellaneous stationery articles and paper. A copy of the tender form for miscellaneous articles and a copy of the notice* for calls for tenders are enclosed herewith for perusal. A copy of the call for tenders* for paper is also enclosed.

Question 8. I should think this feasible.

Question 9. The Controller of this office decides as to suitability of any article purchased.

Question 10. In regard to paper and stationery and presuming the purchasing officer will be the Controller of Printing, Stationery and Stamps, he and his staff possessing the expert qualifications should also have control over inspection.

Question 11. None.

Question 12. Yes, paper and stationery.

Question 13. See reply to question 10.

Question 14. Yes, the financial limit should be removed entirely.

Question 15. That the price is better than or at least equal to what the Director-General of Stores can obtain for a similar quality.

Question 16. Yes.

Question 17. As we purchase by tender, this question does not affect me.

Question 18. Yes, a few such as Japanese hand-made paper, Indian ink and strawboards, and of the latter when the price is better than can be obtained through the Director-General.

Question 19. Yes, stocks are held by me of imported articles for a year's consumption and of local articles for three months.

Question 20. In Calcutta, Bombay and Madras and for Indian and imported stores.

Question 21. Expenditure on stationery stores purchased by the Controller of Printing, Stationery and Stamps, India, Calcutta, during 1910-11 to 1918-19.

YEAR.	(*a*) Stores purchased abroad.	(*b*) Imported stores purchased in India.	(*c*) Indian stores.
	Rs.	Rs.	Rs.
1910-11	8,27,518	2,16,784	30,58,523
1911-12	6,71,581	1,28,826	30,86,892
1912-13	5,56,974	91,361	29,56,717
1913-14	8,36,164	1,98,902	30,57,621
1914-15	8,80,468	2,01,723	32,00,091
1915-16	7,25,966	1,29,388	35,11,580
1916-17	7,44,114	1,45,009	46,60,246
1917-18	11,17,060	4,09,427	69,23,787
1918-19	10,47,527	6,52,557	82,63,516

Question 22 (*a*).—A schedule is prepared each year showing the name and address of the contractor for the year, the quantity of the article for which the tender has been accepted, as well as the rate allowed. The schedule for each successive year is recorded. In the case of stores obtained through the Director General of Stores, home invoices sent by the India Office are recorded for each year.

(*b*) No special records are maintained.

Question 23. Cannot express an opinion.

Question 24. Not concerned.

Question 25. I should think so.

Question 26. All must have expert qualifications.

Question 27. Yes.

Question 28. Two sets of accounts are maintained, namely, one by the Storekeeper and another by the office. The stores received on each order are challaned by the Examiner's Branch and the Storekeeper enters them in a receipt (if they are found to be in order), which is checked by the Accounts Branch with the challan and initialled in proof of the correctness of the receipt and then submitted to the Deputy Controller for signature. From the counterfoil of the store receipt granted to the

* Not reproduced.

supplier, accounts are prepared both in the office and the Store.

As regards stores received from home, the store accounts are prepared from the packing account, while the office takes the figures given in the home invoices. The issue accounts kept by the Store are reconciled with the office issue accounts every month. In case of discrepancy in respect of any article, the details are checked with a view to discover and rectify the error.

After the issue accounts have been reconciled, the balance for each article at the end of the month is struck and the store and office accounts for the month are checked once more and reconciled. The stock is taken after 31st March by the officers of the department every year, and in the third year an officer is deputed by Government to verify the stock balances. The accounts are also audited by the outside Audit Branch of the Accountant General, Bengal, who check the receipts, issues and balances and the rates at which supply bills have been passed.

Question 29. Judging by the experience of this office, the creation of central stores would, in my opinion, render a more efficient audit on purchases possible; also it will be easier to replace goods before they are issued—perhaps some considerable distance and before transport charges are incurred. Some traders here are reluctant to supply goods to the Madras Stationery Office because their rejection would involve freight charges. They prefer to supply through this office.

Question 30. There might be some advantage as regards this office.

Mr. E. DALTBY, called and examined.

Witness had been in the Stationery Department since February 1905. His substantive appointment at present was Deputy Controller of Printing, Stationery and Stamps, and he was at the moment officiating as Controller in a leave vacancy.

He had served an apprenticeship of 7 years, commencing in 1882 in the General Printing Works of Sir Thomas Sowler and Sons and Messrs. Barber and Farnworth, Manchester. At the termination of his apprenticeship, he was appointed foreman with the latter firm and in 1894 was appointed Manager of the Blackburn Printing Works of Messrs. George Toulmin and Sons of Preston, Blackburn and Accrington; in 1898 appointed in London, Superintendent of Messrs. W. Newman and Co.'s Press in Calcutta; in 1903 to a similar position in Messrs. Thacker Spink and Co.'s Press; in 1905 to his present appointment.

Since 1894 he had been purchasing and examining large quantities of paper and printing and stationery materials, and had a wide experience in the organisation and control of establishments connected with paper, printing and stationery. While in Blackburn he was afforded facilities for the study of the manufacture of every class and kind of paper at the Darwen Paper Mills, one of the mills connected with the Paper Stainers' Association.

He considered that the present establishment of the Controller of Printing, Stationery and Stamps could be taken over, as it stood, as a separate branch in the central purchasing agency and that the existing supervising staff was sufficient to carry out the work of purchase and inspection of paper, etc.

All Departments of the Government of India and of local Governments, except Bombay and Madras, obtained their supplies of stationery through his department. He could not say why Bombay and Madras stood aloof. In actual practice, Madras asks him to call for tenders for its requirements of paper and for his advice thereon before concluding contracts. The paper manufacturers in Bengal did not on one occasion respond to calls for tenders from the Bombay Government, and were not generally anxious to do so at any time. The Bombay Government imported most of its requirements. Consequently he had not experienced any undesirable competition on account of the present arrangement. Madras and Bombay should, however, come into line.

Cases of independent purchase of paper by departments of the Government of India, and of local Governments, at unnecessarily high rates had come to his notice, and he had frequently been able to secure substantial reductions in price. These transactions had usually been entered into through ignorance of the existence and scope of the work, of the Stationery Department. Failure to appreciate the true intimacy between stationery and latrine paper had led a military supply department to conclude the contract for the supply of latrine paper of Indian manufacture in considerable quantity for a long period without consulting the Controller of Stationery, who on hearing of it was able to arrange a reduction in the rate already agreed upon, which represented a saving to Government of about two thousand and five hundred rupees per month throughout the period of the contract.

All stores purchased by the Controller of Printing, Stationery and Stamps for Government Departments were examined and proved to be of efficient and good quality before issue. When, for convenience and economy, paper was despatched direct from the mills to the consumer, one sheet of each quality was sent to Calcutta for examination before the bills were accepted and paid.

The inspecting staff had become experts through a long experience in handling and usage of paper. Experience of actual manufacture was not necessary for a paper testing expert. Though chemical tests provided useful information, they were not of much real practical value, and a scientific training was not sufficient, in itself, to make a man an expert paper inspector.

The Indian Munitions Board had supplied the Controller of Stationery from time to time with very useful information regarding articles which could be made in India. It was largely through the efforts of the Controller that the manufacture of pencils on a large scale had been commenced in India. The results up-to-date had not been altogether satisfactory but the manufacturers were making real efforts to overcome the difficulties in their way and to improve the quality. The cheaper forms of inkpots issued were of china and were similar in appearance to, and of as good quality as, those previously imported.

J. H. WHITE, Esq., C.M.G., Agent, Eastern Bengal Railway.

Written Statement.

Question 1. My answer to this question is in the affirmative.

By the formation of a central purchasing agency I am of opinion that the following improvements will accrue:—

(*a*) Complete control over the requirements of the different consuming departments with the resultant effect—prevention of accumulation of excessive stocks, and waste of funds will be avoided.

(*b*) The introduction of standardization in certain classes of material which will lead to a further reduction in expenditure.

(*c*) Purchasing material procurable in the country at the lowest possible price, thus reducing competition down to a minimum.

(*d*) Obtaining the quickest possible deliveries by purchasing in large quantities, which would naturally be an incentive to business houses to hold larger stocks than they do at present and at the same time offer more favourable rates for supply.

(*e*) Obtaining material of an indigenous nature and thus fostering and developing the resources of the country.

(*f*) An incentive to local business houses and British manufacturers at Home to develop and extend their connections out here and to permanently invest capital in India, and thereby assisting in the development of the Industrial scheme recommended in 1918.

Question 2. The formation of a central purchasing agency should, in my opinion, be governed by the following:—

As Calcutta is considered the leading commercial town in India and Bombay and Madras come next in order of importance, it is self-evident that the head of the central purchasing agency should be appointed to live at Calcutta and that divisions formed of experienced and qualified officers should be placed under his direct control at each place. These divisions would naturally deal with all indents submitted to the Controller who would be entirely responsible for the supply of material required. Working in conjunction with these divisions, I advocate the formation of district or provincial subdivisions which would deal with all items of local manufacture or of indigenous origin and which can be produced in their respective districts. The staff appointed to be Divisional or District Officers should be men who are scientifically trained, and they should have suitably trained workmen to co-operate in productive effort. The divisional and district sections of the purchasing agency should be so organised that they will be competent to arrange for supplies of material required by the different consuming departments. It is not necessary that the purchasing agents should have a knowledge of the practical application of the material which they buy, but they should be fully protected by specifications and standards to guide them in their duties. A system of bids and prices should be maintained. Their organisation should be systematised so as to handle the demands placed on them in the least possible time, which means that their data should be so arranged that the indenting departments will not be kept waiting for their requirements. Every day saved in the handling of demands saves complaints and at the same time reduces investment.

Question 3. I am of opinion that the central agency should not purchase stores where the consumption by the different services in one province does not amount to sums over Rs. 50,000 per annum. Further, there are several items, such as straw, bricks, baskets, country brooms and other material of a like nature, where the element of competition between the different Government and other departments does not materially affect the market. For materials of this and a like nature, I am of opinion that the different Government and other services should make their own arrangements, and that their purchasing agent should be empowered to do all the buying.

Question 4. I am of opinion that it would be advantageous for (*a*) local and *quasi*-public bodies, and (*b*) Company-owned Railways in India to procure their requirements through a central stores agency, and that they should contribute towards the maintenance of the central organisation. I do not advocate that British Colonies and Protectorates should be invited to join the central purchasing scheme for the following reasons:—

I am of opinion that the central purchasing agency will find the volume of work to be done so heavy that it will take them all their time to cope with the demands made on them by the different departments in the country. I do not think that purchases made in India at the present moment by British Colonies and Protectorates in any way seriously affect the markets to warrant their inclusion in the scheme. Moreover, suppliers would naturally prefer disposing of their commodities in the country if there is a market sufficiently large enough to keep them fully occupied.

Question 5. I am of opinion that the formation of a central stores department in India would be highly advantageous to all Local Governments. I have already suggested in my reply to question 2 what measures of decentralisation should be adopted.

Question 6. I am of opinion that to make the scheme a success, it is essential that there should be local agencies for the purchases of Local Government requirements, and in order that these local agencies should be placed in a position to deal with demands sent to them I have advocated the formation of three divisions at the chief centres of trade. In order that these divisions should be placed in a position to be able to supply the requirements of the district or local agency, I further advocate that contracts for the supply of material which is not procurable in the country be given to firms of standing in the three trade centres. The stipulation given to the successful tenderers should be operative on the following lines. The suppliers should be given a Priority Certificate which would empower them to ship material at a low freight and insurance and be landed in the country free of duty and other charges not now imposed on Government material and stores. Given these facilities firms would be given an incentive to cut their rates down with a fair margin of profit and at the same time would probably be agreeable to become the custodians of Government material and stores until such time as the same are required. On the other hand the local purchasing agency should protect itself by insisting that supplies should be up to the specification and standard required, and that any failure to comply would lead to a heavy penalty being exacted from the supplier, provided always that the latter were given a reasonable period in which to meet the orders placed upon them.

Question 7. I have not had any experience of the existing system by which Government calls for tenders for the supply of stores, but make a few suggestions on the subject.

Writing on the subject of my own experience and from what I have gathered from others, I find it is customary to call for tenders for materials without any specifications and very often without standard samples. Tenders are accepted as often as not at the lowest price consistent with the quality desired. The officer advising on the tenders may know from past experience that certain firms are not to be trusted to carry out the contract satisfactorily, but may hesitate to express his views and may acquiesce in placing contracts against his judgment, because by so doing he avoids trouble and possibly the suspicion that he has personal reasons for not recommending the lowest tender.

Again summaries of price quotations will not necessarily show whether or not every effort has been made to tap the best market. Moreover, under existng conditions the purchasing agent has always been so handicapped with his ordinary duties that he has never been able to find time to study this question properly. On the other hand Government has hitherto failed to assist him in overcoming this want of knowledge by not affording him facilities by which means he would learn where the market exists. It is only during the recent war that the Industrial Department of the Government of India have taken the trouble to inform buyers of the manufacture of certain articles which were until then a sealed book to most of the purchasing agents in the service.

I would, therefore, advocate that in calling for tenders the system followed should be as indicated below:—

(*a*) That purchases are made to the best advantage, *i.e.*, at the lowest price consistent with the quality desired.

(*b*) That every effort is made to tap the best market and that no unfair advantage is given to one firm over another.

(*c*) That the contract is placed without regard to any personal or other irregular considerations. Further, that tenderers should be allowed to quote not only for the makes actually specified but for other similar makes, and though it may be that supplies of the particular brand will be purchased it will be on the basis of a competitive rather than a monopoly price. In deciding between firms competing for the supply of materials it is necessary to take into account not only the price, point of delivery, reputation and capacity of the firm, but also the manner in which previous contracts have been carried out.

On the other hand, the firms tendering must not be left in doubt as to the exact description and quality of the articles required, and, wherever possible, sealed patterns should be available for inspection or lent to the firm as a guide in executing orders. It is also desirable that a standard specification setting out the chemical and physical properties required in the material and the nature of the tests which will be applied should be furnished to those who may require this information.

Question 8. My answer to this question is in the negative, unless the principle of running contracts is adopted. At the present moment most of the contracts in India and in England are for a year, and if the existing system is continued it is an impossible proposition to expect firms in India and England to quote simultaneously.

Question 9. I am of opinion that all inspection work should be carried out by the department responsible for the supply. To my mind this can be safely conducted by the purchasing or supply department if they are provided with sealed samples and specifications and have facilities for obtaining the results of chemical and physical tests.

Question 10. I am of opinion that inspection should be carried out by a special department attached to the purchasing department under the control of the central purchasing agency.

Question 11. This question can only be answered in a more definite way if one is placed in a position to know what arrangements will be made for carrying out inspection of material ordered. If it is finally decided to have a technically trained inspection section attached to the central control purchasing agency, the work required can, to my mind, be satisfactorily carried out by the inspection department, but if, on the other hand, a suitable inspection department cannot be formed on the score of expense, I am of opinion that for mechanical, electrical and structural works special men trained in these lines should be appointed to do any inspection necessary.

Question 12. This question is practically answered by the concluding paragraph of my remarks above.

Question 13. I am of opinion that it will be found necessary to have local inspection agencies only for materials produced in a province or circle of indigenous origin.

Question 14. The answer to this question is in the affirmative.

Question 15. I have already touched on this point in my reply to question 6. By granting firms whose tender has been accepted the facilities I have mentioned would lead to their becoming the stock holders of material required by the different services and would be the means of saving Government very heavy expenditure, which undoubtedly will be incurred if they form their own warehouses. It might be argued that firms would be unwilling to undertake to store material required by Government, but, on the other hand, if a system is introduced where arrangements for the requirements of the different services are made in advance, it will be found unnecessary to throw a great deal of the burden of storing the entire material ordered on the suppliers at the same time. British manufacturers in England would undoubtedly be ready to establish themselves out here if they were assured that there is a large market for their commodities.

Question 16. My answer to this question is in the affirmative.

Question 17. The only suggestion I can make on this question is as follows:—

Until normal conditions in trade are resumed, a register of all rates paid for material will need to be maintained, and particulars of prices ruling in England will from time to time have to be obtained from the Director-General of Stores, India Office, Whitehall, London. Local business houses in India will doubtless in due course issue priced catalogues, and when this takes place it will be possible to obtain the information required more readily. At the same time as soon as things get more settled at home the Direcor-General of Stores will be able to give rates that will remain firm for some time.

Question 18. As far as my experience goes I do not think it advisable for the central purchasing agency to procure materal outside the Empire, except through the agency of the Director-General of Stores.

Question 19. I do not advocate the formation of central stock depôts by the Government of India. With better control and standardisation I am of opinion that the existing Government Stores Departments of the different services could accommodate a lot of the material earmarked for the central purchasing agency and make despatches as ordered. Further, that with encouragement, local and provincial business houses will be prepared to accommodate material under contract with them.

The same remark applies to imported stores. Shipments should be made by the Director-General of Stores of all material purchased for a particular branch of the service direct, as at present, and the same on arrival in India would be cleared and sent to their respective destinations by Local Government agencies.

Question 21.

YEAR.	(*a*) Value of stores purchased abroad.	(*b*) Value of stores purchased in India.
	Rs.	Rs.
1910-11	*	87,000
1911-12	50,00,000	1,71,000
1912-13	66,00,000	3,00,000
1913-14	68,00,000	1,85,000
1914-15	88,00,000	23,00,000
1915-16	63,00,000	10,00,000
1916-17	12,00,000	15,00,000
1917-18	6,00,000 †	14,00,000
1918-19	9,00,000	17,00,000

Values given in round figures.
* Information not obtainable for 1910-11.
† Fall in amount is due to the war.

Under (*c*) I am unable to give the figures as no proper record has been kept and the data obtained from the Audit Department shows that the amounts given include various charges which do not apply.

Question 22. (*a*) A rate register is maintained.

(b) A register is kept of firms who fail to fulfil their contracts, but from past experience I have found that the maintenance of a register of this nature is only necessary for a few petty native firms. No trouble has been experienced in the case of European and large Indian business houses.

Question 23. My answer to this question is in the affirmative.

Question 25. My answer to this question is in the negative.

Question 26. I am personally of opinion that recruitment for the staffs of central and local stores departments should be confined to men trained in the country. Given the facilities and the opportunity I see no reason why the service cannot be recruited in the country by technically and scientifically trained men. In the past it has been possible—in fact quite usual—for men possessing sound commonsense and business capacity, although devoid of scientific training, to rise to positions of great importance.

Question 27. My answer to this question is in the affirmative.

Question 29. My answer to this question is in the affirmative.

Question 30. I am of opinion that it would be an advantage to arrange interchanges of *personnel* between the Home and India Stores Department.

Mr. F. W. Wadley, Controller of Stores, Eastern Bengal Railway, called and examined.

Mr. Wadley, represented the Agent, Eastern Bengal Railway and was examined on that officer's written statement.

Witness had been Controller of Stores, Eastern Bengal Railway, since 1908. Previous to that, he had been 13 years as Temporary Engineer on North Western Railway.

The practice on the Eastern Bengal Railway was to maintain a stock sufficient for eighteen months, which was replenished once a year on the basis of the average consumption during the preceding three years. The annual home indents and the demand for country stores, each took about four months to compile. The period of the contract for the supply of country stores was one year and though the contractor was bound to supply the full quantity offered, if and as required, the railway was not bound to take more than 75 per cent. of the full contract quantity. This was unsatisfactory, from the supplying firm's point of view, and he recommended that all running contracts should be for period of not less than two years as variation of demand from the average was likely to be less marked over longer periods. This would also enable firms to offer lower rates than the uncertainty, regarding the continuance of the contract during the succeeding year and the risk of having 25 per cent. of the order left on their hands, permitted them to quote at present. When there was delay in the receipt of articles indented for from England, small quantities were purchased locally by tender from week to week, until the indented supply came forward.

The main troubles with Indian firms were quality and delivery. It was very necessary to examine all supplies carefully and quotations were often made which firms could not possibly fulfil. When purchasing imported articles from European firms of standing, it was customary to permit the firms to despatch, without inspection, direct to the indenting officer.

Surplus stores lists compiled by the various railways and Government Departments were not worth the expense of their compilation. The materials shewn in them were generally in bad condition. The chief cause of stores becoming surplus was hasty changes of policy by successive heads of Government Departments.

A central purchasing agency should on no account attempt to undertake the purchase of articles which were common produce throughout India and in the purchase of which competition did not arise, such as lime, bricks, baskets, furniture, etc. Otherwise the volume of work would be found to be too enormous for any centralised Department to deal with. It would be enough in his opinion if the Central Agency confined itself to dealing with home indents and the purchase of stores in India, for which the various railways and departments at present made separate annual contracts. He would also exempt the purchase of stores peculiar to any one particular department from the sphere of a central agency.

Standard specifications should be drawn up for as many articles as practicable. These specifications should be concise and explicit and not be padded out with elaborate details. The India Office specifications would be useful guides.

The central agency should be split up into branches which would take the place of the Consulting Engineers now employed by the Director General of Stores, India Office. These branches should be held responsible for preparing designs and drawing out specifications, appertaining to the particular work of each branch; and also for the inspection of all work which came through the branch. The heads of these branches might be called Chief Technical Advisers and separate branches should be established—ordnance, steel structural works, mechanical and electrical engineering, railway locomotives and vehicles, etc. Inspectors should have no power to permit any departure from specification.

Reliable and trustworthy inspecting staff under a central control, but distributed over India as required, was the most important factor for the success of the central agency. There was urgent need for the expansion of the test house and staff at Alipore. Even now, it sometimes took two or three weeks to obtain the results of tests, and few firms would keep offers open so long.

If a central purchasing organisation were established, it would still be necessary for railways to maintain stores depôts of their own, but these could be on a smaller scale than at present and in charge of officers of the rank of District Controllers of Stores who would be eligible for appointments in the central agency. As the important purchases made at present would be arranged by the central agency, railways participating in the scheme, would probably find it unnecessary to retain officers of the present rank of the Controller of Stores. These officers could be absorbed very usefully in the central purchasing agency.

In the beginning, the central stores depôt should be staffed by men selected in India and well acquainted with the country. The future recruitment should be done in India from youths with a technical college education who, after a period in the lower course of the Stores Department in India, should be sent to England for two years' training in the Home Stores Department.

The Director of Stores in India should be chosen for administrative rather than technical qualifications.

At Calcutta, Tuesday, 6th January 1920.

PRESENT:

Sir FRANCIS COUCHMAN, K.B.E., M.I.C.E. (*President*).

A. W. DODS, Esq.
H. N. HESELTINE, Esq.
Lieutenant-Colonel C. C. H. HOGG, C.M.G., R.E.
Brigadier-General H. A. K. JENNINGS, C.I.E.
LALJI NARANJI, Esq.
Rai Bahadur LALA MILKI RAM.

J. C. HIGHET, Esq. (*Secretary*.)

The Hon'ble Dr. Sir NIL RATAN SIRKAR, Kt. M.D., Vice-Chancellor, Calcutta University.

Written Statement.

Question 1. Yes. I support the proposal for the formation in India of a central agency for the purchase of stores by departments of Government for the following reasons:—

(*i*) It would be a very convenient machinery for the supply of articles required by Government and would often help the departments in procuring their requirements much more quickly than at present and at a moderate cost.

(*ii*) It would afford the departments proper opportunities for purchasing articles suited to their needs.

(*iii*) It would help the organisation and development of industries in this country.

Question 2. It would, I think, serve the purposes of departments such as the Army, Railways, Royal Indian Marine, etc., if the central agency is manned by officers having experience of the requirements of the various departments

Question 3. The central agency should be precluded from purchasing two classes of articles. These are: (1) such requirements of Local Governments as are manufactured in their respective provinces; (2) such articles as are not procurable in India. Articles of the first category should be purchased by provincial agencies and those of the second, by the reconstituted stores department of the India Office, indents being sent through the central stores agency.

Questions 4 and 27. It would be advantageous for (*i*) Company-owned Railways and (*ii*) British Colonies and Protectorates, which buy stores in India, to make their purchases through the central stores agency. If they do so they should be expected to contribute towards the maintenance of the Stores organisation. The cost of the central and local purchasing agencies may be met by the percentage charge on orders placed with them. Local public bodies like district boards, municipalities, etc., should have the option of making their purchases independently or through the stores agency.

Questions 5 and 6. Provincial stores agencies should, I think, be established for meeting the demands of the Local Governments. The most convenient arrangement, in my opinion, would be for Local Governments to purchase their requirements through the respective stores agencies. The balance of the requirements of each Local Government should then be procured through the central agency, which should purchase the articles needed by the Local Governments and the Government of India departments through the provincial agencies and the central stores. The remainder of the requirements should be procured through the Stores Department at the India Office.

Question 8. Yes. It would not only be possible but also advantageous to have a system of simultaneous tendering introduced in India and England for important contracts on behalf of Government.

Question 9. In the interest of efficiency, it is essential that in certain matters the consuming departments, while in others the department responsible for industrial development, should be able to dictate the policy of inspection. The departments may be expected to come to an understanding after they have gained experience in the working of the stores agency.

Questions 10 and 13. Yes. There should be local inspection agencies for provincial agencies for the purchase of stores for Local Governments. Attached to the central agency there should be an adequate staff of trained Inspectors possessing expert knowledge. Provincial agencies should avail themselves of the services of a number of these officers who, so long as they are deputed to work under provincial agencies, should be entirely under their control and supervision.

Question 11. Yes, for instance the Army, the Royal Indian Marine, with a view to procuring suitable articles for special needs of the departments.

Question 12. Yes. Scientific instruments and also complicated machinery for the special industries of tanning and boot-making.

Question 14. Of course.

Question 15. It would be advisable not to allow purchase of European imported articles (except in respect of such as are not manufactured in India), as such purchases is likely to prejudice the development of industries in this country. The effect of the concession would be—

(*a*) Holding of larger stocks by the firm.
(*b*) Reduction of the possibilities of the firm establishing manufacture in India.

Question 16. Yes.

Question 17. It ought to be possible to make arrangements for compilation of price lists of articles obtainable both in India and England, quarterly.

Question 18. There may arise occasions when Government may require for very urgent purposes articles which are procurable in countries other than the United Kingdom. With a view to avoiding delay such articles may, in exceptional circumstances, be purchased from abroad otherwise than through the Director-General of Stores at the India Office.

Question 20. Central stock depôts should be established at Calcutta and Bombay. They should be maintained for Indian as well as for imported stores.

Question 23. Yes. If not at once, after some time.

Question 25. Yes, in the case of local and *quasi*-public bodies.

Question 29. I think, yes.

Question 30. Yes.

The Hon'ble Dr. Sir NIL RATAN SIRCAR, called and examined.

In his written reply witness had contemplated a central stores department under the Government of India which would exercise no actual purchasing functions in India, but would be kept informed of the activities of purchasing agencies established under the various local Governments and would therefore be able to offer advice to the different provincial agencies as to where it was best to buy. His sole reason for preferring that the actual purchasing agencies should be under the Local Governments was to ensure that each Province would be able to give preference to its own particular products in meeting its own requirements. If it were laid down that, when a Local Government expressed a wish that certain of their own requirements should be purchased from factories situated within their own Province, the central agency should only point out where similar articles could be obtained better or cheaper and should have no power to over rule the final wish of the Local Government, then there was no objection whatever to one central agency, which would make all purchases through branches located throughout the country.

In his written reply to question 9 he meant that in certain special articles, such as glass for lenses, surgical instruments, etc., it was essential that the final decision regarding suitability should rest with the consumer. There were, however, many articles in which some relaxation might be insisted upon by Government in favour of the local product. This was the policy of the Calcutta University who would prefer a better quality of paper but put up with the best they could obtain of local manufacture.

Local bodies should give preference to their own local industries and if they were encouraged to make use of the central purchasing agency he was of opinion that small local industries would in many cases suffer.

T. N. BANERJEE, Esq., C.E., Superintendent of Stores, Corporation of Calcutta.

Written Statement.

Question 1. Yes. My reasons are as follows:—

(*i*) Such an agency with a suitable organisation, keeping itself in touch with the requirements of the various spending Departments of the Government on the one hand and the sources of supply on the other, is best calculated to foster the growth of new and promising industries.

(*ii*) By purchasing in bulk and eliminating competition between various departments of Government who are wholesale buyers, it is likely to secure the most favourable rates for the purchases.

(*iii*) It will secure economy by accumulation preventing unnecessary of stocks in one centre and transferring them to another and by disposing of obsolete stores to the best advantage.

Question 2. I am not in possession of sufficient information to give a definite reply to this question. But if the Indian Munitions Board which was an emergency organisation could meet, even with partial success, the requirements of these departments during war time, there is no reason why the proposed central agency will not be able to meet their requirements in normal times with complete success.

Question 3. Unmanufactured country produce which can be had locally need not be purchased through the central agency. Purchase of such materials may be left to the heads of Government Department requiring them.

Question 4. Yes, but the local bodies such as the Corporation of Calcutta will only be able to take a limited advantage of this organisation.

Question 5. Yes. Assuming that there will be an Imperial Department of Stores under the Controller General of Stores and in each major province a provincial department under the Director of Industries. I entirely agree with the Industrial Commission's proposals set forth in paragraph 197 (Appendix I). Any proposed measures of decentralisation will be tentative and will have to be considerably modified in the light of future experience.

Question 6. Please see answer to the foregoing question.

Question 8. Yes, simultaneous tendering in India and England for important contracts is possible and is also very necessary, as one of the objects for the establishment of this central agency is to secure the best possible advantage for the Government.

Question 9. The policy of inspection should be dictated by the department responsible for the industrial development of the country, which is the main object for the establishment of this agency. But the interests of the consuming department will be secured by having on the personnel of the stores department men who have had experience of the requirements of these special departments.

Question 10. Yes.

Question 13. The inspection should be carried out by central inspection agency, which will serve the purpose of disseminating useful information from one province to another.

Question 15.—

(*a*) When the articles are already in India at the time of order, and their price and quality are not unfavourable as compared with those at which similar articles could be obtained through the India Office.

(*b*) When as the result of simultaneous tendering in India and England favourable rates are obtained in India.

(*c*) In all cases where serious inconvenience to the public service would be caused by waiting to obtain an article from England.

Question 15 (*a*). If the restrictions now imposed on the purchase of European stores are removed, the Indian branches of British manufacturing firms are likely to hold bigger stocks than at present.

Question 15 (*b*). There will be a greater inducement for the firm in establishing manufacture in India.

Question 16. Yes.

Question 19. Yes.

Question 19 (*a*). In that case it will only be necessary for Government Departments to hold stock sufficient for consumption for a limited period and thus it will prevent any unnecessary accumulation of stock.

Question 20. In Calcutta and Bombay. These stock depôts should be maintained for imported stores and only to a limited extent for a certain class of manufactured Indian articles.

Question 21.—

(*a*) About a lac of rupees.
(*b*) About 7 lacs.
(*c*) About 18 lacs.

N.B.—Only approximate figures are given.

Question 22.—

(*a*) We prepare a schedule of prices every year and this is filed in the records.

(*b*) We have no special record for this purpose, but as my department is in close touch with local firms whom we deal with I have a fair idea of their equipment, etc.

Question 23. Yes, as this will be one of the functions of the central agency.

Question 26. I have not had sufficient time to consider this matter in detail. But from what little experience I have gained during the last fifteen years both as an engineer and a stores man I venture to think that the Controller General of Stores and the heads of provincial organisations should be *non-technical men* of proved administrative ability and wide experience. There appears to be a sort of want of sympathy between the stores purchasing and consuming departments. In the early stages, at any rate, a great deal of success of this central purchasing scheme will depend on the good will of the various spending departments of Government. It will, therefore, be necessary in the very beginning to ensure that they have no legitimate grounds of complaint. This, in my opinion, can only be done by recruiting officers subordinate to the directors from amongst men who have had a great deal of experience in the matter of handling and distribution of large volume of stores.

Question 27. No. If the primary object of this scheme is to develop and foster the industries of the country, the cost should be a charge on the revenue.

Question 28. This may be briefly described as follows:—

Stores are delivered to the stores department according to orders placed. A receipt in triplicate is made out for all stores received in the store depôt. One copy of the receipt is handed over to the vendor and the duplicate copy is sent to the audit department. No bills are received in the Stores Department. They are sent direct to the audit department by the vendor supported by the receipt granted by the Stores Department. Two sets of ledgers are maintained. One in the depôt and another in the audit department. The one is a duplicate of the other except that the depôt ledgers are only numerical ones and the audit department ledgers are priced ones.

A half-yearly balance return is sent to the audit department and the depôt ledgers and audit ledgers are compared. The balance of stock in various depôts is checked at least once a year by a stock verifier of the audit department in the presence of the depôt store-keeper. The discrepancies, if reasonable, between the actual stock and the ledger balances, are adjusted immediately. Any unusual discrepancy which cannot be satisfactorily explained is reported to the Chairman of the Corporation, and is adjusted under his orders.

Question 30. Yes.

Mr. T. N. Banerjee, called and examined.

Witness had organised the Stores Department of the Calcutta Corporation on its present lines and had been Superintendent of Stores since November 1911. Previous to this he had been Engineer and Secretary, Patna Municipality, for five and a half years and was an Assistant Engineer in the firm of Messrs. Martin & Co., Calcutta, for two yers.

He purchased all stores and materials required for all departments of the Corporation, except heavy machinery. Requirements were compiled annually. The normal stock of imported articles was about one year's consumption. Maximum and minimum limits for the stock of particular classes of country stores had been fixed and these stocks were replenished from running contracts made annually. A register of reliable firms was maintained. Tenders were called for by advertisement but tender forms were supplied only to registered firms. The tenders were opened by the Deputy Chairman of the Corporation and the recommendations of the Superintendent of Stores were considered by a Committee. For certain imported stores tenders were invited not only from firms represented in India by branches or Agents but also from firms in England who had no representatives in India. Ample time was allowed for the firms in England to send out their tenders. All the tenders were opened in Calcutta. The Corporation were not represented in England and there was no inspection of imported stores before shipment. In a few cases the supplies, when received, had been found not to comply with the specification but a satisfactory settlement had always been arrived at amicably. On the whole, there was seldom much difference, one way or the other, between the prices quoted for imported articles (when not purchased in bulk) by firms in India and in England.

When he wrote his reply to question 4, that local bodies such as the Corporation of Calcutta would only be able to take limited advantage of a central purchasing agency, he had taken it for granted that road and building materials and coal, which formed the bulk of their purchases, would not come within the scope of the agency. He would furnish a list of articles which he considered consuming departments should be allowed to purchase themselves. He thought that the Calcutta Corporation would be glad to obtain all imported articles through the Agency and also possibly articles manufactured in India, provided they had not to pay any extra charge and there was no delay in the supply.

He had found that technical men were apt to get into grooves and if appointed to administrative posts were often inclined to attach undue importance to the particular branches of the work, in which their personal interest was greatest, to the detriment of the other branches.

He recommended that, in the beginning at any rate, local bodies should not be charged for the services rendered to them by the central agency in the purchase of stores manufactured in India so as to popularise the Agency and indirectly to assist Indian enterprise.

There should be interchange between the staff in India and in England so that the practice in India might be kept up to date.

Brigadier-General H. A. Young, C.I.E., C.B.E., R.A., Director of Ordnance Factories.

Written Statement.

I attach a note of answer to the questions with which I am concerned. The time available and the press of work has prevented as careful an examination of the questions as I would like; moreover, so much depends on the nature of the organisation to be established.

2. The Ordnance Factories are of a somewhat special character in this matter, as they must be prepared at all times to meet the requirements of the Army and their productions must be of the highest class of workmanship and of material. Large stocks have therefore to be maintained, and frequently these stocks must consist of material of a better quality than that used by other branches under Government. Thus the keynote for us is immediate availability of material and maintenance of our standard of quality of material.

Question 1. Yes, up to a certain point. Reason: there is undoubtedly a good deal of competition among Government departments, and also between them and semi-government departments such as Municipalities and Trusts, which must tend to force up prices. There were instances of this during the war. The formation of a central purchasing agency, which would issue distribution orders after tenders had been accepted, would, in my opinion, tend to keep prices down.

Question 2. No, providing specifications exist, there is proper inspection and conditions are rigidly adhered to.

Question 3. Yes. In Ordnance Factories a very large amount of material is in the highest sense special and far above the average quality demanded by work of a non-lethal or non-military character. Such material should, for purchasing purposes, remain under the Director of Ordnance Factories. There are also a number of small items which would naturally remain for local purchase.

Question 7. The Director of Ordnance Factories' office calls for a certain number of tenders and the various factories call for a good many more. The system is rather cumbersome and slow, and there are some conditions which firms of repute find irksome, but on the whole the system is not a bad one, and is capable of improvement on lines of detail rather than on lines of principle.

Question 8. I am not quite clear as to the precise meaning of this query, but as I understand it, it resolves itself into a question of stock and time. The Ordnance Factories have to carry large stocks to cover expenditure between supplies, and on the time between supplies depends the stock. There is a further stock, more correctly known as reserves, which has to be maintained for grave emergencies, but which can be trenched upon to cover gaps in supply under certain precautions. It can therefore be taken that the Ordnance Factories carry about nine to twelve months' supply, and this would give a margin of time for simultaneous tendering. We have now a further complication in the source of supply. We obtain stores from France, Italy, South Africa, Germany, Chili, Canada, Syria, England and Australia, among other places, and it appears fairly obvious that dealing with such a wide circle from two centres will only mean a loss of time and therefore a large increase in stock, with a corresponding increase of capital lying idle. There is nothing inherently impossible in simultaneous tendering, but it appeals to me as theoretical rather than practical. The question will to a large extent solve itself as Indian industries increase and India's resources are better known and developed. For instance, in the items of acetone and walnut India has replaced Canada as supplier and if it is desired to call for tenders for these items simultaneously the delay would be reduced by the time necessary to make inquiries in Canada from England.

One exception to the above generalities might be the case of stores (not materials) which are made both in India and England but cannot be made in Ordnance Factories.

Question 9. Unquestionably by the consumer, as regards quality; as regards location, it is a matter of considerable difficulty as far as this department is concerned; we have establishments at Conoor, Kirkee, Jubbulpore, Cawnpore and near Calcutta, and we have already a centralised inspection with headquarters in Simla; as this inspection is of necessity in the closest touch with the Army Headquarters the Head Office is rightly placed, but the delay caused thereby to outlying factories is certainly very great. This delay is at present almost solely on questions of design, sometimes of serviceability, but if thereto we add suitability of raw material, further delay seems inevitable, and that would be serious in an emergency.

Question 10. There is no objection to a central agency for inspection, provided that it is decentralised sufficiently, but it must be absolutely distinct from the purchasing agency; the only possible link would be at the very top of the organisation. The functions of inspection and purchase are so fundamentally opposed to each other that any attempt to combine them under one control (save in the most shadowy form) must inevitably lead to disaster.

Question 11. The Ordnance Factories certainly require a special inspection organisation on their lines on certain articles though on other articles they would be content with the general inspection. I do not think that a special staff of the central agency would be necessary, as the factory staff, who are experts in their own lines, would be quite competent to carry out inspection as they now do. As the Superintendent of a factory is responsible for the serviceability of his outturn, I consider it only fair that he should control the quality of the raw material in important items.

Question 12. Generally speaking, materials for ammunition, harness and saddlery, guns and their carriages, rifles and machine guns require expert inspection. Putting it very broadly, a failure in the field of such items would lead to serious disaster and loss of life, and material which for example might be quite good enough timber for a country cart wheel, where a breakage is at the most only a matter of annoyance and delay, might prove quite unsuitable for a gun carriage wheel, a failure in which might lead to a military reverse.

Question 13. This is largely bound up with questions 9 and 12. Certain standard articles, such as oils, could well be inspected by the central agency at the main points of supply, *e.g.*, Calcutta, Karachi, Bombay, Madras. Again, walnut for rifle stocks and wood for gun carriages, etc., might have a preliminary rough inspection at the source of supply by a local agency of the central agency to throw out stuff which it is absolutely obvious will be unsuitable. This is a measure of sheer economy in freight and rolling-stock. The extent to which local agencies should be independent of the central agency appears to me to depend on the type of man employed and his salary, but there should be general standard of inspection and inspection and purchase must be separated. A system of Indian Imperial inspection recruited from Provincial inspection or purchase would appear to be the best solution.

Question 14. I think so. The Stores Rules are somewhat inelastic and are a source of great inconvenience in a case of urgency. The more India becomes self-supporting either in production or in stocks from private enterprise, the more surely the Stores Rules will have to be abrogated.

Question 15.—In my opinion the whole matter is one of urgency, and the responsibility must rest on the purchasing officer. An interview with an established Indian branch will result in a cable being sent home direct by the branch to the firm direct, and in direct supply. The saving in time may run to weeks, and more than counterbalance any slight increase in cost due to no tenders. Even in the best regulated offices there is unavoidable delay, and the more intermediate offices can be dispensed with the better.

I think that this concession would affect both (*a*) and (*b*) enormously and encourage them, but stocks held in India by private firms are likely to be more expensive.

Question 16. Not if it does not replace the scrutiny by the Director General of Ordnance. By scrutiny I understand compilation; alteration of quality or quantity could not be considered, and there should be no question of supply of something "just as good." Our demands, as I have said before, are largely specialised, and where a particular article from a particular firm is demanded, the demand should be strictly complied with or a reference made by cable to the demanding officer.

Yes, so far as it is done with a view to establishing manufacture in India of identical articles, *e.g.*, glass test tubes.

Question 17. Neither the administrative office nor the factories find any difficulty in keeping up information as to the prices of articles, though Home prices are naturally not quite up to date; they are practically so, however. It is simply a question of the number and distribution of bills and invoices, and you can get as many of those as you like to pay for, and also for the clerical labour to deal with them.

Question 18.—I have no remark to offer; but where there are reliable Indian agencies his intervention is perhaps unnecessary.

Question 19. Except possibly in the group of Calcutta Factories, I do not see that there is any possible advantage in the proposal as far as the Ordnance Factories are concerned. It appears probable that the extra handling, freight charges and overhead charges cased by the central stock depôt would entirely outweigh any advantages in the case of the Cawnpore, Jubbulpore, Kirkee and Cordite Factories, and in the case of local stores in any district I cannot see any advantage. It is surely cheaper and quicker to get delivery direct from the supplier in this instance.

As I stated before, it is vital that the Ordnance Factories hold stock and reserve for emergencies, and we are equipped to that end. If our stores were held in a central depôt common to all Government departments, they would either have to be earmarked, in which case there would be no advantage to any one, or else the Ordnance Factories could never depend on getting their own particular quality and material at demand on sight, which is an essential for efficiency. The accommodation required for stocks and reserves would be enormous for the Ordnance Factories alone. The foregoing covers (*a*).

As regard (*b*) I am not certain, but I think it would militate against firms holding stocks.

Question 20. Please see question 19.

Question 21. A rough summary is attached, figures in italics being estimates. Accurate figures would take many months to get out for each of the eight Factories concerned.

Amounts expended by Ordnance Factories for each year since 1910 are as under:—

Year.	(*a*) Stores purchased abroad.	(*b*) Imported stores purchased in India.	(*c*) Indian stores.
	Rs.	Rs.	Rs.
1910-11	13,08,761	38,382	14,27,109
1911-12	33,56,172	50,331	13,25,442
1912-13	41,06,222	43,674	15,76,674
1913-14	43,99,839	52,885	12,50,480
1914-15	34,10,202	1,37,913	41,85,247
1915-16	1,42,97,555	1,87,520	79,93,759
1916-17	1,66,53,178	*3,00,000*	1,59,68,946
1917-18	1,73,41,403	*4,00,000*	1,70,49,171
1918-19	*1,00,00,000*	*3,00,000*	1,42,75,892

Figures in italics estimated.

Question 22. Factories, as well as the administrative office, keep up a bill book in some form or other from which (*a*) is fairly readily obtainable. The Quarterly Return also gives much information.

As regards (*b*) there is no regular machinery, but the firms are on the whole well known to the factories who deal with them and a good deal of quiet unofficial visiting goes on. This is not quite satisfactory, as it leaves things too much to the personality of the staff of a factory at any particular moment. Some officers are naturally curious and look for information; others are content to administer inside the four walls of their establishment. There are also firms who object to their methods, etc., being known. On the whole, however, I think we have a good deal of information, and exchange of ideas and a more cordial working with firms might, I think, be more encouraged than they are.

Question 23. I very much doubt it. The information would not, in my opinion, be reliable and it would have to be collected from and disseminated over such a wide area that by the time it eventually reached the desired point it would be somewhat out of date.

Question 26. I do not think it would be easy to improve on the Ordnance Factories system. It only requires expansion.

The following is a brief outline of the system in Ordnance Factories. We do not hold that details could not be improved, but we do consider the system to be efficient.

The foundation for demands and indents is the intimation by the Director of Equipment and Ordnance Stores of his probable requirements for the next financial year. In the case of ammunition and rifles this takes the form of a Forecast and figures are generally fairly reliable. In the case of guns, gun carriages, harness and saddlery and all components for these three headings and for miscellaneous items such as barrack and hospital stores the intimation from the Director of Equipment and Ordnance Stores is of necessity somewhat vague, so that while it forms a basis for calculation, it must be tempered by a review of the past three years' annual average output and by our knowledge of the trend of development in equipment; on the data derived from the above the individual factories prepare their material and labour budgets.

In each factory there is an estimating branch in one form or another and also a store section. This latter is controlled, under the orders of the Superintendent, by the Commissary and is staffed by three or more Europeans, generally warrant officers and non-commissioned officers with arsenal or factory training assisted by an Indian clerical establishment.

This store staff makes out demand sheets for material by multiplying the material per unit, by the number of units intimated by the Director of Equipment and Ordnance Stores. The demand sheets are criticised by the expert management concerned and the figures thus arrived at form the basis of the demand.

In addition to the demand we have in a factory to consider three other items:—

(*a*) Reserve. This is a stock fixed by the administration which can only be drawn on by administrative sanction, and which is designed to meet war requirements.

(*b*) A pre-operative period stock to cover the time before stores arrive.

(*c*) A working balance.

(*b*) and (*c*) are provided for by multiplying the Director of Equipment and Ordnance Stores intimation figures by a factor, generally 2½ for imported stores and 1½ for locally obtained stores.

For stores for shop use or which are not required by the Director of Equipment and Ordnance Stores intimation, the average annual expenditure over three years is taken and this is added on to the foregoing items.

From the totals of these five are deducted stock and dues at a date pre-determined by the administrative office. This is not a sheer guess as normal expenditure and shipments are fairly accurately known, and when other variants are considered, the nett result is fairly accurate.

The figures thus arrived at form the factory demand or the administrative office, and are submitted on single item sheets lasting a period of five years or more.

The store section of the administrative office is composed and recruited exactly as the factory store sections are, and is under the direct orders of the Assistant Director, Ordnance Factories, who confers with the Deputy Director, Ordnance Factories, as regards outturn, and the Civil Engineer Assistant on technical, mechanical and electrical details. Under his orders the demands from all factories are collected on to single item sheets, and stocks and requirements of the Ordnance Factories are reviewed as a whole. Nomenclature is checked, deficiencies in one establishment are adjusted by transfer of surplus stock in another as far as is practicable and economical, and generally everything is done in conjunction with the factories to see that what is required is demanded.

Having arrived at the total demand the administrative office then considers it from two other aspects, the source of supply and the budget, and if financial circumstances are bad, the demand is reduced to within budget limits and the deficiency from requirements is marked off against a future supplementary indent.

The Home indent is typed, checked and sent for printing and the factory sheets are returned with orders passed.

These would be—

(*a*) Demanded from England.

(*b*) Obtained from factory.

(*c*) Contract will be placed by Director of Ordnance Factories in India.

(*d*) Call for contracts and submit.

(*e*) Purchase as required.

(*f*) Ordered to be manufactured by—factory and action is taken by the administrative office or the factory accordingly.

To meet unforeseen demands by Director of Equipment and Ordnance Stores and to keep a check in some measure on stocks we have a system called R. S. D. (required stock, due) cards.

If a factory reports stock running low it does it by submitting the R. S. D. card made up to date, and the administrative office endeavours to put it in a satisfactory position by transfer or local purchase or a supplementary indent. Similarly when a forecast is first heard of (and we often get indirect notice) administrative office will call for R. S. D. cards from all factories concerned and will endeavour to balance stock and obtain money for further purchase.

Owing to the restricted financial powers of the Director, Ordnance Factories, references have of course to be made to Indian Munitions Board but the only trouble in this direction is extra clerical labour.

Until now the A. D. has been consolidated into an annual return but it has now been arranged that it shall go forward in monthly instalments. By this means we anticipate we shall spread the work more evenly over the year, and will get our supplies quicker, thereby reducing stock and idle capital.

Question 27. Yes, but the agencies should be run at bare cost and not be considered as profit-making concerns. Stocks should be on suspense account till actually distributed.

Questions 28 and 29.—Audit of purchase of stores is done for us by another department.

Question 30. I can see no objection: both departments would learn a lot, and efficiency would most probably improve.

Brigadier-General H. A. YOUNG, called and examined.

The practice in the Ordnance Factories was to have in hand imported materials sufficient for six months' consumption and to have on order and under the process of supply sufficient for another twelve months. A combined indent was prepared annually and sent to the Director-General of Stores, India Office, in December so that supply should commence about April following. Of materials obtained in India each Factory maintained three months' stock. All factories sent their demands for local stores to the Director of Ordnance Factories who decided which items each factory should purchase itself as required; for which items each factory should invite tenders separately; and which items should be grouped and supply arranged by him.

Witness maintained that the Ordnance Factories must be retained not only to set a standard to private firms but in certain cases secrecy was necessary in connection with the manufacture of a war store. He agreed, however, that providing all questions of quality and suitability had been clearly and distinctly settled when the specification was being prepared and were not allowed to wait over until the goods had been delivered, a certain amount of the materials used in the manufactures in Ordnance Factories could undoubtedly be obtained through a central purchasing agency, for instance hides, though he doubted whether any advantage would result in this particular item as probably a central agency would not be buying hides for any other Government Department and even if it were would not be buying the same class of hides which, for Ordnance Factories, were bought out of lime and not dry.

The best Indian leather had proved by test superior in strength to English leather though inferior in finish. During the war it had not been possible to obtain sufficient Indian leather of good quality and a good deal had to be obtained from Australia. The leather trade had been encouraged by part of the Army requirements of harness and saddlery being given out to selected firms but the war prevented any systematic development of this, as every possible firm was employed to assist and the best firms had to concentrate on boots. Early in the war India had been asked to make 10,000 sets of saddlery for the War Office. Half this order had been given to the Government Factory, Cawnpore, and the other half to firms. The former had been completed earlier and at less cost than the latter and many components had to be supplied by the Government Factory. Costing system in vogue in Ordnance Factories was sufficiently accurate to give reliable comparision with outside prices and would become increasingly accurate every year.

All Ordnance specifications were drawn up by the Inspection branch in consultation with the manufacturing branch. Many of the specifications come from the War Office and the only alteration usually permissible in these was the substitution of equally suitable material more readily available locally than that actually specified.

Once a manufacturer had accepted a specification as one to which he was able to work he should have no right to appeal to the consumer against rejections by the Inspector. In cases of dispute the final power of rejection should be vested in the authority controlling both inspection and manufacture in the case of Government Factories or inspection and purchase in the case of supplies from the trade.

The Head of the Inspection Department should be an administative officer but need not necessarily have technical qualifications.

The central purchasing agency should be recruited from men trained in India, as the cost of qualified men from Home would now be so high.

It was essential that Inspectors should be technically trained men but not necessarily with service as apprentice in workshops. At present the supply in India with these qualifications was unequal to the demand.

At Calcutta, Thursday, 8th January 1920.

PRESENT:

Sir FRANCIS COUCHMAN, K.B.E., M.I.C.E. (*President*).

G. H. COLLIER, Esq., C.I.E.
A. W. DODS, Esq.
H. N. HESELTINE, Esq., C.I.E.
Lieutenant-Colonel C. C. H. HOGG, C.M.G., R.E.
Brigadier-General H. A K. JENNINGS, C.I.E.
LALJI NARANJI, Esq.
Rai Bahadur LALA MILKI RAM.

J. C. HIGHET, Esq. (*Secretary.*)

The Hon'ble Mr. F. A. A. COWLEY, Secretary, Irrigation and Marine Departments, Government of Bengal and C. P. WALSH, Esq., Secretary, P. W. D. (Roads and Buildings and Railways, Government of Bengal.)

Joint Written Statement.

Question 1. So far as the Public Works Department in Bengal is concerned, a central purchasing agency is unnecessary.

Question 2. In our opinion the question does not arise.

Question 3. Yes; indigenous materials and articles manufactured within the province of Bengal from imported material. These should be purchased by a local or provincial agency.

Question 5. Not as far as Public Works Department in Bengal is concerned.

Question 6. To the extent only of machinery and plant imported in a finished state for a particular purpose.

Question 7. No.

Question 9. The consuming department. The industries of the country should be developed to meet requirements of consuming departments.

Question 10. By an agency independent of but under the same control as the purchasing agency.

Question 13. Inspection should be carried out by local inspection agencies.

Question 15. Purchase should be allowed freely at the discretion of the consuming officer acting under the advice of an expert inspecting agency—

(*a*) possibly to a very small extent;
(*b*) possibly not at all, but a firm has recently established manufacture in India. (Irrigation Branch.)

Question 16. It seems unnecessary and would result in delay.

Question 19. No—as far as Public Works Department in Bengal is concerned: there would be a tendency for small consuming departments to be supplied with old stock which could not be got rid of to the larger consumers.

Question 21. Amounts expended by the Public Works Department, Bengal.

YEAR.	(*a*) Value* of stores purchased abroad.	(*b*) Value of stores purchased in India.	(*c*) Value of Indian stores.
	Rs.	Rs.	Rs.
1910-11	1,16,618	1,95,829	59,880
1911-12	75,705	2,21,603	33,440
1912-13	92,896	1,90,217	63,598
1913-14	76,032	3,35,521	59,760
1914-15	27,074	5,04,498	1,62,688
1915-16	3,741	5,23,038	1,07,456
1916-17	*Nil.*	4,90,054	1,24,523
1917-18	2,789	7,08,659	1,63,474
1918-19	*Nil.*	4,15,153	3,61,188

* NOTE.—The figures for 1910-11 to 1913-14 do not however represent the full amounts spent as the records of the several Divisions have been destroyed.

Question 22. No special records are maintained by the Public Works Department in Bengal.

Question 23. Doubtful. It would certainly be their most useful function to the Public Works Department in Bengal.

Question 27. This would be reasonable for purchases actually made but not for advice only.

Question 28. Purchases are subject to the general audit exercised by the Accountant General's Department.

Question 29. Probably, provided the personnel of the Stores Department were more technical than the present audit personnel. But purchases should not be subject to audit by two separate departments.

Mr. C. P. WALSH, called and Examined.

A stores Sub-Division has existed in Calcutta for many years and a stores depôt has been maintained mainly for facility in taking delivery, and for the temporary storage, of imported stores. The Sub-Division and the Depôt are still maintained.

Executive Engineers make their own local purchases; it is usually difficult for them to forecast their requirements very far ahead on account of the uncertainty regarding the programme of works to be undertaken each year.

The tendency in the Public Works Department is to allow contractors for works to supply, to a greater extent than formerly, all materials required.

He had not intended to imply in his written statement that there was no need whatever for a central purchasing agency.

There is no special reason why the Provincial branches of the central agency should be in any way under the Local Governments.

If the agency included, on its inspection side, a branch skilled in the design of structures and in drawing up specifications, he thought the Public Works Department would make use of it with advantage.

T. A. FERRIER, Esq., C.B.E., Officer in Charge, Mathematical Instrument Office, Calcutta.

Written Statement.

Question 1. Yes. It would enable consumers to get articles cheaper and better, because a central agency would be in a better position to know the markets. It would also be in a position to judge the Government consumption of any particular item and get tenders in accordance with the consumption of the whole of India at one time.

It would enable consumers to get articles of country make as soon as they became available and were of a class fit for Government use.

Question 2. If the agency is to purchase for this Department, then it should have special arrangements for the inspection of surveying, scientific and military instruments.

Optical materials and scientific instruments should not be purchased by the central agency unless experts are on the agency staff.

Question 3. The remarks made against question 2 apply here also. Unless an expert is on the staff, these should be left to the consumer to purchase and inspect. The Mathematical Instrument Office is actually a central agency for purchase of scientific instruments, since it supplies all Government departments.

Question 4. Nothing to answer. No experience.

Question 5. Nothing to answer. No experience.

Question 6. Nothing to answer. No experience.

Question 7. Nothing to answer. No experience.

Question 8. Nothing to answer. No experience.

Question 9. Inspection should be dictated by the consuming department. This refers to istruments such as this office has to contend with, but not to materials and the like.

Question 10. Yes.

Question 11. Answer to question 2 applies here.

Question 12. Answer to question 2 applies here.

Question 13. No opinion to offer.

Question 14. No opinion to offer.

Question 15. Purchase of European stores through established Indian branches of British manufacturing firms should be allowed whenever the price is within a reasonable allowance. The amount of this allowance to be fixed after careful enquiries have been made.

(*a*) This would help towards stocks being held.

(*b*) If the firm can make a bigger profit by manufacture in India they would do so.

Question 16. Yes.

Question 17. No experience.

Question 18. The purchase of articles to be obtained from countries other than Great Britain should be left to the discretion of the central agency.

Question 19. I do not think central stock depôts would be advantageous for the class of stores this office has to contend with.

Question 20. No remains.

Question 21.—

YEARS.	(*a*) Value of Stores purchased abroad.	(*b*) Value of Imported stores purchased in India.	(*c*) Value of Indian stores.
	Rs.	Rs.	Rs.
1910-11	40,228	9,769	5,876
1911-12	45,640	7,877	5,205
1912-13	57,103	12,458	11,038
1913-14	86,199	15,267	14,468
1914-15	2,72,323	17,103	18,743
1915-16	1,67,004	23,046	9,654
1916-17	98,004	1,20,387	20,589
1917-18	62,167	4,54,703	45,244
1918-19	65,168	2,87,677	1,01,387

Question 22. Records of prices are kept in the ledger and stock books of this office.

Question 23. No remarks to offer.

Question 24. No remaks to offer.

Question 25. No remarks to offer.

Question 26. No remarks to offer.

Question 27. No remarks to offer.

Question 28. Local purchases are audited by the Examiner, Outside Accounts (or by auditors deputed by him), under the procedure laid down in the subjoined extract from audit instructions:—

"Store-keeper's memoranda of receipts (Forms 1 and 2) checked for four months as regards both quantity (or numbers) and value—

(*a*) for *receipts from England* . . .

(*b*) for *local purchases* with vouchers forwarded with contingent bills (obtained from Accountant General, Central Revenues' Office). In the case of retail purchases of material in the bazar, the items might be conveniently traced through the office contingent register."

Question 29. No remarks to offer.

Question 30. Sometimes perhaps, but not as a general rule.

Mr. T. A. FERRIER, called and Examined.

Witness had been in the Mathematical Instrument Office for twenty one years.

He knew no reason why the Mathematical Instrument Office should be under the Survey Department. The present establishment with certain additional staff, which he had already applied for, could form the nucleus of an expert inspecting staff for surgical and other delicate instruments.

At present it was customary for Government Departments requiring instruments of a special nature to send their own indents direct to the Director-General of Stores, India Office. He had nothing to do with the first supply

to the Army of optical instruments, such as binoculars and range-finders, but these were sent to him for repair. In fact his work consisted mainly of the repair and re-issue of instruments. He had no separate whole-time inspection staff. All examination was done by his workshop staff.

The staff at present employed in the Mathematical Instrument Office comprised :—

Designation.	No.	Pay.	Remarks.
		Rs.	
Officer in Charge .	1	800—50—1,250	Present incumbent is getting Rs. 1,100 after 21 years service in this office.
Managing staff.			
Works Manager .	1	700—50—1,000	Present incumbent is getting Rs. 900 after 16 years service with increment of Rs. 20 up to Rs 1,000.
Assistant Works Manager.	1	450—35—800	Just joined.
Assistant Manager (Optical Expert).	1	450—35—800	Just joined.
Workshop establishment.			
Upper Supervising Staff.	1	Rs. 250–10–300	
	1	Rs. 175–10–225	
	2	Rs. 125–5–150	
Lower Supervising Staff.	10	up to Rs. 100	
Workmen . .	546	up to Rs. 40	
Clerical Staff . .	22	Rs. 20 pay of last post up to Rs. 200 pay of Head Clerk.	

Sanction to the appointment of an additional Assistant Optical Expert had been applied for.

If the Mathematical Instrument Office undertook inspection for the whole of India one Mechanical Engineer Expert from England and four or five locally recruited men would be required to start with, and probably a second expert from England later on.

He considered that there was a good opening for scientific instrument manufacture in India and was in favour of encouraging the development by giving out work, as far as possible, but so far his experience of outside work had been disappointing. Instrument work was very special, but in his opinion the failure was not due to inability of the artisan to work to sufficiently high a standard but to the want of method and the absence of expert supervision in the outside workshops.

J. A. Simpson, Esq., Controller of Stores, Bengal-Nagpur Railway.

Written Statement.

I have considered the questionnaire from the Bengal-Nagpur Railway's point of view and am of opinion that as we have our head office in Calcutta we are particularly well situated both as regards the importation of materials and local purchases and therefore cannot see that the proposal of the central agency to take over the whole of our purchases is going to benefit the Railway Company sufficiently to warrant the change.

Questions 1 and 4 (b). I do not advocate the formation of a central agency for the purchase of all our stores, nor do I consider it advantageous for the following reasons :—

(*a*) It is too large an organization to work smoothly and efficiently, as it will mean extra handling of goods, extra correspondence and, in consequence, delays in deliveries.

(*b*) It will mean delays in the passing of bills, and in consequence firms will have to quote higher rates to cover the interest on their money.

(*c*) Work divided between two departments instead of one.

(*d*) A fixed commission will have to be paid to the central agency over and above the cost price, to defray working expenses, with little corresponding decrease in the working expenses of our Stores Department, which would still have to be maintained, as it cannot be expected that the central agency could arrange for the distribution of stores and the allocation of cost to the indenting officers.

(*e*) We should be obliged to order on the central agency irrespective of any advantage which may be obtainable through the fall in market rates.

(*f*) The Bengal-Nagpur Railway's interests are better protected by its own department than by a huge organisation such as the central purchasing agency, which has no particular interests to watch.

(*g*) With our head office in Calcutta we are in direct communication with the contracting firms and can deal with our requirements more expeditiously and economically than through a central agency.

Question 7. No experience of existing system by which Government calls for tenders. We have our own system.

Question 8. Provided the central stores agency has special cabling arrangements, it might be possible—even then, I doubt if it would work satisfactorily. Delays in the settlement of contracts are inevitable, as tenders could not be fairly criticized until they were all collected and a comparative statement drawn up. This would take at least a month to six weeks to collect, and in the meantime firms cannot possibly be expected to stand by their tenders which are dependent on the ruling market rates on the date tenders are called for or reasonable date thereafter.

Question 9. As far as railways are concerned, the consuming department should dictate the policy of inspection.

Question 10. I think it should be independent of the purchasing department, as it would prevent possible collusion, and the reports should be sent direct to the consumers for record.

Question 11. Yes, the Engineering Department for all classes of structural work, all building materials, sleepers, rails, fishplates, bolts and nuts, pipes, signalling gear, etc. The Loco. Department for all metals, spares, etc., for the manufacture and maintenance of locomotives. The Carriage and Wagon Department for all the timber used, vacuum brake gear, etc. The Electrical Department for all electrical plant. There is no objection to the inspection being carried out by such existing officers as the Metallurgical Inspector at Jamshedpur or the Government Test House at Alipore.

Question 14. As a Company's line we have our own rules.

Question 15. When it is not possible to manufacture in the country. If manufactured in the country, quality and value for your money should have first consideration.

(*a*) It would induce firms to hold larger stocks.

(*b*) The possibilities of firms establishing manufacture in India is dependent on the raw material and the labour obtainable.

Question 16. I do not consider it necessary for indents sent home being scrutinized by a central agency, as it is bound to lead to delays in forwarding the same. We have our Home Board and firm of Consulting Engineers in London, who know our requirements and are capable of handling all our indents satisfactorily, and I cannot see that the scrutiny of indents by the central agency is likely to be of any material assistance.

Question 19. Please refer to my answer to question 4 (*b*).

(*a*) The holding of stocks by Government departments would be greatly reduced, as they would naturally rely on the central stock depôt to hold their requirements and consequently reduce their stock to a minimum. Whether this is a sound policy, particularly in cases of emergency, is doubtful.

(*b*) It depends on the system of calling for tenders. If it is the intention of the central stores department to import as well as purchase in the country, then it is bound to be felt by the private firms. The ordering in large quantities in the country would be distinctly to the advantage of the larger firms. In time it would shut out the smaller firms, unless they could form a ring to compete.

Question 21.—

YEAR.	(*a*) Value of stores imported direct.	LOCAL PURCHASES. (*b*) Value of imported stores purchased in India.	LOCAL PURCHASES. (*c*) Value of stores manufactured in India of indigenous origin.
	Rs.	Rs.	Rs.
1910-11	..	..	..
1911-12	..	..	..
1912-13	..	..	..
1913-14	..	..	..
1914-15	..	..	..
1915-16	56,88,974	15,05,299	8,76,817
1916-17	16,60,241	30,68,641	5,68,346
1917-18	8,11,708	30,17,780	11,68,975

NOTE.—Re. 1 equals 1*s.* 4*d.*

Question 22. None.

(*a*) All price ledgers for five years are kept, and beyond that only particulars of important items.

(*b*) No system, except record of the firms who fail to comply with our orders in a satisfactory manner.

Question 23. Yes, provided you get the co-operation of the contracting firms, which I think is extremely doubtful, as naturally firms are very jealous about giving any information away, particularly rates, as it is likely to get into their competitors' hands.

Question 24. No knowledge of shipbuilding.

Question 25. Yes, as naturally it is to our advantage to encourage all enterprises started on our line, whereas if orders were placed through the central stores agency we should be obliged to accept whatever is offered.

Question 26. Yes, they should be recruited from men of commercial training with technical knowledge.

Question 27. Yes, it is the only way of meeting the working expenses.

Question 28. Bills are passed on the signature of the Controller of Stores on the certificate of the officer in charge of the depôt that the stores have been correctly received and entered in the stock ledgers.

Question 29. No, I consider our system efficient and cannot see that the creation of a central or local stores department is likely to exercise a more efficient audit on purchases.

In conclusion I should like to add that the policy of this railway has always been to encourage local enterprise, and anything in the nature of advice or reliable data from the Central Agency would receive our co-operation.

Mr. J. A. SIMPSON, called and examined.

After twenty years with Messrs. Jessop & Co. witness had joined the Bengal-Nagpur Railway as Controller of Stores five years ago.

The opinions he had expressed in his written statement were based on his experience of the Indian Munitions Board's methods. A central agency would eliminate competition in buying, but might also eventually eliminate competition in selling by conferring monopolies on larger firms, who, by mass production, would be able to keep out the smaller concerns. He considered the present system, in which different purchasing officers distributed their orders between different firms, to be preferable to centralised purchase. Of course, the central agency could make it its policy to distribute orders amongst several firms, large and small, but that would probably involve payment of higher rates to the smaller concerns.

The main work of his department was the distribution of stores and the allocation of the cost to the proper heads of railway account, so that even if the railway obtained its large annual requirements, which can be forecasted, through a central agency, the reduction in the stores staff, which would be possible, would be insignificant. On the whole, he would favour the creation of a central purchasing agency so long as it would be optional, and not obligatory, for Company-worked railways to employ it.

He had never tried simultaneous tendering in England and in India, but considered it impracticable as English firms could not be expected to keep their tenders open for the period required for mails to reach India. It might be practicable if firms were permitted to include in their tenders a clause allowing them the right of withdrawing their tender on the day it came due for submission if certain fluctuation in the prices of raw materials had occurred since the date of posting.

He had no objection to supplying copies of all home indents after their transmission so that a central department would be able to offer advice as to whether any of the items could have been obtained in India and to collect information regarding the demand for particular items for the benefit of firms contemplating manufacture in India. The end in view would justify the extra correspondence and work involved, as the industrial development from the fostering of local industries would benefit railways.

In his opinion all stores purchased on behalf of Government should have been manufactured in, and be obtained only from, countries comprising the British Empire and its Dependencies.

At Calcutta, Friday, 9th January 1920.

PRESENT.

Sir FRANCIS COUCHMAN, K.B.E., M.I.C.E. (*President*).

G. H. COLLIER, Esq., C.I.F.
A. W. DODS, Esq.
H. N. HESELTINE, Esq., C.I.F.
Lieutenant-Colonel C. C. H. HOGG, C.M.G., R.E.
Brigadier-General H. A. K. JENNINGS, C.I.E.
LALJI NARANJI, Esq.
Rai Bahadur LALA MILKI RAM.

J. C. HIGHET, Esq., (*Secretary.*)

Mr. MILLAR M. KING, nominated by Bengal Chambers of Commerce and the Indian Engineering Association.

Written Statement.

Question 1. Yes. Centralized purchase in India would be more economical of time and money than the present system, would make for greater efficiency; allow for closer scrutinising of Indents; and enable orders to be placed in greater volume in the country for stores either stocked or manufactured locally thereby encouraging local Industries.

Question 2. Special inspection arrangements would require to be made, chiefly I think for the Army Department and Railways.

Question 3. No.

Question 5. No, I would recommend local agencies in each of the larger Provinces. Or probably India could be divided into four North, West, East and South worked from Delhi, Bombay, Calcutta and Madras respectively with Rangoon of course working Burma.

Question 6. Yes. Departments of the Government of India should obtain all their requirements in the province of the local agency if suitable stocks are available, or manufactured, at competitive prices.

Question 7. Yes. No criticisms to offer.

Question 8. Yes.

Question 9. The consuming departments.

Question 10. No.

Question 11. Yes. I would suggest that all important consuming departments (such as those specified in question 2) have their own special inspection organisations.

Question 12. Yes.

Question 13. Yes. I consider it advisable that local inspection agencies be created.

Question 14. Yes. If the proposed organisation is created these rules would be required to be considerably revised.

Question 15. "Indian Branches of British Manufacturing Firms" is not clear. A fair field and no favour is all that the engineering concerns in India ask for. Given this it would follow that:—

(*a*) Larger stocks would be held.

(*b*) Local manufacture would also be encouraged.

Question 16. Yes.

Question 17. If the procedure laid down in Government of India Resolution (No. 4941—4988-12, dated 14th July 1909) were followed it would seem to meet requirements in this respect.

Attention is invited to paragraph 4 of the Resolution.

If the provisions of rule 10 of the existing Stores Purchase Rules were carried out this should meet the case. Attention is invited in this connection to paragraph 6 of a letter dated 22nd July 1912 from the Association to the Department of Commerce and Industry regarding the local purchase of stores for the public services in India.

Question 18. No.

Question 19. No.

(*a*) Stocks should be held by consuming departments as at present. The holding of large stocks by Government is not advocated on economic grounds.

(*b*) Stocks held by private firms will increase *pro-rata* with the local purchases made on behalf of Government.

Question 23. Yes.

Question 24. No. These rules should be entirely redrafted and brought into line with present day Indian capabilities.

Question 26. Only officials with expert knowledge and if possible with Indian experience should be appointed.

Mr. MILLAR M. KING, called and examined.

Witness had been twenty four years in India with Messrs. John, King Co., Ltd., and had been a Director of the firm for eleven years, and was at present Managing Director.

The establishment of a central Government stores agency with branches where necessary would be welcomed by engineering firms in India.

He thought that it would be inadvisable to place the supply of any Ordnance stores except those of general nature under a central agency. The standard of work required for such Ordnance stores as could be given to outside firms was not beyond attainment by firms in India.

Engineering firms in India had suffered hitherto from unfair comparison of prices as they were frequently asked to quote for only a small supply, and their prices were then compared with those quoted by home firms for a very much larger supply. If given a small trial order to test its ability, any firm should be able to calculate the price it could afford to accept for the production of the same article in large quantities.

He considered that simultaneous tendering would be practicable in normal times when markets were fairly steady as home firms at present usually reserved the right of withdrawing their tender in the event of fluctuation in prices between the dates of posting and of opening their tender.

If Government published all their requirements in India, firms would be able to decide on the best lines of development to meet the demand.

All Inspectors should be experts in the line of articles they were expected to deal with and should preferably be officers who had had experience in England.

For many items of miscellaneous stores, inspection before despatch by the supplying firm was quite unnecessary, and no firm of any repute would object to subscribe to the condition that supply was subject to acceptance at the consumer's depôt at suppliers' risk.

All stores purchased by or on behalf of Government should be of Indian or British manufacture, if so obtainable.

In his opinion, no Government department could rightly claim that it could manufacture its own requirements cheaper than private firms could supply. The overhead charges added in Government workshops were invariably inadequate.

Referring to paragraph 2 of the procedure governing provision of new vessels, etc., in Appendix IV to Marine Regulations, India, Volume III, wherein it was laid down that when a local Government or Administration or a Department accepted the necessity for the construction or purchase of a new vessel, it should send the necessary design of the vessel to the Director, Royal Indian Marine, witness stated that as a rule local Governments had no officials with the necessary qualifications to design any type of vessel—big or small. What they very often did was to approach private firms who supplied the necessary particulars and that was about as far as private firms got with regard to the actual building of the vessel owing to the fact that when the matter was referred to the Director, Royal Indian Marine, that official, or his department, usually decided that the work would be carried out in one of the Indian Marine Dockyards. Witness was of the opinion that the overhead charges allocated to the nett cost of building vessels were not sufficient to cover the actual charges incurred and therefore shewed that the Dockyard was building vessels at less than their true cost.

Witness stated that the Consulting Naval Architect at the India Office when designing a vessel would follow a recognised set of rules, such as Lloyds, when arriving at the scantlings required and no special or expert qualifications were necessary on the part of a Naval Architect to apply these rules. The internal arrangement of a vessel to meet the conditions existing in this country was in witness's opinion work which could be carried out more successfully by Naval Architects resident in the country and who were conversant with local conditions. In support of this opinion witness instanced a case, which came under his notice as a member of the Indian River Craft Board, when barges were designed and built in Great Britain for the Mesopotamian rivers, which were entirely unsuitable for local conditions. Before these barges could be put into commission they had to be shortened and provided with new bows and sterns.

With regard to Indian firms' knowledge of up-to-date methods of propulsion witness stated that as far as his own firm was concerned they were in constant touch with their home office who kept them advised on any improvements made in this particular direction, besides the technical papers received weekly in India contained up-to-date information which was at the disposal of everybody.

Provided raw material was available there would be no difficulty in building ships in India up to the launching capacity of the river (in this case the Hooghly), say, up to 9,000 tons, but there should be no limit up to which tenders should be called for in this country. If the opportunity was given to firms to quote they would equip their yards to meet the demand.

The Naval Architect of the Government of India should be resident in India and in close touch with the requirements of the country.

Lieutenant-Colonel B. J. SINGH, C.I.E., I.M.S., Inspector-General of Prisons, Bihar and Orissa.

Written Statement.

Questions 1, 2 and 3. I have no experience of any of the departments of the Government of India and am therefore not in a position to say whether a central agency for the purchase of all stores required by them would be suitable, though from an economy and efficiency point of view an agency of such descriptions would seem to be more than desirable if it can command the necessary expert knowledge required for the selection and testing of such varied articles as are required by the Army Department, Railways, Public Works, Posts and Telegraphs, etc.

Question 4. I do not consider it to be advantageous for local and *quasi*-public bodies etc., to make their local purchases through the central stores agency as contemplated in these questions.

Question 5. I am strongly against any purchases for Local Governments being made through the central stores department. The arrangements will not work to the satisfaction of the Local Government and will entail long delays, unnecessary correspondence and loss.

Question 6. I am in favour of the creation of local agencies for the purchases of Local Governments.

Question 7. No.

Question 8. Yes, but the aim of the department should be to obtain articles made in India in preference to those made outside, as far as possible.

Question 9. Except perhaps, in the case of the Military Department the policy of inspection may be dictated by the department responsible for the industrial development of the country; of course the details as regards quality and specification, etc., should be settled by previous consultation between the consuming and the Industries Departments and the Consuming Department should have the right to reject an article if it does not come up to the specifications agreed between the two departments.

Question 10. The agencies for purchase and inspections must be under the same control and in the case of those in the Provinces responsible to the Department of Industries.

Question 11. My department does not require any special inspection organization and I am unable to give any opinion regarding other departments.

Question 12. No.

Question 13. The purchase of stores for local Governments and their inspections should be carried out by local agencies.

Question 14. No.

Question 15. Purchases of European stores through established branches of British Manufacturing firms be allowed on the condition that the charges made by them are not higher than those obtaining in the United Kingdom, the quality being the same; and that they can supply the stores either at a short notice or, at the most, within the time that they usually take in supplying the trade. The concession will encourage these firms to hold stocks in India of such stores and will increase the possibilities of the firms establishing manufacture in India.

Question 16. Indents from the departments of the Government of India should be scrutinized by the central department before transmission to the Director-General, and those from the Provinces by the Provincial Directors of Industries.

Question 17. This can be done by correspondence between the Central and the Provincial Departments of Industries as well as between those and the Director General of Stores, India Office.

Question 18. Articles manufactured in countries other than England should be purchased as far as possible through the medium of the branches of the manufacturing houses of the countries concerned established in India or their agents resident in this country.

Questions 19 and 20. No! There should be no Central Stock Departments. The Government Departments should continue to hold stock of articles of usual consumption, but there should be a greater scrutiny of them to avoid unnecessary accumulation. A system of running

contract should be introduced in all cases where possible. This will encourage the private firms to hold sufficient stocks and relieve the Government of the necessity of locking up large sums of money in creating stock depôts.

Question 21.—

Statement showing the total amount expended by the Jail Department of Bihar and Orissa in each year since 1910.

Year.	(a) Stores purchased abroad.	(b) Imported stores purchased in India.	(c) Indian Stores.
1910-11	1,07,250	2,932	2,18,241
1911-12	58,537	..	3,57,650
1912-13	50,300	4,250	4,13,542
1913-14	42,971	..	4,71,023
1914-15	64,829	6,028	3,99,055
1915-16	59,126	14,404	4,10,930
1916-17	53,027	3,980	4,09,218
1917-18	54,645	8,410	6,06,936
1918-19	76,340	6,677 for half year.	2,70,258

Question 22 (*a*). Before purchase of stores in India quotations are called for from different firms and the orders are placed with the firm with the lowest quotations, provided the quality of the goods is the same. As regards European stores, the prices are checked by the Director-General of Stores, India Office.

(*b*). None except that we have dealt with those firms for a number of years and they have given general satisfaction.

Question 23. This should be one of the duties of the central and provincial agencies.

Question 24. No reply.

Question 25. The system if introduced would certainly interfere with the legitimate sphere of private enterprise.

Question 26. The provincial stores department should consist of an expert Industrialist in charge of purchases, etc., with the necessary staff under the control of the Provincial Director of Industries.

Question 27. Yes.

Question 28. The account of stores purchased is added in the Detailed Contingent Bill which are checked in my office and then sent to the Accountant General so far as local purchases are concerned. As regards the purchase of European stores, the adjustment is made by the Accountant General on the receipt of intimation from the Director General and an intimation of the amount debited to my department is communicated by the former to the jails direct. The charges are accepted by me in the authority of the vouchers received with the Detailed Bills.

Question 29. I think it certainly would.

Question 30. The interchanges of personnel between the different purchasing departments would certainly be very desirable.

Lieutenant-Colonel B. J. Singh, called and examined.

The opinions expressed in his written statement represented his own personal views and were based on his experience of Government purchasing agencies, such as the Director-General of Stores, India Office, and the Indian Munitions Board. He could frequently have made more satisfactory and favourable purchases locally of articles which, according to rule, he was forced to obtain by indent.

He thought he could on one occasion have purchased a supply of paper at a more favourable rate than that at which the Controller of Printing, Stationery and Stamps supplied.

He admitted that a central agency would be able to offer the services of a much better equipped organisation than each Local Government would be able to afford to maintain separately for its own purchases. Theoretically a central purchasing agency seemed sound, but he is very doubtful whether it would be found to give satisfaction in practice.

He was strongly in favour of provincial agencies, but if a central agency had a most efficient organisation and suitable local centres in each Province over which the Provincial Directors of Industry had some control he would have no objection to a central agency.

To encourage local industries the Local Governments should insist on the use, by its officers, of locally made articles even when these are not as good as could be obtained elsewhere. He considered that such a policy would lead to the improvement of a local product in time.

At present he had no means of ascertaining readily what could be obtained in India and in this respect a central agency would fill a want.

R. C. Arbery, Esq., Officiating Metallurgical Inspector at Jamshedpur.

Written Statement.

Question 9. Regarding the inspection of rails, structural steel, plates, heavy iron and steel products, I am of the opinion that the policy of inspection should be dictated by the department responsible for the industrial development of the country.

My reasons are—

(1) The head of the department inspecting steel, etc., being a highly qualified expert, and having at his command accumulated knowledge dealing with the inspection of such material, will be the most competent person to decide the quality of the material, and the type of inspection employed.

(2) Similarly he will prevent unreasonable specifications being presented to the manufacturers. A company may sometimes be obliged to accept an unreasonable specification, which either causes them unnecessary hardship or the employment of dishonest practices to fulfil the conditions. Actual cases may show the two points more clearly :—

(*a*) In India most of the Company-owned Railways have their own specifications at present. State Railways conform, more or less, to that laid down by the Railway Board. In my opinion there is no reason why all Railways in India should not adopt one standard specification. Here, therefore, the inspecting department, in collaboration with the railway authorties, might draw up a suitable scheme, and thus prevent each company buying rails to different specifications.

(*b*) Further, I have found that some railways adopt severe specifications. This causes the manufacturers considerable extra expense and trouble. The finished products, however, are subjected to the same conditions of service as those which apparently give satisfaction but pass a less severe specification

These two points deal with rails, but in the development of iron and steel in India other cases will probably arise, which the Metallurgical Inspector ought to decide.

Question 10. Dealing again particularly with rails, and the heavy iron and steel industry, I see no reason

why the inspection should not be under the same authority as the agency for the purchase of stores, strict independence being observed, and the considerations of purchase having no influence on the type of inspection. A purchasing agent might consult the Metallurgical Inspector should he feel himself unable to judge of the various prices asked by firms; a possible instance being an extra charge for a particular type of manufacture.

Questions 11, 12, and 13. It would be convenient to deal with questions 11, 12, and 13 together. It is first necessary to describe the organisation and work of the present Metallurgical Inspector's office. The Metallurgical Inspector is a distinguished Metallurgist, and an authority on the manufacture of steel and iron. He has been directly responsible to the Railway Board, and the Indian Munitions Board, and has been consulted on various questions dealing with iron and steel. His main work, however, is that of insuring that rails and other materials manufactured by the Tata Iron and Steel Company (a pioneer firm) are in every way equal to similar material imported from England. A chemical laboratory has been organised to analyse all material made by the Tata Iron and Steel Company, and there are suitable arrangements for testing. The late Metallurgical Inspector was assisted by—

(1) a metallurgist of experience.
(2) an assistant inspector, with engineering qualifications,
(3) a staff of chemists.

Thus this department is responsible in every way for steel products. The work is one of considerable importance and approximately 2,63,446 tons of rails, 3,09,802 tons of structural material have been passed after inspection since the opening of this office. So far few complaints have been received, and inspection and testing have never held up the manufacture or shipment in any way. The fees recovered since the opening of the office are Rs. 7,83,380, and the net gains Rs. 4,62,319. I think, therefore, the department may be considered an important and successful one, and its organisation affords some guidance for the future extension of this type of inspection. It is desirable to bring to notice the work done here, as after a perusal of the suggested schemes, attached to the Questionnaire, I find no place assigned to this office.

The manufacture of iron and steel is of the most vital importance to the future development of India. If it has to be imported in large quantities, any scheme for the production of heavy plant will be greatly handicapped. Steps of great consequence are being taken in iron and steel production. The Tata Iron and Steel Company are enlarging their present plant considerably. There seems some further activity in the Bengal Iron and Steel Company, a new firm. The Indian Iron and Steel Company have been formed, and in Mysore, too, I believe, the question of the manufacture of iron and steel is being considered. To insure a high standard of quality, expert inspecting of the products of these firms will be necessary. The standard, too, must be uniform all over India for the same class of material.

I, therefore, consider that the whole control of this inspection should be vested in the Metallurgical Inspector, who will be chief Government authority in India on all matters dealing with iron and steel.

It is early to decide the type of organisation of this Department, but assuming the present projects of steel manufactue are successful, and other firms also come into existence, the following scheme seems suitable:—

As the Tata Iron and Steel Company are at present the only producers of heavy steel, and will probably be the greatest for many years to come, I would suggest the headquarters of the Metallurgical Inspector be situated at Jamshedpur. Here he would have an establishment to deal not only with all the products of the Tata Iron and Steel Company, but a Laboratory suitable for investigating all iron and steel questions in India. Chemical and testing laboratories would be erected to deal mainly with the routine work of the particular firm to which it is attached, at other centres of steel manufacture. The policy of inspection, any special investigations and other important questions, however, to be referred to headquarters, Jamshedpur. This would aid the smooth working of inspection. Moreover information collected at headquarters would be of value to the development of the industry in India.

This scheme would embrace all India, and I would suggest that the Metallurgical Inspector be directly responsible to the Controller of Inspection and Intelligence in the scheme prepared by Mr. Coubrough, or to the Inspector-General of Stores in India in that drawn up by Mr. McPherson.

Questions 21 (a), (b), and (c). This office was not in existence in 1910 but was organised in 1912-13, and all the purchases of stores since that year to March 1917 have been made through the agency of the Eastern Bengal Railway and afterwards through the Indian Munitions Board. The amount spent was furnished to the Controller (Home Indents and Priority) in this office letter No. 1153, dated the 6th December 1919 (copy attached), total of which is shown below:—

	Chemicals.	Stationery.	Miscellaneous.
1912-13 to 1918-19.	Rs. 21,884	Rs. 300	Rs. 2,225

Most of the chemicals and laboratory requisites were purchased abroad. Stationery and miscellaneous articles are also imported goods, but it is not possible for this office to allocate them to different heads at (*a*), (*b*), and (*c*), as small purchases on those accounts have never been debited separately.

Question 28.—As all stores had previous to the beginning of the year 1917-18 been purchased through the agency of the Eastern Bengal Railway, the expenditure in connection therewith was audited by the Chief Auditor of the Railway, and subsequently by the Controller of War Accounts, Munitions Branch, as the stores have since been purchased through the Indian Munitions Board.

I am giving you the procedure in dealing with the stores received on indents at present:—

(1) Indents for stores from England are submitted to the Secretary, Indian Munitions Board, for transmission to the Director-General of Stores, India Office, London. The Secretary, Indian Munitions Board, while sending them, furnishes this office with spare copies of the same.

(2) When the articles arrive, they are unloaded by the Agent for Government Consignments, Calcutta, who charges all costs incurred by him to this office, and forwards the stores by rail, together with two copies of packing accounts, one of which is retained in this office and the other returned, duly verified and receipted, to the Director-General of Stores, India Office, through the Agent for Government Consignments.

(3) The articles of stores, when received, are checked with the entries in the packing accounts.

(4) A copy of the invoice of the articles, together with all incidental charges incurred thereon, is received from the Deputy Controller of War Accounts, Munitions Branch, for certifying as to the correctness or otherwise of the articles received, and it is then sent back to him duly certified. A copy of the invoice is also in this office file.

Copy of letter, No. 1153, dated the 6th December 1919, from the officiating Metallurgical Inspector, Jamshedpur (Sakchi), to the Controller (Home Indents and Priority), Indian Munitions Board, Delhi.

Your letter No. 504-27, dated 20th November 1919.

With reference to the detailed statistics, regarding purchase of stores, to be submitted to the Stores Purchase Committee, I beg to inform you that this office was not in existence in 1910-11, but was organised in 1912-13. From this year up to 1916-17 the expenditure incurred either for chemicals and apparatus for laboratory purposes or for stationery and miscellaneous purchased through the agency of the Eastern Bengal Railway has been adjusted in the books of that Railway and is, I understand, similarly included in the respective return of the Eastern Bengal Railway for those periods for submission to the Railway Board, as will be seen from the Chief Auditor's letter No. S. P.-17-19, dated 1st December 1919, copy attached.

Subsequent to this period, *i.e.*, from 1917-18 to 1918-19, the expenditure on stores either met from office contingencies or purchased through the Indian Munitions Board, effecting book adjustment, has all been booked in the office of the Controller of War Accounts, Munitions Branch, Delhi, where the respective figures in detail for the above periods are available.

I am, however, enclosing separately a statement showing figures under the proper heads as indicated in the printed returns and compiled from the available records of this office, which will give you an approximate idea of expenditure incurred on those heads during each year under reference.

Statement showing expenditure incurred in purchase of stores through the Eastern Bengal Railway and Indian Munitions Board, as far as available in the Records of this Office.

Period.	Chemicals.	Stationery.	Miscellaneous.
	Rs.	Rs	Rs.
1912-13 .	8,895	103	751
1913-14 .	4,128	32	114
1914-15 .	1,618	30	1,178
1915-16 .	268*	68	..
1916-17 .	1,515	57	..
1917-18 .	5,069	10	85
1918-19 .	927	..	99
TOTAL .	21,884	300	2,225

Copy of letter No. S. P.-17-19, dated the 1st December 1919, from the Chief Auditor, Eastern Bengal Railway, 3, Koilaghat Street, Calcutta, to the Metallurgical Inspector, Jamshedpur (Sakchi).

With reference to your letter No. 115, dated 25th November 1919, I beg to state that the value of stores purchased for your Department is included in the similar return for the Eastern Bengal Railway, which is being submitted to the Railway Board and in which all purchases made through the agency of the Eastern Bengal Railway, whether for railway requirements or for other departments, are being shown. Separate figures in respect of your Department only are not available at this distant date.

* Credit afforded by the Eastern Bengal Railway on account of English stores, chiefly chemicals.

Mr. R. C ARBERY, called and examined.

Witness had been in the office of the Metallurgical Inspector for six years during which time he had assisted in the inspection of the iron and steel products of the Tata Iron and Steel Company and had been officiating as Metallurgical Inspector for the last seven months pending the arrival of the newly appointed Inspector from England.

The Metallurgical Inspector and his staff had been appointed to test and pass the steel produced by Messrs. Tata Iron and Steel Company. Under the orders of the Government of India no rails from Tatas could be used in a line carrying passengers unless they had been inspected and passed by the Metallurgical Inspector. It is most desirable that all Indian railways should agree upon one standard specification for rails and fishplates not only with regard to the chemical composition and tests, but also the adoption of uniform sections for rails and fishplates, and spacing of bolt holes. So far as he knew the Railway Board's specification for rails from Tatas had given satisfaction but he thought that it could now be improved slightly. By arrangement with Tatas the Metallurgical Inspector certified the tests of structural sections which the firm sold as being to British standard specification.

He considered that if other firms started steel manufacture it would be desirable to have the quality of the steel certified by a Government inspector. His reasons for this were that in order to establish the confidence of the country in Indian made steel, the Government should purchase their requirements from the Indian firms. To ensure satisfaction the materials should be certified to by a Government inspector qualified to judge both the ability of the new manufacturers and the quality of their material. His experience was that more ado was made about the failure of an Indian made than an English made article, and that unless some guarantee of suitability of quality be given, one incompetent firm in India might discredit other firms turning out good work.

The Metallurgical Inspector would not be qualified to inspect the erection and workmanship of structures made of steel himself, but he could, if necessary, control inspection staff for such work. This would, however, really be outside his province, and if engineering firms established structural works in the vicinity of steel works it would be preferable that the inspection staff should be under an Inspector of Manufactures.

At Calcutta, Monday, 12th January 1920.

PRESENT.

Sir FRANCIS COUCHMAN, K.B.E., M.I.C.E. (*President*).

G. H. COLLIER, Esq., C.I.E.
A. W. DODS, Esq.
H. N. HESELTINE, Esq., C.I.E.
Lieutenant-Colonel C. C. H. HOGG, C.M.G., R.E.
Brigadier-General H. A. K. JENNINGS, C.I.E.
LALJI NARANJI, Esq.
Rai Bahadur LALA MILKI RAM.

J. C. HIGHET, Esq. (*Secretary.*)

H. E. SKINNER, Esq., nominated by the Indian Engineering Association.

Written Statement.

Question 9. All inspection should be done under the control of the department responsible for the industrial development of the country.

Question 10. Such inspection to be carried out by provincial inspectors under the supervision of imperial officers responsible to the central purchasing agency.

Question 11. There are departments that require special inspection but such could be provided by the central agency.

Question 12. Yes.

Question 13. See reply to question 10.

Question 14. To enable the central buying agency to foster local industries it would be necessary to modify the Stores Rules of 1913.

Question 15. (*a*) Larger stocks would be held.

(*b*) The possibilities of the firm establishing manufactures in India will depend largely on the demand.

Question 16. Yes.

Question 19. The formation of special central stock depôts is not recommended.

Government could draw on stocks in the country held by private firms.

Mr. H. E. Skinner, called and examined.

Witness had been a Director of Messrs. Jessop & Co. for five years. In addition to carrying on general engineering work, his firm were agents for many engineering firms and manufacturers in various parts of the world.

The two most usual methods of conducting an agency business were either to hold stocks for the actual manufacturer adjusting as sales were made, in which case the agency was practically a branch, or to hold stocks which had been purchased outright from the principal firm with the sole right of sale within a certain specified area.

For many years, the Indian Engineering Association had been urging the formation in India of a stores department which would exercise an effective scrutiny of all Government orders going out of the country and give firms in India a fair chance of securing their due share of work.

He had no criticisms or suggestions to offer regarding the existing method followed by Government when calling for tenders.

He had given much thought to the question of simultaneous tendering which the Indian Engineering Association had frequently pressed for; but personally he had not been able to see any practicable method of introducing the system generally. The main obstacle was the time necessary for mails to bridge the great distance between India and London. It was very desirable that simultaneous tendering should be resorted to in any particular case in which it might be practicable; but he was unable to suggest a workable scheme.

Quality must be maintained, and where this was not at question, preference should be given to the tenders of firms in India even though their price was greater, so that industries in India would have the proper chance of developing. If called for, simultaneous tenders should be considered and decided in India.

It would be advantageous if Government called for tenders for all the requirements in India whether everything required was being made in the country at the time or not.

The present inspection staff of the Superintendent of Local Manufactures was inadequate. The waggon building work of his firm had been in abeyance during the war; but previously there had been no inspection until waggons were completed and ready for despatch and then the work of the shop had frequently been upset by the inspecting officer being unable to come until some days after the waggons had been offered for inspection. Waggon building firms would welcome resident inspectors in their works, and if Messrs. Jessop & Co. were employed to their full capacity, which was at present 1,000 waggons per year, a resident inspector would be fully employed in watching that work alone.

Such resident inspectors should be men of a foreman type drawing, say, five to six hundred rupees a month and should have had experience in waggon building firms in England. It would be exceptional to find one man qualified to inspect both waggon building, and structural steel work. The latter lent itself more readily to inspection and one visit a week by an Inspector should be sufficient.

He considered that for items such as transport carts and gun carriages, special inspecting staff should not be necessary. Technical experts who inspected work of similar nature for the trade should be competent to inspect ordnance miscellaneous stores. Special inspectors would possibly be required for articles of ordnance equipment which were special to the army, such as shells, fuses, etc.

The shell work undertaken during the war had improved the standard of work in engineering workshops immensely. A proportion of the work other than very special now done in ordnance factories should be regularly given out to firms. This would tend to the improvement in the standard of workmanship in workshops generally and by familiarising firms with ordnance stores would facilitate the rapid expansion of production in emergencies.

He advocated the establishment of a department capable of drawing up complete plans and specifications for steel structural works, so that it would be possible for all firms in India to tender on the same design and list of materials. At the moment, the Public Works Department, Bengal, were awaiting designs and tenders for a new bridge to replace the condemned Kidderpore canal bridge. Each firm desirous of securing the contracts had to incur considerable expenditure in preparing designs which only the successful firm would recover. The others would have to recoup themselves indirectly from their other constituents.

Government departments and *quasi*-public bodies, who manufactured articles for their own use under the impression that they were doing so cheaper than they could obtain them in like quantities and as a regular demand from private firms, were mistaken. No Government or *quasi*-public body could manufacture as cheaply as private firms who were in competition with one another. Government department should not manufacture their own stores unless these could not be made by competing firms.

A. James, Esq., Superintendent of Stores, Assam Bengal Railway.

Written Statement.

Question 1. No, unless the agency is prepared to quote prices and unless the placing of orders with the agency is optional.

The necessity for every possible economy being urged by the Railway Board, it is not satisfactory to place orders blindly without knowing the price and be forbidden moreover to even enquire elsewhere, as was the case with the central purchasing agency. If it is claimed that the agency can always supply the most advantageously, which I am by no means satisfied is the case, indenting departments would soon find this out and would use the agency whether it was optional or not. To object to its being optional is to confess that there would be some supplies which could be better obtained elsewhere, and if this is the case the Agency should either so improve its buying as to compete successfully, or else cease to supply the article in question. To be forced to buy any article at a price above what it can be obtained in the market is to support the agency in unbusinesslike purchases.

Another objection to compulsory purchase is that Government routine is not expeditious. In° cases of urgency most private firms can be relied upon to despatch more promptly than the agency where orders filter down through the sectional controller to the actual despatcher. This is a matter chiefly affecting the railways at a distance from the sources of supply.

Question 3. If placing orders with the agency is optional, no exceptions need be made.

Question 4. Yes, if placing orders with the agency is optional.

Yes, maintenance should be provided by a percentage on the orders.

Question 8. Yes, assuming that the agency would be represented by Consulting Engineers in England who would call for tenders as instructed by the agency in India and who would inspect the contract if placed in England.

Question 9. These should not be antagonistic. It is for the consuming department to dictate what they want, and then for the department responsible for the development of the country to state to what extent requirements can be met. The latter would advise with regard to the acceptance of any deviations from the specification. The consuming department should not be expected to accept any article with which they were not satisfied.

Question 10. Yes, provided this does not cause delay.

Question 11. Yes.

Question 12. Metals, and as a mechanical engineer I know that this must also apply to many other articles, *e.g.*, timber, paints and varnishes, chemicals, etc.

Question 13. Entirely a matter of organisation, though I favour a central inspection agency provided the inspectors were not confined to one district but moved about extensively. They would thus learn what was the highest standard of workmanship obtainable.

Question 15. To the full extent to which they could be purchased at favourable prices—

(*a*) it should encourage this;

(*b*) if an English firm makes a product for which there is a demand in India, it is entirely for them to judge whether they can produce it more cheaply in England or India.

Question 18. A consumer should be at liberty to obtain by the cheapest means stores of a recognised standard quality which do not require inspection.

Question 19. Yes, provided the depôts are in free competition with business firms—

(*a*) it should greatly reduce this;

(*b*) the quantity of stocks maintained, both from a consideration of possible market fluctuations and of capital lying idle, would for a business firm be simply a question of the extent to which it would pay: this should be also the case for a central agency.

Question 20. Calcutta, I can speak only for Bengal. Yes, to the extent to which it would pay to do so.

Question 21.—

YEAR.	(*a*) Stores purchased abroad.	(*b*) Imported stores purchased in India.	(*c*) Indian stores.	TOTAL.
	Rs.	Rs.	Rs.	Rs.
1910 . .	4,28,584	2,72,668	6,76,119	13,75,871
1911 . .	11,82,322	3,85,992	10,36,449	28,04,763
1912 . .	4,20,690	4,22,070	10,16,644	18,59,314
1913 . .	82,945	1,39,667	2,51,434	4,74,246
(for 3 months only i.e., January to March).				
1913-14 . .	12,80,143	5,14,022	14,05,831	31,99,996

Question 21—contd.

YEAR.	(*a*) Stores purchased abroad.	(*b*) Imported stores purchased in India.	(*c*) Indian stores.	TOTAL.
	Rs.	Rs.	Rs.	Rs.
1914-15 . .	34,02,068	18,48,345		52,50,423
1915-16 . .	5,38,778	18,05,664		23,44,442
1916-17 . .	1,86,501	3,52,031	17,87,307	23,25,839
1917-18 . .	2,05,154	9,82,938	16,63,923	28,52,015
1918-19 . .	10,18,221	6,32,328	14,47,951	30,98,500

Question 22. The ledgers shew the date, supplier, quantity, price of each purchase together with any remark regarding the quality of the article. A special point has been made of this during the last few years, new ledgers being introduced to permit of the above information being recorded.

Question 23. Yes, I consider this and the encouragement of new industries to be by far the most important functions of the proposed agency.

Question 25. Yes, unless the placing of orders with the agency is optional, that is, unless the agency is in free competition with business firms.

Question 26. The staffs should include a large proportion of men with mechanical training.

Question 27. Yes.

Question 28. All quotations are recorded in tabular form, these records being open to inspection.

Question 30. An interchange between the Indian stores departments and the local purchasing departments would be hardly necessary provided the purchasers and inspectors were not confined to one district, see answer to question 13.

In general, I am strongly opposed to the formation of a 'protected' agency, by which I mean one that is not in free and open competition with the market. A protected Agency—one with whom we were obliged to place orders—would "constitute interference with the legitimate sphere of private enterprise" (question 25) and would also become inefficient. Should the promoters state that if the use of the agency was optional they would be liable to have stocks left on their hands, I reply that due consideration must be given to this possibility when buying, as with a business firm. Though when large stocks are dealt with the 'cutting of a loss' has occasionally to be faced, any greater percentage than in the case of a well managed business would indicate bad management and serve as an automatic check on the agency. On the other hand a well managed agency would be a useful check on profiteering and should make it possible to reduce the quantity of stores maintained by Government departments and local and *quasi*-public bodies.

I consider by far the most useful purchase of an agency is contained in the answer to question 23 and particularly in the discovery and encouragement of new industries and sources of supply. To carry out these duties efficiently implies that the agency is able to give adequate inspection.

The extent to which the agency should be a supplier should be simply the extent to which they can supply more cheaply than the market. I suggest that it is unlikely, they can do this for all stores and that as suppliers the agency should begin in a small way, gradually increasing their operations as warranted by the orders received. In the meantime the agency could perform service useful alike to the country and to consumers in fostering the many new industries springing up throughout India.

Mr. A. JAMES, called and examined.

Witness had been with Great Western Railway, Swindon, England, five years' apprenticeship in shops, five years in drawing office; with Messrs. Rendel Palmer and Tritton, Westminster, one year inspecting in Germany, one year inspecting in England; with Assam-Bengal Railway, India, four years as Assistant Locomotive Superintendent, nine years as District Loco. Superintendent, two years, as Superintendent of Stores.

The figures under Indian stores in the statistics of purchases, which he had given in his written reply to question 21, included both coal and sleepers, which, though actually purchased by the Locomotive Superintendent and Chief Engineer respectively, passed through the books of the Stores Department. The marked and irregular fluctuations in the figures for stores purchased abroad were due to variations in the number of locomotives and other such expensive items obtained each year.

There were no restrictions as to what might or might not be purchased in India. Generally he had found it cheaper to obtain imported stores by indent on the Home Board of the Company, than by purchase from firms in India.

All petty items had been eliminated from the list of stores for which tenders for the supply throughout each year as required were invited annually and this list now comprised about 20 items only, *viz.*:—

List of Annual Tender items for 1920-21.

Serial No.	Description of articles.	Estimated quantity required during 1920-21.
1	Brooms, cocoanut, 1 lb. each	10,000 bundles.
2	Cloth, canvas, brown	1,000 yards.
3	Cloth canvas hemp, English	1,000 ,,
4	Coal tar	60 tons.
5	Earth, Fullers or Sajimatee	7 ,,
6	Hides, tanned, cow country ¼" thick	2 ,,
7	Oil for axles	40,000 galls.
8	Oil for cylinders	80,000 ,,
9	Oil, earth, for shingles	12,000 ,,
10	Oil, kerosene, Gold Mohur	50,000 ,,
11	Oil, kerosene, Waterlily	1,000 ,,
12	Oil, linseed, boiled	5,000 ,,
13	Oil, linseed, raw	2,000 ,,
14	Oil, turpentine, unscented	2,500 ,,
15	Paint, black ground, in oil	20 tons.
16	Paulins cotton canvas 20' × 18' with eyelets and lashings complete.	100
17	Pipe leather delivery copper revited 7½" × 7'	100 lengths of 700 feet.
18	Soap bar	2 tons 10 cwts
19	Soap soft best	2 ,,
20	Tallow, best, country	10 ,,
21	Twine, country	1 ton 10 cwts.

List of Annual Tender items for 1920-21—contd.

Serial No.	Description of articles.	Estimated quantity required during 1920-21.
22	Waste cotton No. 1	25 tons.
23	Waste jute	15 ,,
24	Wine spirits of methylated	500 galls.
25	Candles composition	4,000 candles.

In his written statement, it was assumed that a central agency would maintain stock of imported and indigenous articles for sale indirect competition with ordinary business firms; and his opinions were influenced by his experience of the central purchasing agency set up by the Indian Munitions Board during the war. He was entirely in favour of the establishment of a central Government agency provided it was prepared to quote prices and it was optional to consumers to make use of it.

There were many articles for which no inspection was required. His practice in the case of such articles was to accept the guarantee of quality afforded, by a well-known brand or makers' name.

A central agency should be able to secure advantageous terms by combining small demands and purchasing in bulk. He considered, however, that there was a limit to the advantages to be gained by bulk purchase, and that railways were such large purchasers of most articles that they probably already reaped individually the full advantage to be gained.

Personally his policy was to use Indian products wherever possible and he would be glad to receive advice from the central agency about developments of industries in India. For this purpose, the Assam-Bengal Railway would willingly provide copies of all their home indents. This and the facilities it would afford for inspection of particular articles would be the most useful functions of a central agency, as far as railways were concerned. The Assam-Bengal Railway had derived great benefit from the advice and inspection afforded by the Mining Engineer in connection with the purchase of coal.

So far as he knew the Assam-Bengal Railway obtained all girders through their Consulting Engineers in London who prepared the design and specification and carried out the inspection. If railway companies in India maintained bridge designing experts on their staff, more orders for girder work would probably be placed with firms in India. A branch in the central agency capable of designing structures, preparing specifications, and inspecting the work would be of value to railways.

At Rangoon, Friday, 16th January 1920.

PRESENT.

Sir FRANCIS COUCHMAN, K.B.E., M.I.C.E. (*President*).

A. W. DODS, Esq.
H. N. HESELTINE, Esq., C.I.E.
Lieutenant-Colonel C. C. H. HOGG, C.M.G., R.E.
Brigadier-General H. A. K. JENNINGS, C.I.E.
Rai Bahadur LALA MILKI RAM.

And the following co-opted members—

J. P. HARDIMAN, Esq., B.A., I.C.S., Commissioner, Meiktila Division, and
F. RULY COLLINS, Esq., M.I.C.E., M.C., Superintending Engineer, Rangoon Circle.

J. C. HIGHET, Esq. (*Secretary*).

A. RODGER, Esq., O.B.E., Forest Research Officer, Burma.

Written Statement.

Question 1. Yes.

Reasons. (1) A central agency would provide us with reliable and up-to-date information regarding stores obtainable, prices, quality, etc., both in India and England. An officer who lives up-country has at present little opportunity of obtaining such information, with the result that he cannot take advantage of opportunities that offer, and work accordingly suffers. For example, if he knew that certain new machinery, suitable for extracting timber, was available, he would be keen to try it. Prompt replies to his enquiries would be of very great assistance.

(2) Purchase of stores required in large quantities would be economical. Depôts should be established at Rangoon and Mandalay, where stocks of stores required could be held ready for immediate despatch. Some forty Forest Divisional Officers could be supplied with stores they require every year, such as sawmill and extraction machinery, elephant gear, materials for uniforms, wire ropes, chains, blocks, stationery, timber-making hammers, tools, measuring tapes, etc. Receiving, handling and despatching would also obviously be done more cheaply than at present. Small quantity of stores from India are handled in Rangoon at a cost out of proportion to their value.

Question 2. As far as I am aware, all departments could be supplied with their requirements by the method proposed by Mr. McPherson.

Question 3. It is desirable that the Chief Conservator of Forests, Burma, and the Conservator of Forests, Research and Working Plans, Burma, should have power to purchase direct from foreign countries machinery and apparatus required for special forest work. For example certain types of "Skidders" which will probably be employed in Burma in the future, can only be obtained from America. Again the Forest Research Officer, Burma, purchased from Austria, before the War, two callipers for measuring trees. If it is considered advisable that such purchases should be made through the stores department, it would be desirable to avoid delay that the head of the local agency only should deal with them. If this would not be feasible, then an expert on the subject should be attached to the central agency. The Conservator of Forests, Research and Working Plans, Burma, was authorised by the Government of India, in December 1919, to buy such articles direct.

Question 4. My experience, as Deputy Controller (Timber Supplies), Indian Munitions Board, has not been very happy, in buying timber for *quasi*-public bodies. I am inclined to think that such bodies, and Colonies, etc., should make their own arrangements. Government requirements should be sufficient to employ the central agency fully.

Question 5. Yes. Please see my reply to question 1 (2).

Mr. McPherson's Scheme seems suitable.

Question 6. In Burma, the Government of India should obtain their supplies of teak for all Ordnance factories through the local agency. I give this as an example. I am certain that great savings would thereby be made. My experience under the Indian Munitions Board confirms this.

It is probable that similar cases occur in other provinces.

Question 8. I think it would. It would be necessary that the English firms should quote c. i. f. Indian port, to this could be added Port Charges and handling, and railing to destination to compare with Indian tenders f. o. r. local station.

Question 9. Military departments are probably on a different footing to other departments. They would probably have to be allowed to pass their own stores. In most other cases a central inspection agency, duly instructed by the consuming department, would suffice.

Question 10. Yes, but of course stores purchased, in the province would be inspected in the province.

Question 11. I think it is probable that the Military departments would, but the men should be most carefully chosen.

Question 12. Yes, timber, for example, for Ordnance and Aeroplane work, which I have supplied recently.

Question 13. I favour local inspection agencies.

Question 16. Yes. Otherwise the central department in India cannot know what is going on.

Question 18. Please see reply to question 3.

Question 19. Yes.

(*a*) Stocks held by Government departments should be amalgamated in these central stock depôts.
(*b*) It would bring down their prices.

Question 20. (1) We should have central stock d[epôts] at Rangoon and Mandalay.

(2) Yes, because at certain times Indian [stores] purchased more cheaply than at others.

Question 21. Will be sent later (no[t]

Question 22. None, as far as I know.

Question 23. Yes, I see no difficulty.

Question 25. Yes, I think they might be so regarded. In fact I am sure they have been.

Question 26. They should be of the same class as the officers of the more important public services in India.

Question 27. The total cost of the central agency might be divided up annually once for all, in the proportion that Local Governments had made use of it. Local Governments should bear the cost of local agencies. There is no need to debit each department.

Question 28. All purchases are audited by the Accountant-General, Burma. A certificate that they were received must be signed.

Question 29. Experts, supported by expert, accountants, would certainly exercise a more efficient audit.

Question 30. Yes, personal acquaintance with local conditions is always useful.

Mr. A. RODGER, called and examined.

Witness had had 20 years' experience of forest work in Burma, and since April 1917 had been Deputy Controller (Timber Supplies), Indian Munitions Board, in Rangoon, in which capacity he had purchased about 100,000 tons of timber and 110,000 tons of sleepers valued altogether at Rs. 180 lakhs. His written statement expressed his own personal views.

Please see statement attached.

The main items consumed by the Forest Department in Burma were uniforms and elephant gear. The adoption of mechanical contrivances for exploiting the forests on a large scale was at present being enquired into and in the future there would probably be considerable demands for forest railways and American saw-mill and extracting machinery.

At present Government timber was disposed of in the log by public auctions at the various forest depôts. It had now been decided to establish Government saw-mills probably at Rangoon and Mandalay, mainly with the object of introducing other timbers besides teak from Burma to the world's markets and also with the idea of obtaining a certain amount of control for Government in the teak trade. Hitherto the large timber firms in Burma had extracted little besides teak, leaving the other trees standing. This prevented the exploitation and improvement of the forests on the best scientific lines. Timber sawn in the Government saw-mills would be sold to the public through agents, and appointments had already been made in London and Calcutta.

In his written statement, he had contemplated stores depôts in which stocks for all Government Departments would be held. He agreed, however, that the diversity in requirements of different departments might make such general Depôts difficult to work and expensive to maintain, and that it would possibly be better and more economical to establish a small Forest Department store attached to the proposed saw-mill in Rangoon.

Witness agreed that it might be more advantageous and convenient—especially considering the advantage of unified control of handling and freight—to forest officers to obtain even special forest machinery through a central agency than to make purchases direct. The forest officer would have to specify definitely what he required and the central agency would have to understand that it was not its business to attempt to persuade the forest officer, as an expert, to modify his demand. He would dispense with inspection in the case of types of machinery of which one firm made a speciality.

He understood that it was customary for the Ordnance Factories in India to obtain teak scantlings and planks through Indian firms in Calcutta who were simply middlemen purchasing from firms in Rangoon. During the war, a large part of the supplies had been made direct through the Indian Munitions Board. When the armistice was signed, the orders in hand were cancelled. A short time later he received information that enquiries for teak scantlings and planks for the Ordnance Factories, of the same sizes as in the cancelled orders, were being made in Rangoon by middlemen in Calcutta. It would be economical to obtain these supplies through a central agency which would require to have its own expert timber purchasing establishment in Rangoon. The Forest Department in Burma should not be expected to act as agents of the central agency but should be treated as a timber supplying firm in the sense that they would undertake to supply Ordnance Factories and other Government departments with timber required by them, at a reasonable profit.

The head of the timber purchasing branch should be located at the headquarters of the central agency. He should confine his work to distributing demands from the various consumers and the general administration of his branch, and should not attempt to interfere with the actual purchasing officers in the details of purchase.

So far as Burma was concerned, it would be immaterial when demands were received but at least six months should be allowed for supply.

It was quite unnecessary to maintain a separate inspection branch for timber. The purchasing officer in Rangoon should be responsible also for the inspection and despatch to consumers. Any one qualified to inspect teak would be able to pass any timber, after a certain amount of training.

The Ordnance specification for teak was as follows:—

The plank (or scantling) should be cut from thoroughly seasoned, log to the sizes and within the limits specified in the order given perfectly straight and parallel and without any twist.
It should be cut from First Class Timber, be sound and well dried and of straight grain.
It should be free from —

(*a*) Sapwood
(*b*) Dry-rot or borers
(*c*) Heartflaws
(*d*) Shakes or Cracks
(*e*) Large and Loose Knot
(*f*) Pin-knots, and
(*g*) Flaws of any kind.

DELIVERY.

Split ends and defective parts in planks will not be taken into account and will not be paid for. In cases where the ends of planks are rejected such rejections may be cut off and removed by the contractor, but rejected parts from inner portions of planks cannot be removed. The contractor may, however, claim to have the whole plank rejected in cases where he desires it. All full planks will be removed by the contractor. A representative of the firm may be present at the factory when timber is being passed as that is the time at which it must be decided which planks must be rejected in full, etc. Objections to the quantities rejected cannot be entertained after the timber has been measured and taken into factory stock.

This was impossible to comply with in all respects and in practice inspectors had therefore to use their own discretion in deciding what timber would suit. So far as he knew the Ordnance Department had raised no complaint against the teak he had passed and supplied to them and this showed that the specification was unnecessarily exacting. The position was most unsatisfactory as, so long as the existing specification was retained, it would always be possible for the Ordnance Department to take exception to the work of any inspector.

As a workable specification which would still secure suitable teak, probably at a cheaper price, he would suggest:—

Timber to be cut correctly to sizes specified from seasoned straight-grained timber, without sapwood. It must be free from serious flaws, cracks, splits, knots, rot, and insect-holes.

Statement of timber supplied by the Munitions Board and Forest Department, Burma, from 15th April 1917 to 31st December 1919.

Country.	Teak Tons.		Other Wood Tons.		Bamboos.		Sleepers.		Total Tons.
	Round.	Sawn.	Round.	Sawn.	No.	Tons.	No.	Tons.	
Mesopotamia .	1,166	16,085	720	19,708	197,123	5,004	740,125	26,166	68,849
Egypt . . .	303	238	4	11,710	75,199	752	401,086	17,168	30,175
Salonika . .	..		..	10,468	..	..	..	..	10,468
East Africa . .	..	158	..	..	..	..	..	..	158
India . . .	34	9,115	593	1,426	..	..	694,117	42,315	53,483
Aden . . .	..	..	..	..	..	..	16,080	486	486
Total .	1,503	25,596	1,317	43,312	2,72,322	5,756	1,851,408	86,135	1,63,619

NOTE.—These are shipments. Purchases were much larger and large stocks are still in hand.

H. WALTON, Esq., M.Sc., Executive Engineer, Ye-M Canal Division.

Written Statement.

Before dealing with the questionnaire in detail, I take the opportunity of stating that it is a great pity the whole question regarding indents and the supply of European as well as Indian stores is not under review. The great objection for a long time past has been the delays in supply, and it is certain that these delays will not be lessened by the creation of a central agency. The Public Works Department as an engineering department is judged by its results in the field, but the delay in the supply of necessary stores, and especially in times of emergency, constitute a grave handicap in the production of these results. The rules regulating purchases are inelastic and are hedged round with restrictions which would only be suitable if there were no officers in Government service capable of exercising judgment and discretion. These rules will continue to be broken and evaded in the future as they have been in the past, and in the light of past experience and results it would appear most desirable to overhaul these rules so that they could further the progress of work in the field and not handicap it as they do at present. This appears to call for a considerable measure of decentralization and the granting of very wide power to the several provincial Governments. This seems to be recognized in rule 3 (*b*) of the Standing Order relating to purchase of stores, etc., where a contracting firm is given the widest powers in the supply of suitable stores for construction work; on the other hand were the Public Works Department to assume the role of contractor—and this is by no means an infrequent occurrence—paragraph 3 (*b*) becomes ineffective and work is subjected to the provisions of rules (3) and (5).

The creation of a central agency leaves the position much the same as at present except that it is bound to add to the delays which already exist. In these circumstances the whole case still calls for a review and it is regretted that this is not recognized.

Another point is the question whether the present machinery cannot readily be adapted to aid the industrial development of India and thus avoid the creation of a ponderous central agency. I incline to the opinion that it can, but that it should be considered with respect to the whole problem and not as a detached portion of it.

These important matters do not receive the degree of consideration they are entitled to, in the proposals for a central agency, and in reading through the papers on the subject, one feels that a decision for the formation of a central agency has already been made and that it will be evolved from the Indian Munitions Board which is on the point of being swept away.

Question 1. I am not in favour of the formation of a central agency for the following reasons:—

(*a*) It is a theoretical rather than a practical proposition, and promises to be too unwieldy and depends on too much interworking to become efficient.

A bureau of commercial or industrial Intelligence which disseminated information in the quarters where it could be utilized, would meet the general requirements of the Public Works Department and furnish full opportunity for furthering the development of local industries.

(*b*) Experience of the recent war teaches that controls of this nature cannot be efficiently run by Government.

(*c*) It does not appreciate the geographical situation and the size of India, and it ignores distances and the general poorness of communications.

(*d*) A central agency will augment existing delays in the supply of stores and increase the work of every department. In the case of the Public Works Department, there appears to be no accruing advantage.

(*e*) It is not a workable proposition for one stores agency to act as the supplier to all departments. Each department knows its own requirements better than an outside one, and redress in the case of a central agency will be a lengthy procedure and fraught with difficulties.

The unit is too large and covers too much ground.

(*f*) There will be the greatest difficulty in obtaining the desired personnel.

Question 2. Assuming the creation of a central agency, practically each department would require a special formation to deal with its wants. This is at variance with the conception of central and local agencies.

Question 3. Contractors should be free to purchase as they like, provided the articles supplied are suitable. The same must apply to their machinery and equipment. An interference in this matter from a central or local agency ought not to be countenanced.

Question 4. It should be permitted and not compulsory for:—

(*a*) Local and *quasi*-public bodies,

(*b*) Company-owned railways,

to deal with the central agency. I doubt if Company-owned railways would patronise it, as usually they are well able to look after themselves and have to work economically.

Question 5. Each province should have its own and distinct organization for the supply of stores to the

various departments. In the case of the Public Works Department in Burma I would suggest it have its own organization, and not have it combined with the Railways, Police, Forests, or any other department. Further it should have its own agency in England for the supply of European stores, which agency, as in the case of similar agencies for other provinces, might be under the general surveillance of the Director-General of Stores, India Office. The home agency would be directly responsible to the Local Government it serves.

The stores department in Rangoon would be directly under the Chief Engineer, and the Local Government should have absolute discretion regarding the purchase of stores and in the drafting of rules regulating their purchase. It is strange that contractors employed by the Public Works Department should have powers of purchase and supply that are denied to the Local Government controlling the department.

Question 6. I do not favour the creation of local agencies as exemplified and described in the questionnaire.

Question 7. I have experience of the system in vogue in the Public Works Department stores, Rangoon. It seems to meet the object in view and I do not think it calls for any alteration at present.

Question 8. I do not think simultaneous tendering in India and England will be possible for a long time to come—if ever—even were the rate of exchange stable; and this is independent of whether a central agency is developed or not.

Question 9. I think the whole question of inspection is overdone and that in most things there is not the necessity for inspection that either the Director-General of Stores or the central agency would make out. Competition in European stores is sufficiently keen to prevent firms from besmirching their reputations. In the case of stores, etc., produced in India and in dealing with what is known as bazaar trade, inspection cannot be dispensed with. I do not think that this inspection will aid industrial development except in those cases where the firms have a reputation to lose or are desirous of building up one. The inspection and the consuming departments must be conjoined, as this is the only satisfactory way of obtaining what is demanded. It is not for the Industrial department to fix the standards.

Question 10. The inspection department should be under the direct control of the purchasing department, *i.e.*, under the stores officer of the agency or the department concerned.

Question 11. Each department would generally require its own inspecting organization. At present this class of work is carried out by the various stores officers and their assistants. I see no necessity for the creation of extraneous inspectors and think that it would be undesired by most departments.

Question 12. Specialized inspection is necessary in the case of Indian cement and steel. This is with the view of ensuring that material turned out for Government purposes conforms with certain standards. Firms who work profitably on low grade articles will not usually raise their standards until competition comes along.

Question 13. I consider it would then be essential to create local inspection agencies to meet the wishes and requirements of the various departments affected.

Question 14. Probably no modification would be required, but the Stores Rules ought to be revised on other grounds, *e.g.*, so that they will not deleteriously affect the carrying out of any work of urgency or magnitude.

Question 15. This is a case where circumstances should dictate the line of action. Hard-and-fast rules will, in many cases, defeat this object. Purchases of this nature should be left to the discretion of the Provincial Governments.

(*a*) If the present rules were more elastic, and discretionary powers were given to Provincial Governments, Indian firms would probably increase their stocks.

(*b*) I do not think this in itself would be regarded as sufficient inducement for a firm to commence manufacturing in India. They would as a rule require a far wider demand than what normally exists.

Question 16. I do not advocate this as it involves nothing more than a waste of time.

Question 17. In this connection a great deal of help could be obtained from a Commercial Intelligence Bureau and by freer cable communication between the home agent and the provincial or local stores officer. Merchants seem to effect this interchange of intelligence very successfully.

Question 19. I do not advocate the formation of central stock depôts in India.

It would not appreciably affect the present stocks held by Government departments, neither would it cause local importing firms to reduce, except temporarily, their stocks. Demands are on the increase as is shown by the increased number of firms and branches in the larger towns. Decay in stock, idle money, and geographical considerations are against the formation of central stock depôts.

Question 22. Records of all transactions are maintained in the ordinary office files, but they are not easily available. The equipment and capabilities of the large firms are not so well known as might be desirable, and in the case of small firms what is learnt of them is more in the nature of accidental knowledge. An intelligence bureau that disseminated information on these points would be greatly appreciated by all concerned.

Question 23. A central agency could disseminate information regarding the capabilities, etc., of contracting firms. The question of prices is a vexed one where the articles required have to be manufactured. However, there is nothing to prevent firms from being referred to as 'cheap' or 'dear,' etc., according as how they transact their business.

Question 25. This covers much the same ground as question 4 and, in this connection I think it should be optional for the parties concerned to deal with the central or its local agencies. It would be an indirect method of testing the efficiency of the central agency both in rising to the occasion in an emergency, and in showing the growing or waning confidence reposed in it.

Question 26. The recruitment of satisfactory personnel for a central agency is a great difficulty. To a great extent it must continue to be recruited from departments already in existence, and yet it is too large a concern to be handed over to amateurs. The proposed units are too large and cover too many diverse branches.

As stated in reply to question 1, I do not advocate the creation of a central stores agency.

Question 27. The cost of the central and local agencies should be met by a percentage charge on all orders fulfilled by them.

Question 29. The creation of a central agency and its local agencies, any one of which may make purchases on behalf of another, will necessarily make the accounts more involved than work under the present system. This means delayed audit and, consequently, audit will become of less practical application. One of the difficulties at present is the delay in the accounts branch. As regards ensuring fuller compliance with the rules in force, the propriety of these rules is open to question. If the rules were suitable or if, in the case of the Public Works Department, they could be made subsidiary to the interests at stake there would be no studied desire to evade them on occasions.

Question 30. I do not think it is so necessary to have personnel interchangeable with the home and Indian stores department, etc., as it is to have closer co-operation between them and for both sides to have a livelier appreciation of the conditions at home and abroad. I think this can be met in the best way by officers being regularly sent on deputation to England or India, as the case may be. It is only by this that there is any real chance of difficulties being appreciated and of their being overcome.

Mr. H. WALTON, called and Examined.

Witness had been seventeen years in the Public Works Department, and, the greater portion of the time, was in charge of construction work in the Irrigation Circle of Superintendence. Towards the end of November 1919, he was placed on special duty in connection with the Public Works Department, Central Stores Depôt, Rangoon, and was for the time being acting as Superintendent of the Central Stores. These Central Stores were situated in Rangoon and were maintained for receiving and distributing imported stores, and for local purchase of such other stores as necessity arose.

The yearly transactions amounted to about Rs. 11 lacs, and the average value of stock on hand was about Rs. 7 lacs. The stock principally consisted of metals. There was £87,000 of stores, etc., on order at the present time.

Purchases of bricks, lime, stone and timber were almost invariably made by the executive engineers and for the whole province the yearly expenditure on this head was about Rs. 30 lacs. It was made up of bricks 1½ lacs, lime 1 lac, stone 24 lacs, timber 3 to 3½ lacs.

Local purchase of stores through this agency had been temporarily suspended owing to the detection of certain irregularities, and executive engineers were for the time being, permitted to make their own purchases, if they so desired.

The only facilities in Burma for making physical tests were at the Insein Engineering School and at the Laboratory of the Government Chemical Examiner.

He thought that it would be better, if instead of establishing a test house in Burma, Government gave more practical encouragement to technical institutions which could be developed to do all the testing required and at the same time would provide valuable instruction and experience to the students who were trained at these Colleges. A test house instituted on these lines would afford cheap and easy facilities for testing local manufactures, and would probably receive considerable patronage from firms who were unable to carry out tests themselves. As the value and the importance of these tests were realised, the local firms might give assistance (pecuniarily or otherwise) in the obtaining of additional or improved appliances for testing a wider range of materials.

His main objections to the idea of a central purchasing agency were fear of delays; the non-feasibility of such an agency being able to supply the ordinary materials of construction (bricks, timber, etc.); its inability to meet an emergency; and the cumbersome nature of the agency itself. He considered that it would be very difficult to recruit the right type of personnel for such a large organisation; and, if such an organisation were decided upon, then he would advocate it being broken up into separate provincial agencies for local purchases.

Witness stated he had had dealings with the Munitions Board and that he had not found them satisfactory. He quoted a definite case that came before him.

He considered that the Public Works Department in Burma should have its own purchasing agency which should more or less conform to the work now carried out by the existing Central Stores. He declined to consider a single agency which would purchase for all the departments in Burma as he thought it would end in confusion and delay. He was not acquainted with the requirements of other departments, *e.g.*, the Forest Department, etc.

He considered that suitable personnel could be recruited locally for Public Works Department requirements; but that a provincial agency, created to purchase for all departments, would entail excessive personnel owing to the diversity of the requirements.

To the hypothetical case of a central store agency that commenced by undertaking the supply of a limited number of items common to several departments and which made no mistakes in supply, and gradually and progressively extended its sphere of supply without detriment to efficiency, the witness agreed that such an organisation would be valuable development. He contended that even in such a case local Governments should not be restricted in any way in making purchases to meet emergencies. A matter that was all too commonly overlooked, was the shortness of the working season, and delays in the supply of necessry stores and machinery exercised a very detrimental effect on the progress of work carried out by the Public Works Department. He quoted instances that had occurred during his experience in the Public Works Department.

So far he had not felt the want of a good inspecting staff for local purchase. He considered inspection unnecessary for articles of good name and approved suitability when they were supplied by firms of good standing and repute. In the case of 'bazar' articles, inspection was necessary to prevent substitution and adulteration.

Witness stated that, in order to secure and retain a suitable and honest staff, it was necessary to hold out prospects of advancement throughout the full period of service.

At Rangoon, Saturday, 17th January 1920.

PRESENT:

Sir FRANCIS COUCHMAN, K.B.E. M.I.C.E. (*President*).

A. W. DODS, Esq.
H. N. HESELTINE, Esq., C.I.E.
Lieutenant-Colonel C. C. H. HOGG, C.M.G., R.E.
Brigadier-General H. A. K. JENNINGS, C.I.E.
Rai Bahadur LALA MILKI RAM

And the following co-opted members:—

J. P. HARDIMAN, Esq., B.A., I.C.S., Commissioner, Meiktila Division.
F. REILY COLLINS, Esq., M.I.C.E., Superintending Engineer, Rangoon Circle

J. C. HIGHET, Esq. (*Secretary*).

J. C. PAULSON, Esq., Superintendent of Stores, Burma Railways.

Written Statement.

Question 1. So far as the Burma Railways Company, Limited, is concerned, I see no advantage in forming a central agency for the purchase of stores.

The present procedure of indenting on the Board for English stores in general use, and inviting local tenders for country stores is as near perfect as it can well be.

Question 2. If a central agency is established I fear there may be very considerable delay in getting stores that are urgently required.

Question 3. Articles that can be manufactured locally should not be dealt with by a central agency. The local stores officer is capable of dealing with these.

Question 4. I see no advantage in the Burma Railways Company, Limited, purchasing stores through a central agency, provided the Railway Company always invite tenders or quotations for their requirements.

Question 5. For Government agencies having no separate stores depôt it would probably be useful to have a central stores depôt but the question whether it would be wanted in a small province like Burma is an open one.

Question 6. I am not in favour of the creation of local agencies for the purchase of stores for the Burma Railways.

Question 7. I have no experience of the system by which Government calls for tenders for supply of stores.

Question 8. I see nothing to hinder the introduction of simultaneous tendering in India and England for important contracts on behalf of Government.

Question 9. In my opinion the policy of inspection should be dictated by the consuming department.

Question 10. Yes.

Question 11. For Railways I do not see any necessity for special inspection organizations.

Question 12. I have no expert knowledge for which specialized inspection is advisable.

Question 13. Assuming the creation of local agencies for the purchase of local goods it will be necessary to create local inspection agencies.

Question 14. I take it that the creation of central or local agencies for the purchase of Government stores would necessitate very considerable modifications in the Stores Rules of 1913.

Question 15. I think the suggestion of purchasing European stores (whether in India or in the United Kingdom at the time of purchase) through established Indian branches of British manufacturing firms the best method of encouraging local enterprise, and where the prices are not out of proportion to what we would pay if we imported direct the purchases should always be made locally. The grant of this concession would—

(*a*) naturally give firms in India a keen interest in keeping stock; and

(*b*) would give the firm encouragement to establish manufacture in India.

Question 16. I see no advantage of any scrutiny by a central department in India of all home indents before their transmission to the Director-General of Stores.

The controlling officer should be sufficiently acquainted with the local market to know if the articles are to be had or not to be had in India.

Question 17. In normal times there should be no trouble, as the range of differences in price is not great. Just now there is no method except constant enquiry, the market being very jumpy.

Question 18. I can think of nothing.

Question 19. I do not advocate the formation of central stock depôts by Government of India.

(*a*) the holding of stocks by Government depôts would be lessened.

(*b*) If the purchase for the central stock depôts were made locally then the holding of stocks by private firms would increase.

Question 20. I do not approve of the formation of central stock depôts.

Question 21. I give below all the figures I am able:—

Year.	(*a*) Stores purchased abroad.	(*b*) Imported Stores purchased in India.	(*c*) Indian Stores.
	Rs.	Rs.	Rs.
1915-16	12,58,282	2,11,954	18,62,714
1916-17	9,73,054	4,05,394	30,83,039
1917-18	1,40,329	5,14,202	15,88,023
1918-19	1,14,055	4,19,839	10,63,609

Question 22. Recently the maintenance of a register was not possible, as prices soared up and have now begun to descend. But we have ledgers for stores bought for stock.

(*b*) No record.

Question 23. Yes, I think this would be possible.

Question 24. No experience.

Question 25. I am unable to answer this question.

Question 26. Recruitment for the stores department on this Railway is one of the most troublesome problems I have to deal with as there is no school in which store-keeping is taught and the only way to make an efficient sub-store-keeper is to get as intelligent a man as possible and let him work for ten years in the godown, at the end of which time he may or may not be a useful man.

Question 27. I am unable to give an opinion at this early date.

Question 28. At the time of delivery a receipt is granted to the vendor, which receipt is attached to his bill; when the bill is presented it is checked with a corresponding entry in the Daily Report of Receipts, and if found correct in number and rate the bill is passed on to the Accounts Section, who again check it with the Original Purchase Order. The Audit Ledger Section then verify the figures and check the bill with a corresponding entry in the ledger, after which the bill is passed to the Audit for payment. If the item is a direct purchase the Audit Ledger Section will check the bill and also see if the item is on the ledgers; in which case attention will be drawn to it by them.

Question 29. No.

Question 30. Yes, I think so.

Mr. J. C. PAULSON, called and examined.

Witness had joined the Burma Railways as assistant engineer in April 1900 and held charge of the Rangoon District from March 1901 to early in 1903 when he joined the Stores Department as Superintendent.

His views, as expressed in his written statement, were based on the impression that he would be bound to make no purchases except through the central agency, and on his experience of the Indian Munitions Board. Provided it was optional to make use of the agency, he had no objections to offer and he thought that such an organisation would be of great advantage in many cases especially by providing facilities for the proper inspection of Indian manufactured articles which was essential. He had frequently to complain of bad packing by firms in India.

He was all in favour of purchasing everything practicable locally. Less stock had to be carried and stock-verification was greatly facilitated as local purchases had not to be accounted for in ledgers.

At Rangoon, Monday, 19th January 1920.

PRESENT:

SIR FRANCIS COUCHMAN, K.B.E., M.I.C.E. (*President*).

A. W. Dods, Esq.
H. N. Heseltine, Esq., C.I.E.
Lieutenant-Colonel C. C. H. Hogg, C.M.G., R.E.
Brigadier-General H. A. K. Jennings, C.I.E.
Rai Bahadur Lala Milki Ram.

And the following co-opted members:—

J. P. Hardiman, Esq., B.A., I.C.S., Commissioner, Meiktila Division.
F. Reily Collins, Esq., M.I.C.E., M.C.I., Superintending Engineer, Rangoon Circle.

J. C. Highet, Esq. (*Secretary*).

J. W. Richardson, Esq., nominated by the Burma Chamber of Commerce.

Written Statement.

Question 1. I do not advocate the formation of a central agency primarily for the purchase of stores. I consider provincial stores should have full powers to purchase their own requirements. I advocate the formation of a central agency for the purpose of suppyling information regarding stocks held, prices ruling and the most suitable sources of supply. The central agency should purchase only if requested to do so by provincial stores, or other Government departments.

Question 2. Particular departments such as those mentioned would use a central agency in the manner described above.

Question 3. A central agency should not purchase any stores unless particularly requested to do so. Certain stores of a highly technical nature should be purchased direct by the department concerned.

Question 4. (*a*) Local and public bodies are covered by answers to questions 1 to 3, (*c*) British Colonies and Protectorates (i.e., Government departments) should be allowed to make use of the central agency for purchases if desired in which case a suitable fee would be charged, (*b*) Company-owned Railways and other private concerns should not use a Government central agency to make purchases. Information regarding stocks, sources of supply and prices ruling should be available on application.

Question 5. See answers to questions 1 and 2.

Question 6. The Government of India departments would ordinarily obtain their requirements from the most convenient provincial stores, or be directed by the central agency.

Question 7. No suggestions.

Question 8. The establishment of a central agency would render possible simultaneous tendering in India and United Kingdom for important contracts, and would in fact constitute one of its important functions.

Question 9. The policy of inspection must be dictated by the consuming department. The department responsible for industrial development should not be allowed to frame specifications for consuming departments except in consultation with departments concerned.

Question 10. Inspection should usually be carried out or arranged by the purchasing agency.

Question 11. There will be cases where the technical nature of requirements will be beyond the ordinary knowledge of the purchasing agency in which case the indenting department must be responsible for inspection.

Question 12. In the case of timber it is necessary to have expert knowledge and consuming departments will usually need to arrange inspection, if considered necessary.

Question 13. I consider that provincial stores should usually be responsible for the inspection of its purchases, and in the event of purchases at an inconvenient distance from the province concerned the provincial controller should be permitted to call upon other provincial stores for the services of inspecting staff.

Question 14. The creation of provincial stores would necessitate a modification of Stores Rules of 1913 inasmuch as the provincial stores should have power to purchase in the cheapest or most convenient market whether goods are of Indian or home manufacture.

Question 15. Purchases of European stores should be allowed through local agents or Indian branches of British firms at the discretion of the controller of provincial Stores. I am of the opinion that this would encourage—

(*a*) the holding of stocks in India.
(*b*) the possibility of manufacture being established in India would depend upon many considerations of which the above concession would undoubtedly be an important inducement.

Question 16. I consider that scrutiny of home Indents should be solely for the purpose of assisting in the form of advice, the provincial stores controllers to buy in the best market. The central agency should not have power to vary an indent except with the sanction of the provincial stores controller.

Question 17. The provincial stores would inform the central agency of the best offers received against its enquiries; this together with information gleaned from trade publications and other sources would be co-ordinated by the central agency and a bulletin issued periodically to provincial controllers and the more important purchasing departments.

Question 18. Yes, any stores obtainable more advantageously in South Africa, Australia and foreign countries which can be more expeditiously reached direct than through the India Office, more especially if such places abroad have an organization corresponding to the central agency proposed for India.

Question 19. Stock depôts should be established by provincial stores not by the central agency.

(*a*) This would I consider enable Government departments, to reduce the quantity of stores held in departmental stores.

(*b*) I do not consider the holding of stocks by private firms would be affected.

Question 20. Stock depôts should be established in or near the capital of each province in the case of the major provinces and Burma. I am not sufficiently acquainted with minor provinces to be sure that separate stores are necessary. Possibly the nearest major province could handle a minor province's requirements more economically.

Question 21. } No answer.
Question 22. }

Question 23. This should be one of the central agency's most important functions.

Question 24. No answer.

Question 25. I consider that Company-owned Railways and similar bodies should not be allowed to purchase from Government stores. It would constitute interference with the sphere of private enterprise were they allowed to do so.

Question 26. No answer.

Question 27. The cost of purchasing departments and the Central Agency should be met by a charge on orders placed.

Question 28. } No answer.
Question 29. }

Question 30. Interchanges of personnel between provincial stores, central agency and home stores department would tend to give a wider experience of supplies and a more intimate knowledge of requirements than can be obtained in the course of correspondence.

Mr. J. W. RICHARDSON, called and examined.

Witness has been fifteen years with Messrs. Steel Bros. Co., Ltd., Rangoon, and was now a manager of the firm in charge of Timber and Mining Departments.

It was the practice for railways and other consumers in India to obtain their teak from timber merchants in India who purchased and held stocks. He was very doubtful whether any economy would result from direct purchase from the supplying firms in Rangoon. Under the existing system, the consumer in India obtained the advantage of having stocks close at hand which were held at the risk of the merchants who were usually content with a very reasonable profit. The Indian Munitions Board no doubt obtained timber cheaper during the war by centralising purchase and by providing steamship freight when such was otherwise unobtainable but in normal times there were limits to the advantage of bulk purchase. If carried too far, small firms would be cut out and there would be an undesirable tendency for the business to become concentrated in a few large concerns; when each consumer made his own purchase separately timber merchants were able to gauge approximately where demands were likely to come from and to arrange their stocks accordingly. They were thus frequently able to take advantage of favourable markets and freights.

He feared that the establishment of a central purchasing agency might lead to the concentration of industrial development around the headquarters of the central agency to the disadvantage of other parts of the country.

The greater the encouragement given to firms to hold stocks of imported articles the greater was the prospect of new lines of manufacture being started in India or Burma. Firms who had commenced by importing and holding stocks to meet the requirements of ricemills in Burma were now manufacturing many of the items in the country.

He saw no insuperable difficulty in simultaneous tenders in normal times. It would of course be necessary to allow ample time. If the tenders were decided in India, home firms should be able to send full particulars of any alternative specifications by mail. They would then submit their priced tenders to the office in London on the same date as might be fixed for the receipt of tenders in India. The London office would select the most favourable home tender and cable particulars to India for comparison with the Indian tenders.

Government purchases need not be confined to articles of Indian or British manufacture. He saw no reason why foreign articles of equal quality and more favourable price should not be purchased.

If central and inspecting agencies were set up, they must be staffed with experts sufficiently well-paid to be honest. This was particularly important for the inspection staff.

T. F. FFORDE, Esq., Superintendent of Police Supplies, Burma.

Written Statement.

Question 1. Yes. This will ensure economy of public funds, eliminate competition between Government departments, tend to efficiency in making purchases and foster the industries of India.

Question 2. For the time being at least, special arrangements, would, in my opinion, be necessary as each particular department has its own sealed patterns and specifications to work by an officer of each department should be attached to the central agency until such time standard samples and specifications are fixed for all departments.

Question 3. Yes, indigenous articles (that are peculiar to the country) such as oils in or of Burma and articles not required in large quantities or numbers or of any great value.

I would propose that certain discretionary powers be rested in the heads of departments, to purchase direct or through some local agency chosen by such heads of etc.

Question 4. Yes, unless the local market rates are cheaper. They should contribute a certain percentage say 5 per cent. to 10 per cent. to cover transit and other incidental charges and for the maintenance of the central agency.

Question 5. Yes.

Sufficient powers should vest in the heads of departments to purchase stores locally up to a fixed limit, say Rs. 500.

Question 6. As far as possible, all requirements for departments of the Government of India should be obtained through local agencies.

Question 7. Yes, of that in force in the Police Supply Department, Burma, briefly the system is as follows:—

Classified lists of articles required are prepared and tenders are advertised for in the principal Indian and local papers. Tenderers are expected to quote for every item in the schedules. In certain schedules stores are included which are obtainable only from the manufacturers' local agents. The method of calculating the difference between one tender and another is the total cost of the whole tender for all stipulated articles. This, in my opinion, is not sound and Government is often the loser. The lowest quotation for each item of every schedule should be noted and given to the successful tenderer.

There should also be no stipulation that any particular manufacturer's goods only will be accepted. Tenderers should be asked to submit samples with their quotations; and when prices are being compared, the quality of the articles should also be considered.

Further, Government should deal direct with manufacturers and not, as at present, through middlemen.

Question 8. I think it would, sufficient time being allowed.

Question 9. By both. Representatives of each department should be members of the inspecting committee and inspections might be made simultaneously so that the inspecting officers could help each other.

Question 10. Yes.

Question 11. Yes, for the departments noted in paragraph 2 above; but only until such time standard samples are fixed for all departments.

Question 13. Both; the central agency should inspect triennially; while the local inspection agencies should inspect twice a year.

Question 16. Yes, this will ensure that articles of Indian manufacture of the same or even superior quality are not overlooked.

Question 17. The printing and circulating of a commercial gazetteer.

Question 19. Yes.

(*a*) It should not affect existing stocks which would naturally be consumed before fresh stocks were required; and would also later obviate the necessity of Government departments keeping more stock than was readily consumable.

Question 20. They should be situated at all important seaports and presidency towns, easily accessible by rail or steamer or both. For Indian as well as for imported stores. For manufactured articles as near the place of manufacture as possible.

Question 21.—

YEAR.	Value of Stores purchased abroad.	Value of Indian Stores purchased.
	Rs.	Rs.
1910-11	1,01,234	..
1911-12	87,459	..
1912-13	82,481	3,28,879
1913-14	1,07,059	3,63,207
1914-15	1,44,159	3,46,028
1915-16	1,84,084	4,41,999
1916-17	2,82,338	3,25,601
1917-18	1,48,170	3,06,544
1918-19	3,00,588	4,28,825

Question 22. (*a*) Price lists and originals of tenders received.

(*b*) None.

Question 23. Yes, by means of the commercial gazetteer referred to in paragraph 17 *ante*.

Question 27. Yes, please see paragraph 4.

Question 28. The system in force in the Police Supply Department is:—

Orders are made out on contractors who after tendering the stores get the order receipted by the Police Supply Officer—a Gazetted Officer—who personally checks the orders with invoices, these orders duly receipted are attached to the bills by the contractors.

These bills are checked by the Accountant and Superintendent of the office with the rates given in the price list. The bills and detailed contingent bill are then signed by the Superintendent of Police Supplies, and sent to the Accountant-General who again checks the rates quoted and issues a cheque payable to Superintendent of Police Supplies. The cheque is endorsed by Superintendent of Police Supplies and made over to the contractor. For half mounting accounts of which the Superintendent of Police Supplies is the controlling officer, the same procedure is adopted except that the cheques are made out by the Superintendent of Police Supplies and bills are not submitted to the Accountant-General, Burma.

Periodically auditors of the Local Fund Audit Department audit both accounts and check all orders and bills with invoices, placing those bills under objection for which receipted invoices cannot be produced.

Question 29. Yes.

Mr. T. F. FORDE, called and examined.

Witness had been twelve years in the Police Supplies Department and had been Superintendent of Police Supplies for about seven months.

The bulk of the material included under textiles in the statement of purchases which he had prepared was cloth and khaki drill for uniforms which were purchased by open tender. No tests were made. The quality and make of material to be supplied were specified in the tender and the trade marks were examined on supply. On account of inadequate staff and the want of godown accommodation the Burma Police Department had been exempted from the stores rules in the purchase of articles of clothing or equipment.

Uniforms for the Civil Police were now being made up in the jails. They were made in standard sizes and altered to exact fit by *darzis* attached to the Police Force. Military police were provided with English khaki and the Civil Police Indian khaki. The Indian khaki was now as good as the English.

His written reply to question 13 was based on the misapprehension that the inspection of the books of local agencies was referred to.

M. OPPENHEIMER, Esq., nominated by the Rangoon Trades Association.

Written Statement.

Question 1. Yes. The principal reason being the larger the quantity ordered, the cheaper the cost.

Question 2. Yes. Each department mentioned has its own specialities which must obtain serious attention.

Question 3. Yes. Many stores can be obtained more cheaply by asking for local tenders, such tenders to be advertised in the principal Indian and Burma newspapers.

Question 4. This is difficult to answer. Local contractors in many instances are frequently in a position to supply stores at more advantageous rates than if they were imported through one central agency; conditions existing must govern this question.

Question 5. For Army Departments *Yes*. For Railways *No*, owing to differences in gauge and equipment. For Public Works Departments *Yes*. For Post and Telegraphs and Indian Royal Marine *Yes*.

Question 6. See answer to question 3.

Question 7. No.

Question 8. Yes, as far as heavy engineering works or railway plant are concerned, also for Post and Telegraph Departments.

Question 9. Inspection should be under the control of consuming department which doubtless knows best what it requires and wants.

Question 10. Inspection should be carried out by a central agency created for that purpose, but should work under the control of consuming department as far as its requirements are concerned.

Question 11. Yes, Railways, Post and Telegraphs and Military.

Question 12. See answer to question 11.

Question 13. Local inspection ought to suffice, provided stores asked for are up to standard specification.

Question 14. Scarcely.

Question 15. (*a*) Prices might advance in consequence of Government demands.

(*b*) Should be encouraged as much as possible. The late war's lessons ought not to be forgotten.

Question 16. Might be useful in view of associating similar indents from other sources, so as to increase quantities and thus reduce prices.

Question 17. Weekly price list should be issued, as many firms do now.

Question 18. Anything of perishable nature or likely to easy destruction in transit.

Question 19. A certain amount of stock to be determined by actual experience of ordinary expenditure should always be available for prompt issue.

(*a*) Could be co-ordinated to Central Stock Depôts.

(*b*) Position would not change, as unless under contract, stocks held by private firms are for sale to the public.

Question 20. In such towns as may be selected to be the most convenient to the various Government departments to be catered for. Yes.

Mr. M. OPPENHEIMER, called and examined.

Witness was Director of the firm of Messrs. S. Oppenheimer & Co., Ltd., Rangoon. The firm's business comprised import of hardware, cement, tools for mining, canvas, piece goods, liquors, manufacture of uniforms, mule, bullock and elephant gear, tents, paulins, etc.

He had no complaint against the stores rules as they stood at present.

He did not consider that the purchase and inspection of stores for company railways and local or *quasi*-public bodies by a central Government agency would constitute interference with private enterprise in any way.

R. A. HORNE, Esq., Dockyard Superintendent, Irrawaddy Flotilla Company, Rangoon, called and examined.

Witness was not asked to submit a Written Statement.

Witness had been eighteen years with the Irrawaddy Flotilla Company. His principal work was the building of river craft for his own company from plates and angles sent out from Great Britain, ready for assembling and riveting together. He had also had experience of designing and building small river craft.

It was more or less the general practice amongst ship designers to use Lloyds, or British Corporation, rules as far as possible in arriving at the necessary scantlings: so the Consulting Naval Architect in England would presumably follow the same rules. In fact there was no reason why he should depart from them.

An intimate knowledge of local climatic and river conditions was necessary to enable a Naval Architect successfully to design a vessel for Indian waters. Witness had himself condemned barges, also features of design in Paddle steamers in Mesopotamia, which had been designed and built in England specially for Mesopotamia, and he considered that this showed the necessity of having Naval Architects in India to deal with crafts required in India.

Provided materials were available sea-going vessels of fairly large size could be built in Rangoon, and he was of the opinion that ship-building would develop if private firms had the opportunity of quoting for all classes of craft required by Government.

The system of arriving at the cost and overhead charges in Government dockyards should be enquired into, if these dockyards were going to compete with private firms in the building of vessels. That is to say they should be put on an equal footing at least with private firms when quoting for work. His firm had once prepared and furnished designs and drawings of a steam-vessel for a Government department, but no more had been heard of it. He believed that the vessel had since been built in one of the Government dockyards.

Regarding inspection, witness considered that vessels should be inspected during their construction by marine engineers who had had a good practical training in work of that nature. Such a man would be able not only to inspect the propelling machinery but also to carry out the inspection of the actual construction of the vessel and its equipment. He thought that a suitable man could be obtained for Rs. 700 per month rising to Rs. 900, or even to Rs. 1,000 or more, and with good quarters.

At Rangoon, Tuesday, 20th January 1920.

PRESENT:

Sir FRANCIS COUCHMAN, K.B.E., M.I.C.E. (*President*).

A. W. DODS, Esq.

Lieutenant-Colonel C. C. H. HOGG, C.M.G., R.E.

Rai Bahadur LALA MILKI RAM.

And the following co-opted members:—

J. P. HARDIMAN, Esq., B.A., I.C.S., Commissioner, Meiktila Division

F. REILY COLLINS, Esq., M.I.C.E., M.C.I., Superintending Engineer, Rangoon Circle.

J. C. HIGHET, Esq. (*Secretary*).

T. E. GIBSON, Esq., nominated by the Burma Chamber of Commerce.

Written Statement.

Question 1. I do not consider a central agency for purchases necessary; I consider that each province should be at liberty to arrange its own purchasing.

I think a central agency would create unnecessary delay in purchasing and supplying stores and machinery and would not be more economical than if purchases were made by each province on its own account. Instead of a central agency I would suggest that when a particular province is requiring a supply of any commodity an enquiry for this commodity should be sent to each provincial store depôt, and at the same time make enquiries locally, the enquiring province would receive quotations from any province in which the material was available and would be then in a position to purchase on the most favourable conditions. The only use I can

see for a central agency would be as a go between the provincial stores and the purchasing agency at home.

Question 2. I think that each department such as Army, Railways, Public Works, Posts and Telegraphs and Royal Indian Marine should be allowed to do its own purchasing as the departments are large enough and important enough to maintain store depôts. If purchasing for all these departments is centralized I consider that the central agency would be too large and cumbersome and I consider that decentralization to the above extent would be more economical in every direction. These departmental stores should be in touch with each other and enquiries should be sent from one store to another when purchasing if the purchase is considered of sufficient importance.

Question 3. No opinion.

Question 4. I am of opinion that local and *quasi*-public bodies, Railways, Colonies and Protectorates which buy stores in India should be allowed to make their local purchases when prices are favourable from provincial stores. The stores should be supplied at their cost price *plus* a percentage to cover shortage and departmental charges.

Question 5. See answer to questions 1 and 2.

Question 6. I think that Government departments should obtain all their requirements through the provincial store depôts.

Question 7. No suggestions to offer.

Question 8. The establishment of a central agency, say in Calcutta, would render possible the simultaneous tendering in India and England.

Question 9. I consider that inspection should be carried out by the purchasing department.

With regard to the inspection and testing I am of opinion that too much stress is laid on this as in the case of ordinary commercial commodities and material, purchased from firms of standing and repute the material which they would supply would all be standard quality and manufactured under tests by makers.

Large importing firms and merchants buy practically all their requirements on brands or from makers of repute without tests or inspections and in very very few cases are they let down.

Question 10. See answer to question 9.

Question 11. Each department should be responsible for the inspection of its own stores.

Question 12. No opinion.

Question 14. The creation of local agencies would necessitate the modification of the stores rules of 1913 and I consider that each Controller of provincial stores should have liberty of action in making any purchases of stores required, whether of Indian or home manufacture.

Question 15. I consider that the purchasing officer should be allowed liberty of action and he should decide in each case whether it is more economical from all points to place his orders in India or at home. If the purchasing officer has liberty to buy stores of European manufacture from agents in India I consider that this will encourage agents to hold better stocks and also to consider the establishing of manufacture in India.

Question 16. I consider that a scrutiny of home indents by a central agency is not necessary as it is presumed that the indenting officer is qualified to know the requirements of his province.

Question 17. I consider that it is the duty of the Controller of each provincial stores to keep himself up to date with prices and information regarding all classes of stores he is likely to buy the same as a buyer in a commercial establishment does.

Question 18. No opinion.

Question 19. I advocate the formation of provincial store depôts to hold stocks of both Indian and imported stores.

Question 25. I do not consider that the purchase of stores for railways and local and semi *quasi*-public bodies from Government provincial stores would interfere with private enterprise to any extent as private firms would be suppliers to the provincial stores and in any case railways and public bodies would only purchase stores in this manner if supplies could be obtained from provincial stores on better terms than from private firms.

Question 30. I consider it advisable to arrange for a certain amount of interchange of personnel between the home and Indian Stores Department as I am of opinion that a certain amount of local experience and knowledge would largely help the home department in purchasing stores for India.

Mr. T. E. GIBSON, called and examined.

Witness was Partner of Messrs. Cowie and Company, Rangoon, whose main line of business was importing metals, machinery and hardware. They did no manufacturing. The bulk of the business was with private firms and dealers in bazars.

His views had been formed on his experience in Burma and he considered that a province as large and as important as Burma should have absolute freedom of action in the purchase of its requirements. A provincial Government store should be established in Burma which would be entirely apart from the proposed central agency in India as regards administration, but would be able to communicate with, and if desirable make purchases through, the central agency.

The most useful function of a central agency would be the dissemination of industrial information.

If the present stores department at the India Office was transformed into a branch of the central stores agency in India, indents for Burma provincial stores which would ordinarily go to England should pass through the central agency.

If the scrutiny contemplated in question 16 meant solely bringing to notice items which could with advantage be obtained locally and not criticism of the necessity for the demand, he would modify his written reply to that question.

To secure the full benefits of bulk purchase, it is only necessary to purchase in reasonable quantities which varied in amount according to the commodity and were generally known in the trade.

He could see no difficulty in the way of simultaneous tenders. Home tenders could be opened in London and particulars cabled out for comparison with quotations made in India.

Very frequently imported stores could be purchased cheaper from local stock holders than from home. Commercial firms were able to arrange forward purchases when there was favourable market whereas Government stores departments only purchased after indents were received.

In his opinion, Government laid more stress than was necessary on the inspection of stores.

Major A. WHITMORE, I.M.S., Civil Surgeon, Rangoon, called and examined.

(*This witness did not submit written replies to the questionnaire.*)

Witness was not in favour of a central agency conducted by Government officials who would be without financial interest in the efficiency and prompt disposal of the business and whose freedom of action would doubtless be strangled by multifarious rules and regulations.

His experience of obtaining medical stores through Government agencies, *e.g.*, Medical Stores Depôt and the Director General of Stores, India Office, was not encouraging. There was generally difficulty and delay in obtaining any appliances of a new and improved type which might be indented for. Supplies received from Medical Stores Depôts frequently showed signs of over long storage and complaints were ignored: whereas by buying locally from private agencies fresher goods and quicker delivery were secured, and complaints received proper attention.

The diversity of medical stores rendered proper inspection difficult. Inspection was uncalled for when purchases were made from firms of good repute, and if insisted upon would probably degenerate into an inspection of supplier's stock books to ascertain whether his turnover was correct and the goods therefore presumably fresh. The true test of quality was behaviour in use.

If Government test-houses were established, with chemical analysts on the staff, the present posts of Government chemical examiners could be abolished.

At Madras, Tuesday 27th January 1920.

PRESENT:

Sir FRANCIS COUCHMAN, K.B.E. M.I.C.E., (*President*).

G. H. COLLIER Esq., C.I.E.
A. W. DODS, Esq.
Lieutenant-Colonel C. C. H. HOGG, C.M.G., R.E.
LALJI NARANJI, Esq.

And the following co-opted members:—

The Hon'ble Mr. W. J. J. HOWLEY, Chief Engineer and Secretary to Government, Public Works Department.

The Hon'ble Mr. A. Y. G. CAMPBELL, C.I.E. I.C.S., Director of Industries, Madras.

J. C. HIGHET, Esq., (*Secretary*).

S. J. GREEN, Esq. Nominated by the Madras Trades Association.

Written Statement.

I have left several questions blank as these do not appear to come within my province to answer intelligently. They appear to be questions which should be answered by an official store-keeper or one acquainted with the maintenance of store department in India, whereas the Association I represent is more concerned in the development of Indian industries and the supply of stores and manufactures to the Indian Munitions Board.

Question 1. Yes. We advocate a central agency to deal with this great scheme because to centralise creates a far better standard of organisation and efficiency.

The history of each contract, or business of any kind dealing with the department would be centrally filed, and no time and expense would be expended in calling in and awaiting arrival of any particular contract which had been filed elsewhere.

The staff of experts dealing with the various classes of business which would be controlled from this department would be in immediate touch with one another, which in itself is a point that must necessarily lead to greater efficiency.

Question 2. It would be necessary to establish an expert controller dealing with each department who would appoint his own staff to meet the demand of his own special work such as Railways, Public Works Department, Posts, Telegraphs, etc., etc.

Question 3. None whatever. Expert advice should be obtainable at the central agency and everything that can be manufactured in India should be purchased in India provided that a satisfactory article can be produced.

Question 4. As this will be a state department private enterprise should be encouraged to make use of it. The expenses should be met by a well balanced scale of rates being framed, each client paying for the amount of service the department renders.

It would also assist in standardisation of various goods.

Question 5. We consider better advantage would be obtained by all to use the central agency and therefore no decentralisation would be required, except as noted in paragraph 6.

Question 6. A local office of the central agency established in every state would deal direct with any purchases, and therefore no intermediate agency would be justified.

Question 7. As far as we know, many firms who could produce various supplies are not intimated. A general list of stores should be prepared and circulated among the various trades associations and manufacturers so that firms could enroll their names with the central agency.

Question 8. Yes. We fully believe that a great amount of stores hitherto purchased in England could be supplied in India by private enterprise, but it will be necessary for Government to give encouraging support for the initial period, and we believe by the establishment of this proposed agency Indian industry will receive greater attention and should prove its efficiency.

Question 9. We certainly think that the industrial development department should be responsible for inspection. They would understand the various difficulties from time to time that would arise, and their judgment would encourage the particular enterprise as it would fully recognise they were all working for general development. It should work in conjunction with the consuming department so as to ensure efficiency in material and design.

Question 10. Yes. We advocate that inspection should be part and parcel of the central agency.

Question 11. As far as I am aware very few.

Question 12. Some firms in Madras hope to supply Government with scientific instruments and light high class engineering. It would therefore be necessary to secure a trained man to control inspection of this work with satisfaction.

Question 13. Local inspection agencies should be attached to the local purchasing agency. An inspector specially trained to the particular work being produced in that district could be attached.

Question 16. Yes. Attached to the central agency. It would encourage Indian enterprise and assure it the best was being done to forward Indian industries.

Mr. S. J. GREEN, called and examined.

Witness was a partner in Messrs. Simpson and Company Madras, whose main business was carriage-builders, motor and general engineers. During the war his firm had taken up the manufacture of ambulance stretchers, ambulance carriages, hoods and frames, heliograph tripods and small fittings of brass, leather, steel, etc., for the Army. The members of his Association, who were interested, had considered and accepted the views expressed in his written statement.

One advantage of a central agency would be that it would presumably be in possession of full detailed information regarding the various items in demand and would be able to supply patterns or samples on direct application without delay. During the war the local Munitions Board officials were frequently unable to supply essential information and took considerable time to obtain it.

Up to the war and now, Madras was not given a fair opportunity of quoting or competing for Government orders. Very little work was offered to firms in Madras from outside the Madras Presidency. There were great possibilities for industrial development in Madras and the Association feared that if independent provincial agencies were set up, the position of Madras firms might never improve and that the chance of quoting for all India needs might never come their way. For many items which might be manufactured in India, it would be necessary to amalgamate the demands for all-India to obtain a quantity sufficient to permit economical manufacture, and this could best be done by a central agency.

The whole requirements of the Government of India should be published in India so that firms would see what Government requirements really were both in quantity and kind and so know in what directions to develop their works to meet these requirements.

In the event of simultaneous tenders being called for, tenders from England might be opened in London and particulars cabled out for comparison with Indian tenders.

The form of encouraging support required during the initial period by firms commencing new lines of manufacture was expert advice and not financial assistance.

It was essential that inspectors should be acquainted with the manufacture and use of articles they had to inspect. This was not always so during the war. Inspectors should visit works and be capable of pointing out defects occurring in the early stages of manufacture. They should be in sympathy with industrial development and not insist on a standard of finish which was difficult to obtain in India, and which was unnecessary practically. The inspecting staff should be separate from the purchasing staff as the objects of the two were totally different.

He thought that a Government test house in Madras would receive sufficient work to justify its establishment.

If Government formed central stock depôts, private firms would probably hold smaller stocks, especially of articles liable to deterioration.

The purchase of stores by Company Railways and *quasi*-public bodies through a central Government agency would assist, rather than interfere with, private enterprise in India.

H. F. de COURCY, Esq., Superintendent, Public Works Stores, Madras.

Written Statement.

Question 1. Yes. The central agency will be in a position to place large orders and will therefore obtain its supplies at wholesale rates.

Question 2. I am not in a position to reply to this question.

Question 3. I do not know of any class of stores which should not be purchased by a central agency.

Question 4. If the central stores agency is worked on business lines I have no doubt it would be advantageous to these bodies to make their local purchases through it. Of course they would have to contribute towards the maintenance of the central organization.

Question 5. Certainly. I consider it is the only suitable agency. Regarding decentralization the branches of the agency in each Presidency or Province could be allowed to purchase certain stores up to a certain maximum limit.

Question 6. I am entirely against local agencies working under the local Director of Industries. This officer will have quite enough to do to look after his industries. Even if he has spare time I think it would be unfortunate to place the stores department under an officer who knows nothing of stores.

Question 7. I call for tenders practically every working day. The present system of calling for open tenders is, I think, objectionable. A number of petty traders and commission agents, who have no stocks of their own, are led to tender with disastrous results to everyone. I would suggest that the new department should obtain a copy of all the specifications of the Director General of Stores, India Office, correct them where necessary, to suit the conditions in India, bind them in book form and supply a copy to each firm in India. The firms who are willing to supply articles to these specifications should be brought on a list maintained by the new department and tenders should be sent to those firms only.

Question 8. I should certainly say so. All that is required is sufficient time.

Question 9. I am afraid I cannot answer this question.

Question 10. I do not consider it is necessary to have separate agencies for inspection and purchase. My view is that no great knowledge is required for making purchases but that inspection, which requires technical knowledge, is very important. The technical man will soon learn how to purchase and there should be one agency only for purchase and inspection.

Question 11. I do not know.

Question 12. If the department is recruited from technical men I consider all inspection can be done by them.

Question 13. With local agencies for purchase I consider similar agencies for inspection will be required. According to my proposal however, there would be one agency only for purchase and inspection.

Question 14. Yes. These rules have been framed by someone who has no experience of how they work in practice. I should frame entirely fresh rules.

Question 15. I find from my ledgers that firms in India charge, for European stores, about 100 per cent. more than the Director General of Stores, India Office, is able to land them in India. From the point of view of economy it is, therefore, inadvisable to purchase from established Indian branches of British firms. If the concession is granted firms will (*a*) hold larger stocks in India but (*b*) the possibility of establishing manufacture in India will be discouraged.

Question 16. Certainly. I consider this is absolutely necessary.

Question 17. My experience is that the price in England is so much cheaper than in India that there is no need for any comparison. I may state, however, that in normal times the fluctuations in prices at home are very small and English papers giving prices could be received in India within a month and these prices could be taken for purposes of comparison. For Indian prices the practice adopted by firms of employing a bazar clerk could be followed. This clerk visits the bazar daily and ascertains the price of each article.

Question 18. I do not know of any such class of stores.

Question 19. Certainly. It will be impossible to do without stock depôts for some time. The most backward provinces industrially will require the biggest stock depôts, Bengal requiring the smallest.

(*a*) Government departments will then hold very small stocks which is as it should be.

(*b*) Private firms will also hold smaller stocks.

Question 20. I consider each Presidency and Province will require a stock depôt. For the present they will have to maintain Indian stores also.

Question 21. A statement is attached giving the figures required. Those for the years 1910-11 to 1913-14 for stores imported into, and produced in, India are not available now.

YEAR.	Stores purchased abroad.	Imported Stores purchased in India.	Indian Stores.
	Rs.	Rs.	Rs.
1910-11	2,76,495	..	..
1911-12	1,20,470	..	..
1912-13	2,21,477	..	..
1913-14	3,57,413	..	..
1914-15	3,06,328	13,755	27,480
1915-16	1,35,277	30,476	84,707
1916-17	5,14,156	1,27,810	63,013
1917-18	90,707	1,27,019	1,10,771
1918-19	87,992	82,072	90,895
TOTAL	20,60,314	3,90,132	3,82,926

Question 22. (*a*) Price ledgers are maintained in my office and from these the price paid for any article in any year can be traced.

(*b*) No such record is maintained.

Question 23. Yes.

Question 24. I do not know.

Question 25. I cannot see how it would. The object of the proposed department is to encourage Indian enterprise.

Question 26. My idea is that the proposed department should be an Imperial one like the Post and Telegraph. I consider that the officers of the department should have had a technical training. They should be mechanical, electrical or civil engineers, the latter having had shops experience for preference. They should have had a year with an approved business firm. On first appointment they should be posted to the stores branch for a year to gain experience in store-keeping. They would then be transferred to inspection duty. From here they would go as senior assistants to the chief store-keeper or chief purchasing officer, gradually rising to be chief store-keeper or chief purchasing officer and eventually rising to the higher posts in the department. My proposal contemplates the transfer of an officer from the stores branch to the inspection and purchase branch and *vice-versâ* and also from one Province to another. My scheme also contemplates a separate Test House eventually for each Province but the officers at these Test-Houses would be recruited separately as they require special qualifications.

Question 27. Yes. This would be the most convenient method.

Question 28. The only audit carried out is by the Finance Department once a year. The officer goes through the accounts and sees that all rules and regulations have been observed.

Question 29. Yes.

Question 30. Yes. I think this would be desirable. I have already suggested in paragraph 26 an interchange between the stores and purchase and inspection branches.

Mr. H. F. de COURCY, called and examined.

Witness had been Superintendent, Public Works Department Stores, Madras, five years.

The average value of the stock maintained was about Rs. 12½ *lakhs* consisting of small stores, heavy plant and machinery and tools, metals ordinary and valuable, painters' stores, oils, coal, coke and firewood, scientific instruments, building material, sanitary fittings, famine tools and miscellaneous stores. The stock of imported articles was recouped by an annual indent based on the average consumption during the preceding three years.

He considered that it would be essential for a central purchasing agency to keep stocks, if delays in supply were to be prevented. These central stocks would replace the various Departmental depôts now existing.

The parity of price which the existing stores rules insisted on practically ruled out purchases in India, and made the encouragement of industries in India difficult. His statement that the price of articles manufactured or purchased in India had in some instances cost double what they could have been obtained for from the Director General of Stores, India Office, was based on figures which had been extracted for the Public Works Department Reorganisation Committee and included pre-war supplies.

He had had no cause to complain of delay in supply, or the quality, of stores received through the Director General of Stores. Imported stores offered for sale in India were not generally of such good quality as similar articles received through the India Office.

At present there were no means of ascertaining readily what could, or could not, be obtained in India. The purchasing agencies would require to keep close touch with the Directors of Industries and draw attention to articles which might be manufactured locally. Inspectors should advise Directors of Industries whenever they considered locally produced articles could be improved.

At Madras, Thursday 29th January 1920.

PRESENT:

Sir FRANCIS COUCHMAN, K.B.E., M.I.C.E. (*President*).

G. H. COLLIER, Esq., C.I.E.
A. W. DODS, Esq.
Lieutenant-Colonel C. C. H. HOGG, C.M.G., R.E.
LALJI NARANJI, Esq.
Rai Bahadur LALA MILKI RAM.

And the following co-opted members:—

The Hon'ble Mr. W. J. J. HOWLEY, Chief Engineer and Secretary to Government Public Works Department.

The Hon'ble Mr. A. Y. G. CAMPBELL, C.I.E., I.C.S., Director of Industries, Madras.

J. C. HIGHET, Esq. (*Secretary*).

Lieutenant-Colonel C. H. MAGNIAC, C.M.G., C.B.E., R.E., Agent, Madras and Southern Mahratta Railway.

Written Statement.

I beg to send herewith replies to certain of the questions in the questionnaire forwarded by you from the Chief Engineer, Locomotive and Carriage Superintendent and the Superintendent of Stores of this company. These officers are the representatives appointed by me.

The time has not been sufficient for me to review the answers given or to obtain complete answers to all the questions; generally speaking, I am not in favour of a central purchase agency as I consider it would lead to overcentralization, a reduction in competition and a rise in prices by the elimination of the smaller firms.

The question of the holding of stocks would also become a difficult one.

The answers enclosed with this must be taken as the individual opinions of the officers submitting them and not as the opinions of the Board of this company. I trust that my Board may be given an opportunity of expressing their opinion on the various points of policy raised in the questionnaire before any decision is taken in the matter.

Lieutenant-Colonel Magniac was not asked to give oral evidence before the Committee.

A. A. BIGGS, Esq., Chief Engineer, Madras and Southern Mahratta Railway.

Written Statement.

Question 1. I do not recommend the inauguration of a central purchasing agency, which owing to the very large amount of stores to be handled would be of unwieldy dimensions and difficult to maintain and supervise efficiently. Further, I consider that a tendency of such central agency would be to decrease competition among manufacturers and suppliers.

Question 2. Yes. Railway materials largely consist of special fittings and supplies which are not ordinarily required by the other departments of Government mentioned.

Question 3. See reply to question 1 above. I do not consider, except in very few cases, it would be advantageous to purchase from a central agency.

Question 9. I am of opinion that the consuming department should dictate the policy of inspection as that department has a special knowledge of its own requirements and what best suits its particular work.

Question 11. I am not aware of any.

Question 12. Yes, for instance the necessary qualities of steel for particular articles of manufacture.

Question 15. Under conditions of urgency, indenting officers should be permitted to purchase European stores, from reliable agents for British firms in India.

I would recommend that the words "provided that the articles are already in India at the time of order" be omitted from existing rule 5. If materials required are not in India, the agents of firms in India could most probably obtain such material from home much quicker than we could by indenting through the usual channel.

(*a*) If this concession were granted, firms would naturally increase their stock.

(*b*) This concession would undoubtedly make firms consider the question of manufacturing their articles in India.

Question 16. This causes delay and the necessity is not apparent.

Question 17. See reply to question 16.

Question 18. I know of no special material.

Question 19. No, as it would cause delay in the issue of stores.

Question 25. The purchase of stores by a central Government agency would constitute interference with private enterprise but the inspection of the stores by a central Government agency would not.

Question 29. I think not.

Mr. Biggs was not asked to give oral evidence before the Committee.

W. SARGEAUNT, Esq., Locomotive and Carriage Superintendent, Madras and Southern Mahratta Railway.

Written Statement.

Question 1. No. The inauguaration of a central purchasing agency would, owing to its necessarily huge dimensions, be unwieldy and costly to maintain.

Question 2. Yes. Railways especially as regards rolling stock and all fittings appertaining thereto should be especially dealt with.

Question 3. Yes. Small stores urgently required should not, I consider, be purchased through the central agency. The reasons are obvious.

Question 9. Assuming that a central purchasing agency was formed, I am of opinion that the consuming department should dictate the policy of inspection, as the consuming department has to use such material, or if Government laboratories are arranged for, the inspection of material should then be dealt with by specialists.

Question 11. No. Not that I am aware of.

Question 12. No.

Question 15. Under the conditions of urgency. It should be allowed that indenting officers be permitted to purchase European stores from reliable agents for British firms in India.

In existing rule 5 the words "*provided that the articles are already in India at the time of* order" should be omitted

In pre-war times it took on an average twelve months to obtain stores from England by indenting for them in the usual way and provided agents in India for British firms offered the same class of stores at the price such could be obtained from England on indents, I see no reason why such purchases should not be made in India. Even if the material asked for was not in India at the time of order, the agents in India could obtain such material very much quicker than by us indenting through the usual channel.

(*a*) If this concession were granted, firms would naturally augment stocks but of course this would depend on the magnitude of the orders they receive.

(*b*) I take it no British firm would establish a manufactory in India without having sufficient inducements to do so.

It would decidedly be an advantage to Railways if some classes of stores were manufactured in India. For instance, cells for electric batteries, vacuum brake fittings, etc.

Question 16. No. This would cause delay. As it is, indents are delayed quite long enough due to the various stages of scrutiny they have to pass through.

Question 17. No. This is essentially a question for a 'stores' man. I cannot express an opinion.

Question 18. I know of no special material which should be so obtained. A good deal depends on circumstances—See my reply to question 3.

Question 19. No. This would cause delay in the issue of stores, and mean a lot of extra work and expense.

(*a*) It would be difficult to realize the quantity of stock that should be held at such central depôts and further the distribution of stock would be troublesome.

(*b*) It would practically destroy fair competition in trade. Big and wealthy firms would seize most of the contracts for supply and the small or growing firms would suffer. This savours too much of a 'trust.'

Question 25. The purchase would. The inspection would not.

Question 26. No. I think not.

Mr. W. SARGEAUNT, called and examined.

Witness had been Locomotive and Carriage Superintendent, Madras and Southern Mahratta Railway, for about six years.

In framing his written replies, he had in mind a department which would undertake all purchases for every one, and consequently he feared that such centralisation would inevitably result in delays. He did not care how stores were purchased so long as he got what he wanted without unnecessary delay.

All supplies except coal and timber were arranged by the Superintendent of Stores either by indent on the Home Board or by local purchase. The Mining Engineer of the Railway Board was consulted in connexion with coal purchase and his advice had always been valuable and of great benefit to the Railway. The Mining Engineer also supervised the quality and despatch of the coal from the collieries. Timber for the carriage and waggon workshops was purchased on tender from timber merchants in India. He had tried to deal direct with the Forest department but found that that department was not equipped for the sale of timber in the form in which he required it.

The Madras and Southern Mahratta Railway had not as yet obtained any of its waggons from firms in India. He expected to receive some shortly from a supply arranged by the Railway Board.

His experience was that English supplies were generally better than Indian. This was possibly due to the careful inspection in England for which the Consulting Engineers were responsible. Indian labour was not wanting in skill and the work turned out in Railway workshops in India might be as good as similar work in railway workshops in England, provided the same quality of raw material were provided and with proper European supervision. There was therefore no reason why Indian-made articles should be inferior in any way to imported articles if the above conditions are complied with. Indian shops were somewhat handicapped by lack of proper equipment.

A very carefully drawn up specification and constant supervision were necessary for all work done in India. When indenting from England, the usual practice was simply to detail exactly the purpose which the articles had to serve and leave it to the Consulting Engineers to prepare a detailed specification. It would be an advantage if a reliable inspection agency were established in India, or there were Consulting Engineers located in India who could prepare proper specifications and be responsible for the inspection of the manufacture of such articles as it is intended to obtain in India.

Inspectors should be technical men with the knowledge of what the articles were required for.

Percy C. WOODD, Esq., Superintendent of Stores, Madras and Southern Mahratta Railway.

Written Statement.

Question 1. My reply is in the negative. My reasons against such a central agency are—

(*a*) It would be most unwieldly.

(*b*) It would be centralizing work.

(*c*) It would nullify legitimate competition. A combine of buyers, as such a central agency would cause, would result in a combine of sellers and tend to stifle individual enterprise and small concerns.

(*d*) It would be a good step on the road to turning the commerce of the country into Government controlled; for the giant buyer would rule the market.

(*e*) It would not obtain cheaper buying and would put up prices for all other buyers. The giant buyer would be up against the giant seller; the seller would to a great extent fix the price as he knows the buyer must have the material and can do little to moderate his demands or obtain it elsewhere. Meanwhile the small concerns both buyers and sellers outside the combine would suffer grievously and gradually be wiped out, which I maintain would be against the interests of the country as it is the young and small concerns, which require fair play to enable them to grow, that are the real backbone to industrial progress.

As instances of the failure to obtain cheaper buying, I give the following:—

Castor oil. In the latter part of 1918 castor oil was purchaseable about Rs. 38 per cwt. Government came into purchase exceptionally heavily, word flew round the country and prices were rushed up, in a week's time they reached Rs. 55. Government I believe, obtained most if not all their requirements and paid comparatively high rates, small concerns obtained their requirements and paid Rs. 55.

My point is that Government and small concerns could have bought all they got at Rs. 38 and a little higher if Government demands had come through several buyers and buying had been judiciously effected. The material was in the country—the real price was Rs. 38, the giant buyer created the giant seller and the seller fixed the price.

M. S. Plates. I was directed to obtain our requirements through the Indian Munitions Board. Result—three to six months' delay in getting the plates, prices as high and higher than I could have bought at the time the orders were placed and considerably higher than the market at time of delivery.

Bolts, nuts and rivets. Indian Munitions Board offered to supply. Offer accepted and orders placed. Result about two months' delay in obtaining delivery; supplies mixed, some badly made and incorrect—prices if anything higher than market.

Question 2. In my opinion, no.

Question 3. I do not know of any in particular.

Question 8. There is no more reason why it should than under the present conditions. According to the rules, all articles manufactured in India from Indian materials or from imported materials as long as a substantial part of the process of manufacture has been performed in India, should be bought in India provided that the quality is sufficiently good and price not unfavourable; therefore as long as the situation and capabilities of India are known, contracts India is capable of dealing with *must* be let in India.

As far as this company is concerned the statement in the last portion of paragraph 2 of annexure I of Appendix I, and second paragraph of clause 198 of the Industrial Commission's proposals, less the last sentence, is not quite correct.

Articles manufactured in India, whether from Indian or imported materials are bought by this company but the difficulty lies in obtaining reasonable and reliable delivery, sufficiently good and stable quality, price is rarely in question.

Question 9. In my opinion 'neither.' Consuming departments and departments responsible for industrial development are frequently on opposite sides.

Consuming departments' demands are frequently unreasonable and, if they were the arbitrators, would hinder industrial development; on the other hand consuming departments have to use and are responsible for the material used; therefore India must supply sufficiently good material. I submit that Government should lay down the quality required for all important articles and purposes; in minor matters, the usual

qualities might be accepted by both parties Government being the arbitrator in cases of disagreement.

Question 10. Yes; but inspectors must be quite independent of the purchaser and consumer. They should inspect according to the specification of the purchaser which must be according to rules and in many cases should give the purpose for which the article is required so that the inspector may know the quality necessary.

Question 11. In my opinion 'no.' Inspectors of course must only be appointed who possess the necessary expert knowledge of the material they are called upon to inspect.

Question 12. No, see also answer to question 11.

Question 15. Assuming that large central and local purchasing agencies are *not* formed, I see no reason, not covered by rule 5, why purchases of European stores through branches of British Manufacturing firms in India should be allowed. It is bolstering up trade which on principle I am against:—inducing firms to create stocks solely for the use of and at the expense of Government; it would gradually cause home Indents to cease and Government to purchase *all* their requirements in India for the benefit of the pockets of firms, causing heavy extra expense to Government;—it also would take the possibility of control of a large amount of freight out of the hands of Government and in an emergency create a very difficult position. I would however, advocate that the words 'provided that the articles are already in India at the time of order' be deleted from rule 5.

This would not affect the holding of stocks in India by private firms or possibilities of firms establishing manufacture in India, as there are and would be a large number of urgent requirements which in their own interests they hold stocks to meet, and these stocks are sufficient for the purpose of establishing manufacture in India, whenever manufacture is found profitable, though not to supply all of India's requirements.

See also last portion of reply to question 8. Assuming large central and local purchasing agencies *are* formed, some rules and conditions would be necessary as the present rules would greatly reduce the holding of stocks by firms in India and cause difficulties for want of them in establishing manufacture in India.

These rules would be difficult to frame and I regret I am not in the position to make effective suggestions.

Question 16. No; experience shows that it causes great delay and no practical compensating gain, if the rules are kept to as they should be. The scrutinizing of home Indents by the Indian Munitions Board was of no practical use, in my experience, except from the point of view of cutting out items which they considered not essential and insisting on the use of inferior materials as substitutes.

Question 18. I know of no others than those prescribed in the rules.

Question 19. I do not advocate the formation of central stock depôts. It would—

(*a*) cause great delay to consumers obtaining their requirements and extra work;

(*b*) reduce stocks held by Government departments;

(*c*) reduce stocks held by private firms.

I acknowledge that the question of centralizing both stocks and work has to be dealt with very carefully as there are many good reasons both for and against; each case must be dealt with individually and the best balance between the two methods obtained.

In the case of stocks I am against both excessive centralization or decentralization; local conditions and means of transport must be looked into, in each case.

Just so far as really quick and reliable transport is available will objections (*a*), (*b*) and (*c*) above be reduced and greater centralization be advisable, that is, from the point of view of economy to the consumer.

From the point of view that Government desire reserves of material to be built up in this country, centralization of stocks is also not desirable as it would reduce the floating balances in the country.

Question 22. (*a*) Card index system.

(*b*) No arrangement is in force to record equipment or special successes. All successes and failures are card-indexed and special failures are black listed.

Question 23. Yes; and it would be most useful. The Directors of Industries should keep purchasing officers in all provinces posted with information and prices of articles obtainable in India but this information should be complete, reliable and in detail. In the past in most cases, the information given has been too superficial.

Question 25. Purchase of stores for company-owned railways, etc., would, I consider, stifle private enterprise, see answers to questions 1 [(*c*) and (*e*)] and 4.

I advocate inspection of stores for company-owned railways, etc., by a central government agency, as purchasing officers generally have not at their disposal a proper inspecting and testing staff.

My view of this whole matter is that—

(1) Government should (by agency of the Directors of Industries probably) give purchasing officers full reliable and complete information of the capabilities of India (see answer to question 23).

(2) Lay down standards of qualities as far as possible (see answer to question 9).

(3) Insist on the rules particularly in regard to material India is capable of manufacturing *and supplying in reasonable time* from Indian or imported materials, being kept.

(4) Provide a sufficiently large and efficient inspecting and testing staff available for the use of all purchasing officers.

Purchasing officers would gladly avail themselves of this staff, placing orders subject to inspection. Inspectors, expert in the particular class of material ordered, would inspect and pass according to the standard quality laid down by Government or failing a standard the specification of the purchaser which should show the purpose for which the article is required.

By the use of this independent expert, on the one hand good and stable quality would be obtained and on the other the unreasonable demands of consumers would be restrained; thus the capabilities of India would be exploited to the fullest extent possible and much valuable information as to qualities, etc., necessary could be given by the Inspectors to Directors of Industries. Inspectors of course would have to be picked men, not only for their knowledge of the material they are called upon to inspect but for their knowledge of the purposes the material is required to be used for.

Question 29. I do not think it would render possible a more efficient audit on purchases. It might ensure fuller compliance with the rules in force but this should not be so, and I consider it would be an extravagant method of ensuring compliance with rules.

Question 30. I do not consider it desirable.

The requirements, necessary procedure and general situation is different with each and though knowledge of the different branches would be useful and advantage should be taken to gain it at every opportunity general interchanges would tend to impair efficiency.

Mr. Percy C. WOODD, called and examined.

Witness had been ten years in the Stores Department of the Madras and Southern Mahratta Railway, and had been Superintendent of Stores for four years.

His views were coloured to some extent by his experience of the work of the Indian Munitions Board in regard to indents; there was long delay, obviously

unavoidable to a great extent, in passing them for compliance; some items were struck out as procurable in India which were not really so; those ordered in India by the Indian Munitions Board were complied with only after long delays, three to nine months and over, and at prices which, with the exception of Tata's structural steel and cement, were higher than he would have had to pay. His experience was that it was far better not to seek the help of the Indian Munitions Board in purchasing material. He was always ready to purchase in India so long as the article was acceptable to the user, and the price was not excessive. The more that could be purchased in India, the greater the reduction possible in his stores balances. A central agency would be useful for the dissemination of information in regard to the development and possibilities of Indian industry: but he thought that this information could be obtained without the central agency undertaking purchases.

He had means of checking and comparing prices of home and local supplies but seldom did so. In normal times, variations in prices were slow and a minute comparison was a waste of time. It was worth while paying a little more for the quicker delivery, and reduction in stores balances, secured by purchase in India. Though opposed to it in principle, he had to purchase imported articles to a large extent from firms holding stocks in India, probably one-sixth of his imported stores were obtained in this way. Home indents had to be prepared nearly two years in advance and it was impossible to forecast requirements accurately. Imported stores purchased in India generally cost more than stores of the same kind received on home indents. He had never found in normal times, a difference of a hundred per cent. between the Indian and the home prices. If this had occurred he would attribute it to bad buying on his part. It was not his opinion that encouragement to firms to hold stocks of imported stores would result in better rates being quoted. Stores made in India generally cost less than stores of the same kind received on home indents.

He found the surplus stores lists of other railways and the Public Works Department useful but he only looked at items described as new.

There was a great want for a proper inspection agency in India absolutely independent both of suppliers and of consumers. The Consulting Engineers of the Railway were responsible for the inspection of all supplies from England. In India, he was dependent for specialised inspection on the consuming department. Once he knew an article suited the consumer, he found it sufficient, when dealing with firms of repute, to specify that supply should be the same as the previous supply. Consumers often demanded what he considered an unnecessarily high standard. The Indian Munitions Board had done a lot of good by questioning the necessity for certain particular classes of stores which the consuming department had hitherto insisted upon and by suggesting less expensive substitutes which had proved equally efficient.

He frequently made use of the Government Test House in Calcutta and thought that there was enough work in Madras for a separate institution of the same kind.

To secure the full economy possible from bulk purchase, it was only necessary that the orders should be reasonably large. Legitimate competition in buying as well as in selling was necessary for the good of any country.

A. R. L. TOTTENHAM, Esq., I.C.S., Superintendent of Stationery, Madras.

Written Statement.

I wish at the outset to say that I am in no sense an expert. Nor am I intimate with all the details of the working of the Stationery Office. Most of my time is occupied with my other duties as Collector of Madras, and particularly with assessments of income-tax, supertax and latterly excess profit duty. Apart from this, ever since I joined this appointment, it has been understood that the Collector of Madras was to be relieved of the duties of the Superintendent of Stationery in the near future. Consequently, it was not worth my while, even if I had had the time, to make the laborious attempt to master the details of an unfamiliar and complicated subject. The bulk of the work is done by my assistant, Mr. Upendra Pai, who, though like me, he is not a stationery expert, *is* familiar, which I am not, with the details of our working and I would suggest that if the committee requires oral evidence from any one in this office, he is the best man to give it, though I should like to be present at his examination.

My answers relate only to stationery, as I know nothing about questions relating to other classes of stores.

Question 4. Yes. Local bodies would then get their stationery at much cheaper rates than at present.

They should contribute, say 5 per cent. on the cost of the stores supplied to them. Local bodies that get stationery from the Central Depôt at Madras are now charged 5 per cent. commission on the total cost of stationery supplied to them.

Question 5. So far as stationery is concerned, the present arrangement under which the Stationery Department, Madras, is the agency for the supply to public offices in the Presidency, of stationery, of clothing and liveries, books published out of India, periodicals, printed forms and typewriters and their accessories required for official purposes, is satisfactory: but an expert is needed either as the head of the department or (preferably perhaps) as his assistant.

Question 6. Imperial and Military offices in the Madras Presidency including the Commissioner of Coorg and the Resident in Mysore now get their stationery from the Madras Stationery Department and the arrangement works satisfactorily.

Question 7. Tenders for the different classes of paper manufactured in India are called for every year through the Controller of Stationery, Calcutta, and are compared with the tenders of the English manufacturing firms obtained through the Director-General of Stores, London, before the sources of supply for the year are decided with the advice of the Controller and the local Superintendent, Government Press. This system works well.

Question 8. Yes. Such simultaneous tendering in India and in England has been found possible in respect of the requirements of paper for the Madras Stationery Department—please see reply to question 7 above.

Question 9. I think that the consuming department should decide whether the stores to be purchased are suitable for its purposes. I do not believe in buying rubbish at inflated prices in the name of stimulating Indian industry. I have urged this view in regard to the purchase of locally-made strawboards.

Questions 12 and 13. I do not think that any special inspecting agency is necessary if there is an expert in the department (see question 5 above).

Question 15. I understand that experience shows that it is cheaper to buy stationery through the Director-General of Stores than locally. I do not therefore generally approve the purchase of European stores locally in India.

Question 16. Such scrutiny is not exercised now. It does not seem to be necessary, particularly if there is an expert in the department (see question 5 above).

Question 17. Please see my reply to question 16 above.

Question 18. I cannot think of any.

Question 19. I think the depôt for the Presidency should be in Madras as at present. There would be great delay in getting things from (let us say) Calcutta. A typewriter that is urgently required can be got under

the present system in the course of a few hours, but it would take ten days at the very least if it had to be got from Calcutta. Moreover we get some paper, etc., locally. There would be no point in carrying it all to Calcutta and then sending it back again. The supply of clothing, etc., from a distant place would also be unsatisfactory.

Question 21.

	(*a*) Stores purchased abroad (stationery)*.	(*b*) Imported stores purchased in India (stationery).	(*c*) Indian (stationery) stores.
	Rs.	Rs.	Rs.
1910-11	5,04,923	38,715	7,75,748
1911-12	6,38,091	34,561	4,17,873
1912-13	4,46,598	36,825	4,23,508
1913-14	4,57,679	35,574	3,74,641
1914-15	2,46,609	35,549	5,32,919
1915-16	2,64,900	33,204	4,11,720
1916-17	2,05,339	29,179	3,61,253
1917-18	3,00,161	28,063	8,59,780
1918-19	36,012	25,492	9,22,574

* Arranged for by the Director-General of Stores, India Office, London.

Question 22 (*a*) Two registers are kept, one for articles bought in India and another for those supplied by the Director-General of Stores. These registers show the descriptions and the quantities of the articles purchased and payments made for them.

(*b*) No special records of this kind are kept.

Question 23. Yes. At present we often make enquiries of the Controller at Calcutta regarding articles which have to be purchased from other provinces.

Question 25. This is obviously a matter of opinion.

Question 26. Either the Superintendent of Stationery or his assistant should be an expert as already stated. I prefer a lay head with an expert assistant—but I can't say where the sort of man required for the latter could be got or what he would cost.

Question 27. As stated above, the Stationery Department, Madras, charges 5 per cent. in the case of supplies to local bodies. This is a reasonable arrangement.

Question 28. Purchases of stores (stationery) made for the central Depôt here are audited by an auditor from the Accountant-General's office, who sees whether such purchases are correctly and properly accounted for in the books of this office. This is only a test audit and not a complete audit.

Question 29. The Stationery Department at present is a separate and independent one and its accounts are audited by the Accountant-General. As I have stated above, if the head of the department or his assistant were an expert, purchases would probably be more satisfactory.

Question 30. If there were an expert on the staff of the local stationery Department, there would be an advantage in making him interchangeable with the personnel of the imperial stationery department.

Mr. A. R. L. TOTTENHAM, called and examined.

So far as witness was aware, there was no particular reason why Madras should have an independent stationery office and there would be no objection to the stationery office in Madras being placed under the control of the Controller of Printing, Stamps and Stationery, Calcutta.

At present, annual indents or forecasts for paper which Indian mills can supply are sent to the Controller of Printing, Stamps and Stationery at Calcutta who calls for tenders and sends them to the Superintendent of Stationery, Madras, with his recommendations. These are sent with the Superintendent's remarks to the Local Government who finally decide whether the contracts should be placed in India or in England.

The Director General of Stores, London, sends to the Superintendent of Stationery the results of tenders in England and it is by a comparison of these with the tenders received from Controller that the Local Government decide where the orders should be placed, in India or in England.

Lieutenant-Colonel F. E. SWINTON, C.I.E., I.M.S., Medical Storekeeper to Government, Madras, called and examined.

(*Witness was invited by the Committee to appear before them and prepared the note below after his discussion with the Committee.*)

I can only answer for the Medical Stores Department. I do not advocate any change in the general method of making purchases of European or American goods. Such articles should continue to be purchased through the agency of the India Office but slight modifications of the present procedure, which would tend to keep us in closer touch with the India Office, would be helpful.

There might, for instance, be a list of articles, easily specified, the description of which never changes from year to year and for which demands will always be made from India. The Director-General of Stores might make arrangements by contract, etc., to procure many of these items beforehand, that is to say, before the actual receipt of the home Indent from the office of the Director-General, Indian Medical Service.

The Director-General of Stores could judge the probable quantities, required by the average of say, 3 years' past actuals and might safely commit himself to buy 75 per cent. of that figure in readiness to commence supplies to India on April 1st of the year. This would result in even greater promptitude in sending out consignments.

The Director-General of Stores, whatever may have happened fifteen years ago, now serves us very well and gives us good stuff. He possesses the technical and scientific staff to examine and test our requirements *before* despatch and I cannot think that any complicated, cumbrous and costly machinery such as that foreshadowed in Appendices of the questionnaire will serve us any better, if so well.

I speak for the Medical Stores Department, the entire cost of the stores for which is probably less than that of a decent railway bridge, but the intricate and special nature of the vast number of items handled is something, I feel, not appreciated by those who propose changes in our procedure.

More useful from our point of view would be efforts directed towards unification of patterns, restriction of demands for fanciful articles, simpler systems of accounting such as the establishment at each Medical Stores of an Audit Office, a branch of the Controller of Military Supply Accounts' office, for the purpose of valuing vouchers, dealing with "objections," etc., *on the spot* instead of making them the subject of correspondence a year after the occurrence, the said correspondence being conducted with Calcutta, 1,200 miles off.

I am entirely in favour of utilizing indigenous articles, manufactured or otherwise, obtainable in the country whenever the *quality* is as high and the price is favourable.

Except to meet urgent demands, I am not in favour of the purchase, locally, of articles of European manufacture. In any case such purchases, unless the products are those of houses with world-wide reputations to keep up, are always open to suspicion and have to be analysed and tested before acceptance. This means delay before one can issue.

There are many things which we require which will *never* be made in India and the local imitations offered for sale are mere humbug. I am quite free from any misguided sentiment regarding the purchase of Indian made articles merely in order to be able to say they were "made in India." The articles which go to make up Field Service Equipment (Human and Veterinary) must be above all things of the *very best*. The provision of such articles is a task requiring very special and varied knowledge and long training. I should be sorry to have to depend on a "central agency" in such matters.

I am always making experiments and investigations regarding local industries (in my own particular sphere) and after manufacturing for myself I should always be prepared to buy from outside manufacturers if I was confident that the public service and the interests of sick patients would be as well served. Not being interested in making money out of any industry, the Medical Storekeeper and his assistants can be trusted to purchase and utilize only the best raw materials and to turn out the best only. We are not out to make profits and are above suspicion.

The Medical Stores Department already contains the technical staff for testing its own purchases and finished products. It is, furthermore, backed up by the existing establishment of an officer called the Chemical Examiner to Government, the recognized official arbiter on all questions where chemical analysis, qualitative and quantitative, is concerned.

I do not see that any new central organization is going to do such work any better than the existing one and it may pretty safely be assumed that one result of such an innovation would be to introduce a few more "links" in the chain of official correspondence.

At present my research officer is at my elbow *and under my orders* and the Chemical Examiner is at the end of a telephone.

The department is controlled by the Director-General, Indian Medical Service, and by his staff who are, at any rate, *medical* officers and conversant with the needs of their professional brethren.

It is in the office of the Director-General, Indian Medical Service, that the individual home indents of the Medical Stores Depôts are consolidated, scrutinized, criticised, printed and sent home to the Director-General of Stores. The function of pricing the indent has lately been centralized in the office of the Director-General instead of, as in the past, being carried out by each individual medical storekeeper to Government.

As for scrutiny by a central department in India of all home indents before their transmission to the Director-General of Stores, I would prefer to let the Director-General, Indian Medical Service, express an opinion, contenting myself with saying that provided not much time was lost in the process and provided that useful information (not otherwise obtainable by ourselves and for ourselves) resulted there is no *primâ facie* objection.

It is very important however, that the process of getting the home indent into the hands of the Director-General of Stores should not be delayed. From the nature of the task much time is inevitably spent on scrutiny and references and the indent reaches the Director-General of Stores only a month or two before the opening of the financial year in which the stores are to be supplied. That interval gives the Director-General of Stores very little time in which to make his arrangements.

I can suggest no practical method for keeping the scrutinizing department posted with up-to-date information of the prices of articles obtainable both in India and in the United Kingdom. One thing is obvious, *viz.*, that such an attempt would give employment to a huge staff.

There are some classes of medical stores, obtainable from abroad which might perhaps with advantage be obtained otherwise than through the Director-General of Stores. Paraffinum Molle (vaseline) is one of them for the reason that this product is not all shipped from the United States of America to London; an appreciable quantity is shipped direct to India. For many years the Bombay Depôt obtained its requirements from the local branch of the Vacuum Oil Company. This is not one of the articles which is not in any great need of very skilled scrutiny or analysis, neither is it a "life and death" drug and the mere fact that it is obtained from very high class people is enough to protect the buyer from imposition.

I have been quite unable to get any of the great Burmese oil companies to undertake the local manufacture of paraffinum molle. I understand that the local crude naphtha is not rich in vaseline though productive of much excellent paraffinum durum (white paraffin wax) which for a long time we have utilized.

I do not advocate the formation of central stock depôts—they already exist as far as we are concerned in the form of Medical Stores Depôts.

I give here the total amount expended by the Madras Medical Stores Depôt since 1910. I give (*a*) separate but (*b*) and (*c*) cannot be separated and are therefore given together:—

Year.	Imported Stores.	Local purchase.
	£	Rs.
1910-11	15,101	1,35,849
1911-12	33,478	1,60,469
1912-13	26,626	2,51,874
1913-14	30,483	2,49,353
1914-15	24,721	2,63,364
1915-16	27,500	2,70,172
1916-17	30,069	3,39,170
1917-18	41,704	4,54,604
1918-19	37,996	6,20,247

I do not consider that it would be feasible for a central agency to collect and disseminate prompt and reliable information regarding prices, capacity and performances of contracting firms. Each Medical Storekeeper is his own central agency in these matters and can and does apply to his brother storekeeper for help in the case of articles which experience teaches him are better or more cheaply procured from within the circle of another Medical Storekeeper. For a great number of years we have kept in touch with one another in such matters and each tries to procure his own requirements as much as possible from his own circle in order to avoid paying heavy freights. That is only common sense.

One of the peculiarities of the Medical Stores Department is that it *sells* roughly three fourths of its purchases to hospitals. Only the issues to military hospitals are unpriced by the Controller of Military Supply Accounts owing to the fact that the cost of the Department is borne by the Army Budget. All issues to civil hospitals are priced and the cost recovered through the various Accountants-General of Provinces, a percentage being charged in order to pay for the various charges incurred in stocking, handling, losses and deterioration in stock, etc.

The whole process of audit, etc., is already highly centralized in the office of the Controller of Military Supply Accounts, Calcutta, to whom we all have to

refer and to whom all receipted vouchers are submitted for disposal.

It is a cumbrous system, to which I object, but it persists.

Obviously there should be a special branch of the Audit Department within the same compound or at least in the same Town as the Medical Stores Depôt. The "pros" are numerous and powerful, the one "con" is problematical.

It will be seen therefore that the Medical Stores Department differs from all other departments that I can call to mind in that it does not utilize its own purchase within itself but either gives them away or sells them to other Departments to use. It is true that we turn raw materials into finished products but all are intended for subsequent issue to and utilization by people unconnected with the Medical Stores Department. Hence purchases have to be audited out of the department as well as into it.

As regards goods entering the department the Medical Storekeeper is specially responsible for the selection, ordering and scrutiny, correct weight, etc., of local supplies; he passes the bills and sends them to Calcutta to the Controller of Military Supply Accounts who thereafter disburses cheques to the suppliers direct in all cases of over Rs. 10.

I do not think that the creation of a central agency would get such work done any better, if so well, as under present arrangements. It would be more to the point to strengthen the existing organization.

My time is done; I shall have been a Medical Storekeeper for nineteen years in a month or two. I can therefore speak perfectly impersonally, about proposed changes which, in my opinion, would wreck the department.

At Madras, Friday 30th January 1920.

PRESENT:

Sir FRANCIS COUCHMAN, K.B.E., M.I.C.E. (*President*).

G. H. COLLIER, Esq., C.I.E.
A. W. DODS, Esq.
Lieutenant-Colonel C. C. H. HOGG, C.M.G., R.E.
LALJI NARANJI, Esq.
Rai Bahadur LALA MILKI RAM.

And the following co-opted members:—

The Hon'ble Mr. W. J. J. HOWLEY, Chief Engineer and Secretary to Government, Public Works Department.

The Hon'ble Mr. A. Y. G. CAMPBELL, C.I.E., I.C.S., Director of Industries, Madras.

J. C. HIGHET, Esq. (*Secretary*).

J. W. MADELEY, Esq., M.A., M.I.C.E., etc., Special Engineer, Corporation of Madras.

Written Statement.

I have received from the Government of Madras a copy of your letter No. B-507 F., dated 3rd December 1919, together with a copy of the questionnaire, in reply to which I have to say as follows:—

The questions contained in the questionnaire refer principally to Government work. I am not sufficiently acquainted with the needs of Government departments to answer all the questions. Probably the following statement of my experience will be more useful to the Committee than any attempt to reply to the questions under the heading 'Purchase.'

As Special Engineer for the design and construction of new water and drainage works for the City of Madras, I have during the past twelve years designed works—accepted by the Corporation and sanctioned by Government—to the value of Rs. 236·22 lakhs and obtained materials and plant, and executed work, to the total value of Rs. 103·60 lakhs.

For the purchase of the necessary materials and plant both in England and in India, I have drawn up contract forms and specifications under which plant and materials have been supplied. Of these I have had the final acceptance as being the sole judge of the requirements of the specifications. The plant has included amongst other things machinery for ten pumping stations, ranging from a large steam plant to pump the whole watersupply of Madras, down to a comparatively small plant to raise sewage from single divisions of the city, and intermediate plants of many descriptions including direct acting steam engine pumps, steam engines driving centrifugal pumps, oil engines driving centrifugal pumps, electric motors driving centrifugal pumps, and at one station, a Humphrey gas pump plant. Other plant includes twenty trench pumps—steam, petrol and oil, many hand pumps, hand cranes, etc.

The principal materials included about one hundred miles of cast iron pipes varying from four inches to forty-two inches in diameter, steel pipes forty-eight inches in diameter, about ninety miles of stoneware pipes varying from four inches to eighteen inches in diameter, air valves and specials for water and drainage works. Also the purchase of large quantities of Portland cement both in England and in India, and the purchase locally of twenty crores of bricks, large quantities of lime, sand and stone and miscellaneous stores.

For inspecting purposes, we have as agents in England a firm of engineers who engage inspectors to see that the specifications are complied with. This system has worked exceedingly well, and on no occasion have we had any serious dispute with any contractor, except one who wished his contract cancelled on account of extraordinary and unforeseen circumstances arising from the war. In India I have felt some difficulty in the absence of agencies who are qualified to carry out inspections. For my work I should not advocate a central agency for the purchase of plant and materials.

In my opinion such an agency would lead to delays, and would probably tend to standardization carried to such an extent that it would be difficult to obtain the most suitable articles. Under the present arrangement, I am able to specify exactly what I consider most suitable. In some cases, for instance stoneware pipes, I have considered it necessary to adopt a specification more rigid than that of the British Standard Specifica-

tion, and our experience in Madras has shown that the increased rigidity has resulted in gain in quality and in actual economy. I mention this to show that, circumstances may arise to render desirable a departure from good standard practice.

Even if a central purchasing agency were established, I should still give purchasers considerable latitude to buy materials locally, where they can be obtained to advantage.

With regard to question 8, it is a common practice in my department to obtain tenders simultaneously in India and in England for all contracts which can be executed in one or the other country. There should be no difficulty in the adoption of the same system by Government.

For information of the Committee, I send herewith two sets of contract forms,* *viz.*, Contract M. & M. No. 9 for the supply of steam pumping plant, Contract M. & M. No. 10 for the supply and erection of a Steel Elevated Tank. The former contract was obtained by an English firm and the latter by an Indian firm.

Question 9. I am strongly of opinion that the quality of the articles should be dictated by the consuming department. The method of conducting the inspection to ensure that the required quality is obtained should be left in the hands of an inspection department. I do not consider it desirable that the department responsible for the industrial development of the country should dictate the quality.

Question 10. Yes.

Question 12. I consider that most engineering plant, such as pumping engines and cranes; also materials, such as metal-work of all kinds, stoneware pipes, cement, etc., all require specialised inspection such as is readily obtainable in England.

Question 13. It appears to me that for the work of inspection, it is highly desirable to create inspection agents at the principal centres of production. Many articles require inspection throughout their preparation.

* Not reproduced.

Question 15. I would have the purchase of European stores determined by competitive tender—

(*a*) In order to supply in accordance with the terms insisted on by most municipal bodies, it would be necessary for the supplying firms to hold stocks in India.

(*b*) The firm knowing the requirements of the authority to which they are supplying, and also the possibility of local manufacture, would be in a favourable position to determine the desirability or otherwise of establishing manufacture in India. The firm would have a strong inducement to do so, if they considered it would be financially profitable.

Questions 19 and 20. I would advocate the holding of stocks at the principal consuming centres for Indian as well as for imported stores.

(*a*) *and* (*b*). The stocks that must be held by Government departments and private firms would both be reduced by the formation of central stock depôts by the Government of India.

Question 21. The following are the amounts purchased by my department of the Corporation since 1910—

	Rs.
(*a*) stores purchased abroad about .	20 lakhs.
(*b*) imported stores purchased in India about . . .	25 ,,
(*c*) Indian stores about . . .	21 ,,

These figures do not include expenditure on plant and machinery.

Question 22. (*a*) Stores are mostly purchased on contracts which provide the necessary records.

(*b*) A 'black list' is kept of unsatisfactory firms.

Question 23. Yes.

Question 25. I do consider that the purchase of stores for local bodies by a central Government agency is likely to interfere with private enterprise, but inspection by a similar agency should not do so.

Question 28. The auditing is carried out by the Accountant-General with the Government of Madras.

Question 29. I do not think so.

Mr. J. W. Madeley, called and examined.

Witness had been appointed to his present post in 1907.

When stores were required, which were obtainable in India as well as at home, tenders were invited by advertisement both in India and in England and all tenders were opened and decided in Madras. Home firms generally submitted their tenders by the hand of a representative in India whom they informed at the latest moment what their final quotation was, and for how long the offer was open. The terms of contract provided for the delivery of all goods, whether Indian or English, into the store-yard in Madras. Supplies from England were watched by agents in London who were advised of all orders placed and saw that the supply was according to specification.

The main items with which he was concerned were machinery, Portland cement and pipes, both cast-iron and stoneware. At present English cement purchased through agents in Madras was cheaper than Indian made cement and was more uniform in quality. Manufacturers of cast-iron pipes in India were given the opportunity of tendering for his requirements, but up to now they had not been able to secure any order chiefly because they were not prepared to undertake pipes of the sizes required for his work. Stoneware pipes were now obtained mostly in India. This specification for stoneware pipes differed from the British standard specification in insisting on less absorption, and therefore a higher degree of vitrifaction. This secured a harder pipe and diminished breakages in handling and had resulted in economy in the long run.

A central government agency would not be of much use to him in purchasing, but any facilities which might be provided for proper testing and inspection in India would be of the greatest value.

All his specifications and designs were prepared by himself, but in a very few cases it was open to firms tendering to submit alternative designs, if they so desired. He would consult an expert on any matter with which he did not feel himself competent to deal. He had had occasion to seek advice from the Electrical Adviser to Government. He thought that Government would be well advised to create similar posts or other specialised branches of engineering, filled by experts who would be capable of preparing detailed designs and specifications and be responsible for inspection.

For smaller stores, such as tools, etc., he usually let out an annual hardware contract for supply as required. The quantities of such articles used by him were not sufficiently great to render detailed testing necessary.

Timber was purchased locally on tender, and inspected first by overseers who rejected bad and marked doubtful stuff. It was then inspected by an assistant engineer and finally by himself if necessary.

He thought that there was sufficient work in Madras to justify the establishment of a Government Test House and Laboratory; in fact, this was essential for the proper development of the Presidency, and in itself would be a means towards that end. He was frequently asked to make tests of cement for others. He found the Government Chemical Examiner useful, but he did not appear to be able to do all the work that he (Mr. Madeley) wished—probably for want of sufficient staff.

The Hon'ble Mr. S. Cox, Chief Conservator of Forests, Madras, called and examined.

Witness was not asked to submit a written statement.

Witness had twenty six years' service in the Forest Department and was appointed Chief Conservator of Forests, Madras, in June 1919.

Except for Malabar, South Canara, Ganjam and Jeypore forests, the timber exploited from Madras Government Forests was of poor quality, small and crooked. Higher class timber was at present imported from Bombay and the Andamans. The usual practice was to auction the standing trees to be extracted and disposed of by the purchasers. The difficulty of extraction in the West Coast evergreen forests was so great that their proper exploitation had hitherto been impossible. The Forest Department were now preparing to do the extraction of the timber there, when the timber in log would be sold at Forest Depôts from which removal could be easily effected. Sawmills were also being established which would be worked by agents. The Forest Department should confine itself to conserving and improving forests and leave the trade in timber to private enterprise.

He would not go so far as to recommend that all Government requirements in timber should be purchased through a central agency, but he thought that railways in particular would save lakhs of rupees if a timber technologist were employed to advise in purchase and watch supply. The railway officers sent to inspect and pass sleepers were generally unable to distinguish one wood from another and the contractors were experts in the art of faking timbers. The type of man required was a saw-mill expert who should be paid at least Rs. 1,500 per month, and have staff under him to visit forests while the supply was proceeding. These technologists would be able to frame specifications which could be worked to and still give suitable sleepers. The present railway specification required too much and was almost unattainable. Endeavours to work to it caused enormous wastage in conversion and consequently made the price high.

If the central agency undertook the purchase of timber, its timber representative in Madras should be located at Cochin or Calicut.

L. B. Green, Esq., Assistant Director of Industries, Madras.

Written Statement.

I regret that owing to heavy pressure of work consequent on my early departure from Madras, I have been unable to devote, to this important subject, the time and attention that I would have wished.

Questions 1, 5 and 6. It will be convenient to consider these questions together.

I am in general agreement with the several recommendations of the Indian Industrial Commission that an Imperial department of stores should be established, and that provincial agencies should form part of the Provincial Departments of Industries. The indents received by the Director of Industries from provincial officers should be met as far as possible from the manufacturing resources of the province concerned. The balance of the indents would be forwarded to the Controller-General of Stores, who would either arrange to supply from stocks of material held in the Government central depôts, or arrange for the manufacture or purchase of the remaining items in other provinces. In the event of stores being unobtainable in India, the Controller-General of Stores would arrange for the transmission of the indents to the Stores Department of the India Office, or to whatever buying agency in England may hereafter be established.

I consider that with a view to economy the Controller-General of Stores should arrange for the centralized purchase, and enter into running contracts with manufacturers in this country, for the supply of classes of goods which are required on a large scale and are in constant demand. Indents for such stores would be forwarded to the Controller-General by the Deputy Controller of Stores working under the provincial Director of Industries concerned. In the case of stores other than these I consider that the requirements of departments of the Government of India should be obtained through local stores agencies. It follows therefore that the functions of the Controller-General of Stores would be chiefly to arrange for the centralized purchase of stores in demand by Provincial Governments and departments of the Government of India, and to arrange for the transmission to the various stores officers under the Director of Industries, of indents received from Directors of Industries of provinces in which the stores required are unobtainable.

Question No. 2. This is a difficult question to answer in general terms, but I am definitely of opinion that if the proposed stores department is to become an effective organization it must arrange for purchases on account of *all* departments of the Government of India. I see no reason why the requirements of all departments of the Government of India, including the Army Department, (except Medical Stores) and the Royal Indian Marine, could not, with proper organization, satisfactorily be arranged through a central purchasing agency. It would probably be found desirable, and even necessary, to include in the stores organization, liasion officers through whom indents from the specialized departments indicated in the question would be received by the Controller-General of Stores.

Question No. 4. I should say that undoubtedly it would be advantageous for local and *quasi*-public bodies, Company-owned railways, and British Colonies and Protectorates which buy stores in India to arrange for their purchases of stores in India through a government central stores agency. I consider that these authorities should contribute towards the maintenance of the central organization on the basis of a charge of 5 per cent. on the value of orders placed for them by the central agency.

Question 7. My answer to the first part of this question is in the negative. I consider, however, that it should be practicable to inaugurate a system of simultaneous tendering in England and in India whereby tenders for certain stores manufactured in this country would be called for by the Controller-General of Stores in India, and compared with the tenders of representative manufacturing firms in England obtained through the Stores Department of the India Office.

Question 8. I consider that the establishment of a central stores department should render possible the introduction of a system of simultaneous tendering in India and England in respect of important contracts for stores required by Government. It is most desirable in my opinion that such a system of simultaneous tendering, which would have the effect of inducing important British manufacturers to establish branches in India, should be introduced as soon as possible after the establishment of the stores department. A system of simultaneous tendering in England and in India for certain classes of articles required by the Controller of Stationery, Calcutta, is, I believe, already in force.

Questions 9, 10 and 13. Inspection of local purchases should, I consider, be carried out by inspectors who would be borne on an Imperial organization and attached to the staff of Directors of Industries in each province. The inspectors attached to the Provincial Departments of Industries would also be available for the inspection of stores, the purchase of which has been arranged under contract by the Controller-General of Stores.

I do not consider that a central inspection agency is necessary or desirable, except in the case of certain specialized stores, for the inspection of which it would probably be advantageous to have a small staff of central inspectors who would be available for the inspection of the stores of which they have expert knowledge, whether ordered by the Stores officers attached to the Departments of Industries concerned, or through the Controller-General of Stores.

I do not agree with the suggestion of the Indian Industrial Commission in paragraph 198 of its report that inspection of local purchases should be carried out by the expert staff attached to the local departments of Industries as I consider that such experts should be free to concentrate on development work.

In view of the large number of departments for which supplies of stores will be arranged, it would hardly seem practicable for inspection to be carried out by officers connected with consuming departments. And as standards and specifications will presumably be drawn up by the Inspection Department to suit consumers, I do not consider that it is either necessary or desirable that it should. The chief consuming department should be consulted in the drawing up of the standards or specifications to which the stores will be required to conform.

Question 12. A case in point is that of coir goods. During the period of the war orders for large quantities of coir goods, such as coir-screening, mats and matting, rope and hawser, mesh bags and yarn, were placed by the Indian Munitions Board. Inspection of the articles was carried out by myself although I was not an expert in coir and an expert knowledge of the trade is required to differentiate between the different grade and qualities of yarn used in the manufacture of the woven trade articles. As I acquired experience of the industry the inspection of the coir goods became more satisfactory. It is difficult to see how the stores organization could include an army of specialised officers possessed of expert knowledge of all specialized articles in demand. In the case of large orders for specialized articles, it might be advantageous to employ an outside expert to carry out the inspection.

Question 14. There can be no doubt, I think, that the present system relating to the purchase of stores by Government departments leads to great delay and prevents the majority of British firms of repute establishing branches in this country, and the modification of rule 3 of the Stores Rules, 1913, is clearly requisite. If this rule was modified so as to enable plant, machinery and stores, not manufactured in India, to be obtained from branches of manufacturing firms or representatives of such firms in India, the result would be that branches of the best British firms would be encouraged to establish branches in India, to carry stocks and to employ trained staffs. The ultimate object of inducing British manufacturers to establish branches here would be to encourage manufacture in this country by branches originally established to attract orders to home manufacturers. The advantage of large stocks of material and stores being carried by branches of home manufacturing firms in India is sufficiently obvious, while another result would be that these branches with their trained staffs would be much more likely to know the actual requirements of a stores officer or indentor than could be conveyed to the manufacturer through the Stores Department of the India Office. Also one result of the establishment in India of branches of British firms would be that manufacturers in England would become more familiar with the requirements of the country, and would improve their products with reference to Indian conditions.

Question 15. I consider that purchases of European stores through established Indian branches and agents of British manufacturing firms should be allowed subject to the conditions:

(*i*) that in the case of machinery and plant the branch firm maintains a staff of expert mechanics capable of erecting and maintaining the machinery required and

(*ii*) that the actual price of the stores does not exceed that at which articles of the same make could be obtained through the India Office.

The grant of this concession would result in large stocks of stores and machinery being held by branches in India of home manufacturing firms, and would also serve to encourage the manufacture in India of stores hitherto imported by the branches from the home manufacturers.

Question 16. Scrutiny by a central department in India of all home indents before their transmission to the Director-General of Stores, India Office, would appear to be clearly requisite.

Question 17. It should be practicable for the Director-General of Stores, India Office, to furnish the Controller-General of Stores in India with periodical returns containing up-to-date information as to the prices in the United Kingdom of stores ordinarily imported into India. The prices of stores in the various provinces in general demand should be communicated to the Controller-General of Stores by the Deputy Controllers of Stores through the medium of periodical reports.

Questions 19 and 20. If the stores organisation is to be run with due regard to economy and efficiency, I consider that consumable stores, whether imported or manufactured in India, should be stocked at convenient depôts for distribution throughout India. The chief ports of India are also in most cases centres of manufacture and hence depôts established at Calcutta, Bombay, Madras or Rangoon could carry stocks of both manufactured and imported stores. It might also be found desirable to establish depôts at important inland manufacturing centres such as Cawnpore and Lahore.

The effect of the formation of central stock depôts by the Government in India would be to substantially reduce the holding of stocks of stores by Government departments. The holding of stocks by private firms would probably also be reduced to some extent.

Question 21—

Department of Industries.

Year.	(*a*) Stores purchased abroad.	(*b*) Imported stores purchased in India.	(*c*) Indian stores.
	Rs.	Rs.	Rs.
1910-11	..	1,276	1,445
1911-12	..	3,470	2,697
1912-13	68	1,607	3,239
1913-14	3,375	2,549	4 548
1914-15	12,651	1,03,819	19,688
1915-16	1,760	32,475	18,736
1916-17	1,465	35,525	9 676
1917-18	2,180	21,548	13,633
1918-19	4,009	98,790	1,98,000

Controller of Munitions.

In the office of the Controller of Munitions, Madras Circle, stores of the undernoted value have been purchased during the last three years:—

Year.	Value of stores purchased.
	Rs.
1917-18	7,00,000
1918-19	9,00,000
1919-20 (to 15th January 1920) .	5,00,000
TOTAL .	21,00,000

About 50 per cent. of the amount indicated was expended in the purchase of imported stores in India.

and about 50 per cent for Indian manufactured stores, the latter of which were chiefly coir goods.

Deputy Controller (Munitions Manufacture).

YEAR.	(a) Stores purchased abroad.	(b) Imported stores purchased in India.	(c) Indian manufactured stores.
		Rs. A. P.	Rs. A. P.
1918-19 . . .	..	..	20,87,032 8 0
1919-20 (to 20th January 1920).	..	36,330 2 0	6,83,586 1 0

Question 22. (*a*) No registers are maintained in the headquarters office of the Director of Industries, but the subordinate institutions and factories, such as the Leather Trades School, and the Soap Works, maintain a general stores register. This register shows the descriptions, and quantities of the stores purchased, the date of supply, and payments made for the stores. A separate register for recording issues of stores is also maintained.

(*b*) No special records of this kind have been maintained up to the present.

Question 23. It seems probable that the local purchasing officers themselves will possess up-to-date and reliable information regarding the prices, capacity and performance of contracting firms. But it would be advantageous if such information was regularly communicated to the Controller-General of Stores through the medium of periodical reports, and transmitted by the Controller-General to the various provincial Controllers or Deputy Controllers of Stores. From my experience in the purchase of stores for the Indian Munitions Board, I know how extremely useful it is at times to have a knowledge of the price in other provinces of specific stores.

Question 25. I do not think so. It is hardly material to the merchant or trader whether he receives orders for particular classes of goods from a central or provincial agency, or through specific local authorities, although the effect of the reduction of competitive buying would no doubt be to lower prices to some extent. This would not, however, appear to me to be a legitimate cause of complaint by private traders. If the requirements of *quasi*-government departments and company-owned railways are arranged independently of the proposed stores agency, the effect will be as hitherto, that stores agency and *quasi*-government departments and railways will go into the market at the same time for the same classes of stores, and so raise the price, one against the other. It seems to me most desirable therefore that *quasi*-government bodies and company-owned railways should come under the scheme.

Question 26. I should like to have considered this question at some length but regret that the time at my disposal prior to my departure from Madras is insufficient to permit of this. The personnel of the stores organization must obviously consist mainly of mechanical engineers with commercial experience; engineers without commercial experience would be entirely useless for the purpose.

I consider that the purchasing and inspecting officers should be recruited into an All-India Service, and that the staff required for local purchase and inspection should be attached to the staff of the Director of Industries in each province. Officers deputed to Local Governments in this way should be under the direct control of the Government to which they are attached, and not under the Controller-General of Stores.

Question 27. Yes. In my opinion the cost of the central and local purchasing and inspecting agencies should be met by a percentage charge on the value of the stores supplied. An all round charge of 5 per cent. would probably be equitable.

Question 28. Purchases of stores for the Department of Industries are made locally by the Director of Industries subject to budget provision. The accounts of the Madura Technical Institute are audited by an auditor from the Accountant-General's office, and those of the Soap Works by an Associated accountant.

Question 30. I consider that the interchange of personnel between the home and Indian Stores Department, and between the Indian Stores Department and the local purchasing departments, would be eminently desirable on many grounds. The interchange of officers with experience of Indian conditions and those with expert knowledge of manufacturing methods in England could, only in my opinion, prove extremely advantageous in practice.

Note by Mr. L. B. Green, Assistant Director of Industries, Madras, on the manufacturing resources of the Madras Presidency.

The chief imports into this province are cotton manufactures, cotton twist and yarn, metals and ores, machinery and hardware, oils (mainly mineral), sugar, spices, glass and glassware. The chief exports of raw produce are oil seeds, raw cotton, grain, pulse, coffee, tea, spices, oils, hides and skins, and oil cakes. The chief export of manufactures are hides and skins tanned or dressed and leather, cotton manufactures and cotton twist and yarn.

2. The following are the chief manufactures of the Madras Presidency.

Cotton textile manufactures.—It is estimated that in the year 1914-15 there were 422,068 spindles in the province consuming 128,000 bales of cotton. Hand spinning is still carried on in many parts, but the requirements of the 400,000 hand looms which are estimated to be in operation are now chiefly supplied by the spinning mills. The Buckingham and Carnatic mills in Madras city carry on both spinning and weaving but nearly all the other mills confine themselves to spinning for sale to the hand looms and for export.

Leather industry.—As compared with other parts of India the feature of the leather industry in Madras is that the export of raw hides is insignificant while the export of partially finished leather and tanned skins amounts to a very large proportion of the total trade.

There are three chrome tanneries at Madras, the largest of which is that of Chrome Leather Company at Pallavaram. This factory finds employment for about 1,000 men. During the period of the war they were engaged at their full capacity on the manufacture of army equipment but have recently reorganized their works with the intention of concentrating on a few lines only. The chief goods which they now manufacture, in addition to finished leathers, are roller skins belting, hydraulic leathers and pickers. It is also the intention of this firm to develop the manufacture of footware. The two other leather factories, *viz.*, the Madras Leather Company and the South Indian Leather Company manufacture foot-wear on a small scale and a considerable range of articles for retail trade such as hair brush cases.

General Engineering Workshops.—The chief engineering workshops in Madras are those of Messrs. Massey & Co., the Madras Engineering Works, the Indian Aluminium Company, Messrs. P. Orr & Sons, and Messrs. George Brunton & Sons, Cochin. It will be convenient to consider briefly the chief manufactures of each firm in turn.

Madras Engineering Works.—The Madras Engineering Works are chiefly engaged on the repair and maintenance of marine machinery and general ship repairs. During the war, however, they commenced the manufacture of sugar machinery and lathes. They also manufacture oil presses, mortar mills and groundnut decorticators.

Messrs. Massey & Co.—Messrs. Massey & Co. carry on a general engineering business and manufacture a wide range of spares for Hornsby oil engines which prior to the war were invariably imported from England. They have also successfully established the manufacture of centrifugal pumps, disintegrators and water cocks and

estate machinery. They have also successfully established the manufacture of stocks, dies and taps and when these articles have been placed on a quantity manufacturing basis they propose to extend this line of manufacture by constructing screwing machines, tapping machines and similar articles. This firm have also undertaken the manufacture of lathes, milling cutters and metal spinning machinery with a considerable measure of success. At the moment they are engaged in installing the necessary plant for the manufacture of drop forging and the manufacture of eight inches gap bed lathes.

Messrs. P. Orr & Sons manufacture a very wide range of mathematical instruments and articles of a similar kind.

Messrs. George Brunton & Sons, Cochin, have established in recent years the manufacture of vertical two-stroke oil engines, marine oil engines, brick and tile machinery, hydraulic pumps and rubber rollers and propose shortly to considerably extend their manufacturing capacity.

The Indian Aluminium Company manufacture from imported material aluminium hollow ware, and also hammered brass vessels, copper stills and condensers. The capacity of their works is fifteen tons of aluminium ware per month, and eight tons of handworked brass vessels.

Among the small engineering works may be mentioned the Reliance Foundry which are chiefly engaged in the manufacture of spares for various classes of machinery and structural work and Messrs. Aspinwall & Co. of Cochin who manufacture pruning knives and other estate tools.

Coir.—The acreage under cocoanut in South India is very considerable and the various products of the cocoanut which consist chiefly of copra, cocoanut oil and Coir are important articles of trade. The bulk of the manufactured coir exported from the West Coast of this province is coir yarn which is spun from the fibre of the cocoanut, but the weaving of coir mats and matting is now an important industry at Alleppey and Cochin. Every variety of coir mat and matting is woven while coir ropes, cordage and hawser are another important branch of manufacture.

Chemical works.—The chemical works of the East India Distillery and Sugar Factories, Limited, at Ranipet, produce sulphuric acid and hydrochloric acid, and the company is now also manufacturing on a commercial scale nitric acid, epsom salts, green copperas and disinfectant fluids. At its sugar factory at Nellikuppam the same company manufactures golden syrup and confectionery.

Brushes.—There are six small brush factories in Madras but none of these are equipped with modern machinery and manufacture is carried on in a very primitive manner.

Cement.—The South Indian Industrials, limited have a cement factory in Madras which produce on the average about 4,000 tons of Portland cement a year. The average quantity of cement imported annually into this Presidency is however, about 30,000 tons and an investigation into the possibilities of establishing at Bezwada in the Northern Circars a cement factory to turn out this quantity of cement has been investigated and various firms are being approached with a view of the project being carried out. There seems little doubt that the requisite materials required for the manufacture of cement are available in large quantities in this Presidency.

Miscellaneous industries.—Among the miscellaneous industries established in this Presidency may be mentioned the milling of rice, the ginning of cotton, the extraction of oil from groundnut, castor, gingelly and copra and the manufacture of soap and pencils. Manure works have also been established in some parts of the province. There are two factories on the West Coast for the canning of fish products. A factory for the manufacture of glue on a commercial scale will shortly be established in Madras. The manufacture of jute (Hibiscus Cannabinus) is carried on in two factories.

Raw materials.—The chief crops in the Madras Presidency are rice, cholam, cotton and groundnut in the order named. The chief minerals which are mined in this Presidency are manganese, mica and gold. Graphite is found in the Godavari district but the deposit is not being worked at present.

Lines of development.—The Madras Presidency is not rich in mineral wealth and has no indigenous sources of fuel supply. The development of industries in Madras will, therefore, for the most part, be dependent on agricultural product and their utilization. The province is very rich in oil seeds of all kinds but so far it has been content with a lucrative export trade in the raw material. There are indications, however, of a change in this respect. Messrs. Tata Sons, Limited, have already commenced the construction of a large modern copra mill on the West Coast and contemplate the establishment at different centres of mills on a large scale for the extraction of oil from groundnut, gingelly, castor and cotton seeds. Messrs. Tatas will also, it is believed, take up the allied and subsidiary industries of soap making and the manufacturing of edible oils and fats. It may be noted that in the forefront of the programme of the department of industries is

(1) The treatment of vegetable oils,
(2) the manufacture of leather,
(3) the development of mechanical engineering as applied to agriculture.
(4) the organization and development of handloom weaving.

Mr. L. B. GREEN, called and Examined:

Witness was an engineer by profession and had received training in the workshops and technical offices of manufacturing firms at home. He had also had commercial experience in the Manchester and Bombay offices of a merchant firm. He joined the Department of Industries, Madras, in 1915 as Assistant Director of Industries, which appointment he at present holds, and had twice acted as Director. He had served the Indian Munitions Board since its formation as Assistant Controller of Munitions, Deputy Controller (Munitions Manufacture) and Controller of Munitions.

He could see many advantages from having provincial purchasing or stores officers under the Directors of Industries, the chief one being that all the information available with the latter would be more readily available to the local purchasing officers than otherwise. It might tend to economy, but would certainly entail delay, if the Directors of Industries had to scrutinise all provincial indents and note which items could be obtained locally and then send indents to the central agency for advice as to where purchase could most economically be made. The Directors of Industries must leave the scrutiny and noting to the local stores officers and it would be better to leave to the latter full discretion to decide which items he should purchase and which should be sent on to the central agency.

In his scheme, the provincial stores officer would act on behalf of the central agency in the purchase of items for which the demands might be amalgamated. It was merely a matter of proper organisation to overcome the difficulties which might seem to arise from the dual control to which provincial stores officers would be subjected. Railways which run through more than one province might deal direct with the central agency It would be difficult to draw a hard and fast line between what should be purchased by provincial stores officers

and what by the central agency, but he could see no insuperable difficulty in drawing up to commence with a list of items for which the central agency should arrange purchase. He would insist on even emergent purchases being made through the stores officers.

He appreciated the difficulties in the way of simultaneous tendering but had no practical suggestions to offer.

He had recommended that inspectors should be under the Directors of Industries as he reckoned that the bulk of the purchases they would have to inspect would be provincial. There was no real objection to all inspectors being under the direct control of the central agency provided that their services would always be readily available to the provincial stores officers.

To secure uniformity throughout India, specifications and standards should be drawn up in the office of the head of the central stores department. He had not contemplated 'design' as a function of the stores department in India. The same expert advice as the Director-General of Stores, India Office, could command was not available in India. He agreed, however, that the organisation should be framed to provide for future developments in India and not merely to meet present needs.

On further consideration, he would modify condition (*ii*) in his written reply to question 15. The price of imported stores and plant purchased through branches or representatives of British manufacturing firms in India would usually be greater than the price of such stores obtained through the Director General of Stores, India Office, probably by at least 5 to 7½ per cent. Even so, he would recommend purchase through branches or representatives in India fulfilling condition (*i*) in order to secure the advantage of the more intimate knowledge of what was required which the Indian branch or representative would have and also the quicker delivery which he considered would result, even if the articles required were not in stock in India. It would be necessary to accept spare parts, etc., which had not been inspected throughout manufacture but in dealing with firms of good repute cause for complaint would probably be extremely rare.

He thought it very desirable that a Government Test House and Laboratory should be established in Madras, but was not convinced that there was any real necessity for a test house as distinct from a laboratory at present. There was however ample scope at Madras for a research institute and chemical laboratory where amongst other things samples could be analysed for private parties, and the establishment of such an institute would be a logical development of the activities of the Department of Industries.

The formation of Government stock depôts would lead to economy in purchase. They would obviate the necessity of making urgent purchases when greater price would have to be paid and the stock could be replenished when the markets were favourable.

He considered it preferable that the Directors of Industries should possess engineering qualifications. They should preferably be engineers with commercial and business experience.

At Madras, Monday 2nd February 1920.

PRESENT:

Sir FRANCIS COUCHMAN, K.B.E. M.I.C.E. (*President*).

G. H. COLLIER, Esq., C.I.E.
A. W. DODS, Esq.
Lieutenant-Colonel C. C. H. HOGG, C.M.G., R.E.
LALJI NARANJI, Esq.
Rai Bahadur LALA MILKI RAM.

And the following co-opted members:—

The Hon'ble Mr. W. J. J. HOWLEY, Chief Engineer and Secretary to Government, Public Works Department.

The Hon'ble Mr. A. Y. G. CAMPBELL, C.I.E., I.C.S., Director of Industries Madras.

J. C. HIGHET, Esq. (*Secretary*).

C. CREIGHTON, Esq., V.D., Locomotive and Carriage Superintendent and A. H. CHRISTIE, Esq., Superintendent of Stores, South Indian Railway.

Written Statement.

Question 1. (1) Yes, because it would, while eliminating competition among consumers (buyers), foster it among sellers, and thus tend to a reduction in prices. The agency would, however, have to apply only to articles grown, produced or manufactured in India.

(2) Before, therefore, any such agency could be profitably employed it would, we consider, be necessary to tabulate India's resources both as to indigenous and manufactured supplies, and, as much information on this subject has already been collected by the Controller of Industrial Intelligence and the Accounts Branch of the Indian Munitions Board appointed during the war, the compilation of a schedule embodying the required particulars ought not to be a difficult matter.

(3) This schedule, which would have to be revised yearly and thus kept up to date, would be circulated among all government or semi-government departments on the understanding that the articles enumerated therein should be obtained through the agency advocated above.

(4) This done, it should be made obligatory on the part of the foregoing departments to submit to the agency by a given date an estimate of their requirements during a specified period, say twelve months.

(5) The several estimates would, on receipt by the agency, be consolidated, and tenders would thereafter be invited for the articles enumerated therein, it being open, as in all such cases, to the agency to accept such tenders either wholly or in part.

(6) Contracts would thereupon be entered into by the agency, and, with a view to saving haulage, the contracts would, where possible, be entered into provincially, that is, that the consumers and contractors should be located in the same province.

(7) This done, all that would be necessary would be to furnish the several departments with copies of the contracts that had been entered into on their behalf

and the agency would thereafter be relieved of all work connected with the *supplies* under those contracts.

(8) As no *provincial* agencies would be necessary under this proposal, the saving in personnel would be considerable, and, as, during the war, much the same method was adopted in the case of coal, cement and pig iron, there is no reason why it should not give equally satisfactory results in the case of other commodities.

(9) The scheme outlined above would embrace all mineral lighting and lubricating oils, which, though not indigenous, are, so far as we are aware, invariably procured from the Indian representatives of the refineries.

(10) We fear, however, that difficulties might arise in the matter of standards, since, in India, climatic and other conditions are so variable that in many cases the adoption of a uniform quality throughout the country might not be practicable.

(11) In the case, too, of *manufactures*, it would be necessary to keep in touch with home markets, since it is not impossible that the Indian manufacturer would, in certain instances, not be able to compete with his confrères abroad. It is probable, too, that, for many years to come, the Indian output would be insufficient to meet all demands with the result that complications would arise as to the distribution of the quantity available.

(12) Any scheme which involved the purchase, by an agency, whether centralized or local, of material *as it was required*, would in our opinion, be too involved to be workable.

Question 2. None beyond the arrangements suggested under question 1.

Question 3. None *vide* answers to questions 1 and 15.

Question 4. (1) Yes, certainly in that these bodies would thereby secure far better terms than would be possible, were they to purchase individually. They, too, should certainly contribute towards the maintenance of the central agency, and a very small percentage on the purchases of the several participants in the scheme would be required to cover the cost of the latter.

(2) Of indigenous stores the purchase by the chief railways alone amounted in 1917-18 to Rs. 6 crores, a toll of $\frac{1}{2}$ *per cent.* on which would produce from this source alone a yearly income of 3 lakhs, and this contribution would be more than compensated for by the better terms secured.

Question 5. The scheme outlined by us under question 1 would, we consider, meet the requirements of local Governments, and the decentralization of which it admits is defined therein.

Question 6. We do not favour the creation of local agencies but of a single central agency—*vide* reply to question 1.

Question 7. Yes, in so far as it may apply to railways, and we consider, that the system so far as it goes is satisfactory, though there can be little doubt, that, were it amplified as suggested in our reply to question 1, the system would be productive of better results than are possible under the existing procedure.

Question 8. Not necessarily; nor is the step advocated by us since our opinion is that purchases in India should, speaking generally, be restricted to articles grown, produced or manufactured in the country and that all imported stores should be obtained through an agency to be established at home.

Question 9. We consider that the policy should be dictated by the consumer but that in cases where the department responsible for the industrial development of the country had good reason to question the expediency of the policy the matter should, in the absence of a satisfactory settlement, be referred to arbitration or some higher authority.

Question 10. (1) Under the scheme outlined in our reply to question 1, inspection, except in the case of articles requiring special technical knowledge, could be left to the consumers, who, in the event of inferiority or laxity in supplies, should have the option of obtaining their requirements from other sources but at the risk and cost of the contractor.

(2) Where material was of such a nature as to necessitate inspection by specialists, periodical inspections at the works concerned could be arranged for by the Agency.

Question 11. Kindly see reply to the foregoing question.

Question 12. Specialized inspection is, we consider, not only advisable but indispensable in the case of the following among other classes of material:—

(*a*) bridge-work.
(*b*) locomotives and rolling stock,
(*c*) permanent way material,
(*d*) electrical gear,
(*e*) marine requirements,
(*f*) machinery and plant,
(*g*) paints, and
(*h*) the better qualities of iron and steel.

Question 13. Inspections ought, in our opinion, to be carried out at the works of the manufacturers. With local agencies, therefore, the inspections would be conducted by a representative of the area in which the works were situated, or, given a central agency, a representative of that agency.

Question 14. Any such scheme as that under contemplation would involve such radical changes in procedure that the existing rules would have no application and would have to be recast.

Question 15. (1) We consider that a hard and fast line should be drawn between—

(*i*) articles of indigenous growth, production or —manufacture, and
(*ii*) imported stores,

and that the former should, as outlined in our reply to question 1, be obtained through an Indian, and the latter through an English, agency.

(2) It is obvious that, by procuring in India articles that could otherwise be obtained direct from the manufacturers at home, we would be paying two men's profits, that is, the manufacturers' and the Indian merchants,' and supplies would thus be costing appreciably more than necessary.

(3) The purchase in India of imported stores should be resorted to only in cases where, consequent on abnormal demands or delay in the receipt of English supplies, stocks were temporarily exhausted. That an arrangement such as this would be hard on the Indian dealer is indisputable, but we are now writing in the interests of the consumer.

(4) Granted, however, that there were no serious disparities in price $\frac{\text{and}}{\text{or}}$ quality, demands on home markets would diminish in proportion to the extent to which India became self-supporting, with the result that they might eventually cease altogether. What the effects of such a policy would be from a national point of view we cannot say, but, as the tendency appears to be to encourage Indian industries, it is obvious that this can only be effected at the expense of other sources of supply, and there can be no doubt that, from the consumer's point of view, the arrangement would be the most economical, in that the larger the quantity of material procurable locally the less likelihood is there of stocks accumulating.

Question 16. Even as things are at present, the preparation of home indents occupies a considerable length of time, and many months elapse between their submission to the authorities at home and the receipt in India of the articles requisitioned therein. Their scrutiny, therefore, by a central department in India would aggravate this delay, added to which no such precaution would be necessary if the importation of material was restricted to such articles as were known to be unobtainable in India. The only way in which such scrutiny, might be productive of good would be by ensuring the transfer of excessive stocks from one consumer to another but equally good results could be achieved and at far less inconvenience by the periodical circulation by each consumer of lists of surplus stores.

Question 17. In the scheme outlined by us information as to the prices ruling in the United Kingdom would be required only in the case of such articles as are manufactured in India, and where the demands for this class of material were sufficiently large to warrant the step, quotations could be obtained by cable from the home agency, advocated in reply to question 15.

Question 18. None.

Question 19 (a) and (b) (1) There would be no object in Government maintaining stocks of—

(*i*) articles of indigenous growth, production or manufacture, and

(*ii*) articles which were peculiar to individual departments,

but for such imported articles as are in more or less general use, as, for instance, hardware, metals, paints, tools and varnishes, etc., the installation by Government of a magazine at Bombay (the first port of call) would be an undoubted advantage in that it would enable consuming departments to obtain their supplies *as they were required* instead of, as at present, in *anticipation* of their being required, and accumulations would thus be avoided.

(2) The cost of such an institution would, of course, be considerable but, provided that stocks were replenished from abroad and that a small charge was levied on all issues, there is little doubt that it would pay.

Question 20. We do not advocate the formation of any such depôts.

Question 21. The required particulars are appended:—

Year.	(*a*) Value of stores purchased from abroad.	(*b*) Value of Imported stores purchased in India.	(*c*) Value of Indian stores purchased in India.
	Rs.	Rs.	Rs.
1910-11	44,29,000	3,59,000	32,31,000
1911-12 . . .	34,83,000	5,17,000	26,71,000
1912-13	43 97,000	5,55,000	32,18,000
1913-14	97,34,000	10,36,000	40,58,000
1914-15	49,52,000	6,00,000	42 80,000
1915-16	39,30,000	4,70,000	31,63,000
1916-17	17,45,000	5,26,000	38,34,000
1917-18	3,36,000	8,18,000	22,40,000
1918-19	3,89,000	7,66,000	34,41,000

Question 22 (a) and (b) (1) The counterfoils of the orders as also our ledgers which are priced constitute a record of prices.

(2) Beyond a register of defaulters wherein are recorded the names of all firms and individuals who have *not* given satisfaction no such records are maintained, but all catalogues are, of course, specially tabulated and indexed.

Question 23. We fear not, nor would the procedure be necessary under the scheme outlined by us in reply to question 1.

Question 24. We regret we cannot express an opinion.

Question 25. We do not think so, in that the only difference would be that purchases would be effected by the agency instead of by the consumer.

Question 26. None beyond the fact that the purchasing and inspecting officials should be quite distinct and that both should be specialists in their respective spheres.

Question 27. Yes, *vide* reply to question 4.

Question 28. The bills for all purchases made in India are subjected to audit both by our own Department and by the Government Examiner of Accounts.

Question 29. Yes, in that the number of individual purchasers would thereby be appreciably reduced, and the fewer the purchasers the easier would it be to control their transactions.

Question 30. We are of opinion that local knowledge would be so large a factor in the success of any such scheme as that contemplated by the question that an interchange of personnel would *not* be desirable.

Mr. C. CRIGHTON, called and examined.

Witness had been for twenty-eight and quarter years an officer in the Locomotive and Carriage and Waggon Department of the South Indian Railway, for five years of which he had been Locomotive and Carriage and Waggon Superintendent.

The South Indian Railway had not so far obtained any waggons built by firms in India. There was no reason why the Indian built waggons should not be as good as the home product. When locomotive building is commenced in India, it would be necessary to provide inspectors similar to those employed by the Consulting Engineers in England. He saw no reason why a similar designing staff to that employed by the Consulting Engineers should not be employed under Government, or by the railway companies in India. With such a staff at his disposal, he, as an experienced locomotive engineer, would be prepared to undertake the same work as was being done to-day by the Consulting Engineers in England. The establishment of such a branch under a central government agency would tend to economy. At present, the want of consulting engineers in India was not felt; but if India progressed in structural and mechanical engineering, the present system would require complete alteration. Consulting engineers would always be required in England if only for the inspection of purchases made there. It would be best if the consulting engineers employed in India were connected with the consulting engineers in England.

He purchased teak timber by advertising for tenders in India for delivery at Negapatam. The timber was not inspected before delivery—only afterwards. Any logs considered to be inferior were generally accepted at a lower price. The percentage of absolute rejection was very low.

Mr. A. H. CHRISTIE, called and examined.

Witness had been twenty-three years in the Store Department, South Indian Railway, and Superintendent of Stores since September 1901.

The written replies had been prepared by Superintendent of Stores in consultation with the acting Locomotive and Carriage Superintendent.

So far as his experience went, there was no limit to the magnitude of bulk purchases beyond which advantage in price ceased to accrue.

The schedule suggested by him for circulation among consuming departments would contain only items which were grown, produced or manufactured in India.

He agreed that all the requirements of Government, whether obtainable in India or not should be published, so that private enterprise might see in which directions there were openings for new lines of manufacture in India.

For the success of the scheme proposed by him, it would—subject to the proviso that Indian prices were not prohibitive and qualities not unsuitable—be essential for Government to enforce the purchase in India of all items in the schedule. In some cases it might be necessary to place a protective duty temporarily on the imports of articles which appeared in the schedule. He considered this to be the most preferable form of government assistance to new industries as the prices quoted in India would then be a true indication of the cost of production and a comparison with prices in other countries would show to which industries continued encouragement was justified. If private enterprise was certain that Indian-made articles would receive preference, it would not be slow to start out new lines which gave any promise of success.

Items which had to be imported and were, therefore, not included in the schedule, would be obtained by the various consumers exactly as at present without the interference of a central agency in India.

There would be no objection to the inclusion in the schedule of indigenous products, articles, the output of which, though considerable, was not sufficient to meet all demands, but in such cases it would be necessary to supplement the local supply by imports, and it would be for the central agency to decide who should receive the Indian supply and who the imported. In cases where there was any marked difference in the prices of these two supplies, the difficulty might be met by pooling the figures and charging all consumers a uniform rate irrespective of the source of their supply.

He was not bound by any rigid rules as to what he could, or could not, purchase in India. In his opinion increased purchases through agents or dealers in India would have no tendency to encourage manufacture in India. The advantages of being able to purchase in India were better knowledge when delivery was to be expected, quicker delivery, and reduction in stores balances; but in spite of these, his experience was that it was more economical to obtain imported stores through his home Board. He would put the all-round difference in price at about 25 per cent. but in railway accounts no allowance was made for depreciation of stock which firms had to take into account.

The interval between the date on which work on an indent for ordinary stores was first taken in hand and that of the receipt in India of the stores enumerated therein was about twelve months. Emergent cable demands for classes of material that were readily obtainable might be complied with well within three months; otherwise the average time for supply from date of despatch of indent was about six months.

His purchases in India of indigenous stores were mostly made on tender samples, and all supplies were, on receipt at the stores depot inspected by himself or his deputy. Such supplies as were not up to sample were either rejected or taken over at a reduced price as might be indicated by circumstances. This system worked very satisfactorily.

Only in one or two instances had he had occasion to make use of the Government Test House and Laboratory in Calcutta, but he was greatly indebted to the Superintendent of that institution for some very useful information on the subject of the flash point of kerosene oil; and, had the institution been more accessible, it is probable that more use would have been made of it.

MADRAS CHAMBER OF COMMERCE.

Written Statement.

Broadly speaking, the Chamber is in favour of some such organisation as that put forward by Mr. D. L. McPherson, Controller (Munitions Manufactures), Indian Munitions Board, details of which are contained in the appendices to the questionnaire. Mr. McPherson's scheme appears to the Members of this Chamber to be an admirable one in all respects except that it does not go far enough and should, it is considered, be extended so as to cover also the question of the purchase of stores in the United Kingdom. In this connection, I am to recommend the abolition of the existing Stores Department of the India Office and the creation of a branch of the proposed central stores department instead. On the assumption that this suggestion meets with approval, my Chamber desire to make the following remarks in regard to some of the items contained in the questionnaire:—

Question 1. The formation of a central agency for the purchase of stores on account of departments of the Government of India is advocated subject to the constitution of branch establishment on the lines indicated in Mr. McPherson's scheme. The advantages of buying through the medium of such an organisation would result in the purchase of larger quantities from satisfactory suppliers and so indirectly encourage manufacture, obviate competition between Provinces for supplies available, tend towards the standardisation of the requirements of the various consuming departments and thus encourage the manufacture of such stores in the country.

Question 4. The Chamber considers that it would be advantageous for:—

(*a*) Local and *quasi*-public bodies;
(*b*) Company-owned railways and
(*c*) British Colonies and Protectorates.

to make their purchases through the medium suggested, provided that there is no fear of such enlargement of the Department's responsibilities as would render it unwieldy and inefficient. The advantages of the purchase by a central agency of the requirements of Municipalities, etc., are that these bodies would be able to obtain their supplies at lower rates and that a great deal of the corruption that is commonly supposed to exist would be obviated resulting in the saving of public money. Such bodies should contribute to the cost of the organisation on a percentage basis. The ratio might be determined annually on the turnover and expenses of the previous year.

Question 8. Assuming that a London branch of the central stores department were established in London, the department would presumably exercise its discretion as to whether tenders should be called for simultaneously in India and England or in one country only. If, however, the Stores Department of the India Office is not abolished, there appears to be no reason why simultaneous tenders should not be called for though this would probably prove possible in practice only in the case of important projects where market fluctuations did not play any important part owing to the length of time that would necessarily elapse in the consideration of tenders.

Question 15. Purchases of European stores through established Indian branches of British manufacturing firms should be allowed to the fullest possible extent, all things being equal. The Chamber, however, is strongly of the opinion that this method should not be limited to established branches but should be extended to include the duly authorised agents of any British manufacturing firm. Such a concession would encourage the maintenance of adequate stocks and if provided the turnover were justified and the process of manufacture practicable it would lead to manufacture in this country.

Question 16. This Chamber approves the scrutiny by a central department in India of all home indents before their transmission to the Director General of Stores, and this process would naturally occur automatically in the event of the Stores Department at the India Office becoming a branch of the central stores Department.

Question 30. The Chamber considers that it is highly desirable that there should be interchanges of personnel between the organisations at home and in India however constituted and are of opinion that in the event of the Stores Department at the India Office becoming a branch of the central stores department, the responsible personnel should be recruited from those having personal experience of the needs of this country. It is a frequent cause of complaint that the Stores Department at the India Office shows little consideration for the requirements of consuming departments and so frequently substitutes articles other than those specified.

Mr. A. P. SYMONDS, nominated by the Madras Chamber of Commerce, called and examined.

Witness was manager of Messrs. Binny and Company, Secretaries of the Buckingham and Carnatic Mills, Madras.

He had not had the opportunity of reading the replies to the questionnaire sent in by the Madras Chamber of Commerce. He handed in the following note of his own:—

"I much regret that owing to my absence in Calcutta and the occurrence of the tramway strike almost immediately after my return, I have been unable to prepare more than a scanty statement to place before the Committee, quite out of proportion to the importance of the subject.

"The Chamber of Commerce have asked me to give evidence on the question relating to inspection of stores but before doing this, I trust the Committee will not think it out of place if I state my opinion briefly on the functions of the central agency and its relation to sub-agencies. I think all questions of policy, that is to say the decision as to what stores are or are not to be obtained in India, should be one of its chief functions. We have found in a very long experience of supplying stores (Textile) to both Civil and Military departments that whereas one department or regiment as the case might be, found our supplies quite suitable another would insist on having English made goods. This was notably the case with army supplies; for over 20 years we struggled to get our khaki drill recognised but without success until the war came and changed the position entirely. I have no hesitation in saying that the reason in many cases for the rejection of our tenders was not the unsuitability of the article tendered but the blind prejudice or ignorance of the officer. A very minor issue arises out of this main question but I may as well mention it. Chiefly among the civil departments there existed a general desire for made up garments and this led not only to the exclusion of the manufacturer, but it left the decision as to the article very often in the hands of the tailor contractor who might or might not be amenable to conciliation. All this told against the Indian made article being pushed.

"With regard to the relation of the central agency to sub-agencies I would suggest that the latter should be subordinate to the central agency and not to the Provincial Government. My reason for saying this is that there exists a perhaps very natural jealousy of rights when a clash of opinion comes between an Imperial department and the local Government and matters are apt to get hung up in a mass of references backwards and forwards. I could give instances but it seems unnecessary to labour the point.

"On the subject of inspection the main point I have to make is that there must be no duality in regard to the purchase and the passing of supplies. When the Indian Munitions Board took over the functions of a central purchase agency, we found at times that though our contracts were made with the Board the passing of the supplies at the different stations rested with an officer who might be working on an old specification or sometimes on his own idea as to what was suitable. There is of course no objection to the details of a specification being drawn up locally and adopted by the central agency but such specifications should, I think, be centralised in and emanate from one source only.

"In conclusion, I would say that the appointment of a central stores purchase agency such as is now outlined, working with the Director-General and Directors of Industries must, in my opinion, eventually lead to great development of Indian industries and consequent independence of overseas sources of supply."

In pre-war days when dealing with each Government department direct, there had been no trouble over inspection and passing. When the Indian Munitions Board took over purchases of all Government textile requirements, there was occasionally trouble as many of the specifications were revised, presumably by a textile expert with the Munitions Board. The mills were instructed to work to this revised specification but the official to whom the supply was made had not been informed of the change in the specification and therefore refused to take over the material. Care must be taken to avoid this in any new organisation.

The actual users of cloth judged it by appearance and durability and were seldom sufficiently acquainted with specifications to give any useful advice in their preparation. In fact, when consulted, many of them in their ignorance insisted on slight variations from the specification of the cloth used by others which in no way improved the quality and made manufacture more expensive.

The system of purchasing made up clothing through tailor contractors who supplied the cloth should not be encouraged, as Indian manufacturers did not get a fair chance of supplying the cloth.

Manufacturers preferred inspection at the works before despatch. He thought that the officer in charge of textile inspection (Director of Textile Inspection) would be best located at Bombay and should be in receipt of a salary ranging from Rs. 1,200 to Rs. 1,500 rising to Rs. 2,000 per month. Under him would be inspectors, say, one in Bombay, and others as Government contracts warranted at different other centres on salaries of about Rs. 700 to Rs. 1,200. A few assistant inspectors would also be required whose salaries might range from Rs. 400 to Rs. 600 per mensem.

The Director of Textile Inspection should be a man who had received a first class general education and who had later specialised in textile manufacture and had a knowledge of dyes and their application to textiles generally.

Inspectors of Textiles should be men whose education had been similar to that of the Director but preferably younger men capable of acquiring further experience and who would eventually qualify for the post of Director.

Assistant Inspectors might be men who had worked in mills on the actual manufacture of textiles or some specified class of textiles but need not necessarily have the high technical training of Inspectors.

Rightly or wrongly, there was a general feeling in India that the existing Stores Department at the India Office did not favour preference being given to Indian manufacturers and this would be removed only when the stores agency in London was placed directly under India.

The Hon'ble Mr. H. H. G. MITCHELL, Chief Engineer, Madras Port Trust.

Written Statement.

Question 1. If it is intended that the central agency for purchases should be maintained in peace time so as to be ready to function as a Munition Department in war time, I am wholly in favour of its formation.

Government are now taking in hand the development of industries in this country, a policy that I advocated as far back as 1911, when I was one of the very few European members of the Legislative Council who voted for a resolution to the above effect that was then before the Madras Council. But although I am strongly in favour of Government assisting new industries by experimental factories and works, special concessions and expert help, I am of opinion that these industries should compete for the trade with the rest of the world, and that any protection that it is found necessary to give them should be in the shape of a tariff or bounty which will clearly, and at once, show to every one the amount of support which they require or are considered to require. Although in theory it may not be the intention for a central purchasing agency to give undue preference to Government supported industries when purchasing, yet I am of opinion that there would be a decided tendency in this direction, more especially as in paragraph 198 of the Industrial Commission's proposals, it is contemplated that officers employed in the encouragement of local industries should be interchangeable with the staff of Imperial inspectors who will be in close touch with the purchasing department, and will naturally favour the industries for the development of which they have been responsible. If Government manufacture with one department and purchase

their own manufactures in another, the new industries are not likely to develop to the same degree as they would if left to make their way by open competition.

Speaking only of engineering and allied stores, I am not convinced that the saving in price by purchasing in bulk outweighs the loss by delay, inherent in dealing with large departments, and the amount lost in interest on the money locked up in the large stocks of ordinary articles that must be kept on hand, if anything like quick delivery is to be given. The tendency should in my opinion be to keep the consumer, in this case the superintending and executive engineers, in as close touch as possible with the manufacturer, and this can best be done for small schemes through the present Public Works Stores and other purchasing departments, or in the case of projects entailing expenditure of say one lakh, or more, in a year on stores, by giving the officer in charge considerably extended powers of purchase from all Indian sources, whether manufactured in the country or imported.

The art of engineering includes adapting all resources local for preference to local requirements in the most economical manner possible; the centralization of the purchasing of materials in a few highly expert individuals will effectually prevent the general run of engineers from learning anything about one of the most important parts of their business. Much greater latitude in design is possible if the consumer deals direct or through an easily accessible medium with the manufacturer and supplier; the knowledge of manufacturing processes so acquired often enables designs and methods of construction to be modified so as to make the best use of the material available.

Although opposed to the principle of a central purchasing agency, I am in favour of the formation of a Government inspection department.

In my answers to the questions I am speaking from the point of view of a constructional engineer responsible for the carrying out of works.

Question 2 and 3. In view of my reply to query, 1, queries 2 and 3 require no answer.

Question 4 (*a*) *and* (*b*). No. (*c*) Yes.

Question 5. No. As I understand it the Public Works Stores are the present purchasing agencies for the engineering works within their provinces. I would decentralize further and allow officers on projects, remote from existing stores, which required stores to a value of over a lakh a year, to make their own purchases of stores obtainable in India when they could do so more advantageously, both as to price and delivery, than their nearest Public Works Stores could supply. Inspection being carried out where necessary by the central inspecting department or its branches.

Question 6. See reply to query 1.

Question 7. No.

Question 8. I fail to see where the difficulty in simultaneous tenders comes in at present. We sometimes call for simultaneous tenders, they are received in London and here at the same time and the figures are wired out to us by our London agents. The procedure seems quite simple.

Question 9. Undoubtedly the policy of inspection should be dictated by the consuming department. As I have stated in my reply to query 1, it is an advantage for the consumer to be in as close touch as possible with the manufacturer, but I do not think the best results could be expected by allowing the manufacturer to dictate the tests by which his own manufactures should be judged.

Question 10. The inspection should be carried out by a central inspection agency, with local inspection agencies where manufactures or sources of supply were large enough to warrant a branch, these agencies should be ready to take up work for all *quasi*-public bodies, railways, etc., but when private experts set up business the inspecting agencies should gradually make way for them.

Question 11. Probably, such as those responsible for ship-building, gun-making, etc.

Question 12. Yes, cement and iron, though in the case of cement large consumers, who would generally speaking, have expert knowledge of cement, would probably prefer to conduct their own tests.

Question 13. See answer to query 10.

Question 14. I am not conversant with the working of the rules.

Question 15. Freely in competition with simultaneous tenders in England.

(*a*) They would hold larger stocks.

(*b*) If firms see a fair chance of a better profit by establishing manufacture in India some of them may be relied on to take it. Alternatively the Department of Industries would take the matter up.

Question 16. This would not appear to be necessary if the laxity explained in paragraph 2 of annexure I to Appendix 1, where it is stated that officers have neglected to carry out the spirit of the store rules, is remedied. The wording of the rules might be made more precise so that there is no possibility of evasion.

Question 17. Presumably the British Government make large purchases in England for use thereof very similar stores to those in use in India, and they could send or telegraph out the current prices at which they are purchasing.

As regards the prices in India the Customs Department are, I believe, in close touch with the bazaars for purposes of assessment of duty on imported articles, they could give the necessary information, unless the information they acquire is considered privileged. The locally manufactured article if it is to be worth encouraging after the initial stages of development are passed must presumably be manufactured at a rate that will enable it to be sold at no higher than the importing cost.

Question 18. I have no knowledge of the matter.

Question 19 and 20. Only for war purposes.

Question 21. (*a*) Between 1909-10 to 1918-19, Rs. 28,73,000. See detailed statement below.

(*b*) *and* (*c*) Between 1909-10 to 1918-19, Rs. 26,78,000. See detailed statement below.

Year.	English stores purchased.	Stores purchased locally.
	Rs.	Rs.
1909-10	2,73,990	3,40,721
1910-11	4,80,165	2,43,520
1911-12	1,40,355	2,11,343
1912-13	1,36,155	1,78,454
1913-14	5,04,660	3,40,613
1914-15	2,88,810	2,61,077
1915-16	5,83,950	2,03,305
1916-17	1,44,630	3,79,514
1917-18	2,15,805	3,08,894
1918-19	1,04,880	1,42,054

As cement forms a very large proportion of the materials used in the harbour, I enclose a separate statement showing the amount in tons purchased in each year from the date of the commencement of alteration works, 1904. From this it will be seen that we used 51,000 tons of cement of which 40,300 tons were purchased in England, 8,400 tons locally manufactured and 2,300 tons purchased locally from imported stocks.

Statement showing the quantity of cement purchased from 1904-05 to 1918-19.

YEARS.	Imported from Home.	Locally manufactured.	Purchased locally of imported cement.	TOTAL.
	Tons.	Tons.	Tons.	Tons.
1904-05	..	..	..	..
1905-06	3,221	..	..	3,221
1906-07	5,799	1,250	..	7,049
1907-08	4,406	902	..	5,308
1908-09	6,989	100	..	7,089
1909-10	749	940	..	1,689
1910-11	3,169	568	..	3,737
1911-12	1,157	222	730	2,109
1912-13	684	1,000	450	2,134
1913-14	2,000	41	..	2,041
1914-15	2,371	466	180	3,017
1915-16	5,268	283	..	5,551
1916-17	1,745	1,125	900	3,770
1917-18	2,689	1,393	..	4,082
1918-19	..	100	..	100

Question 22. (*a*) The counterfoils of orders sent to various firms and suppliers for supply of materials required—in which is recorded the rate at which each kind of material is supplied as the result in most cases of competitive tenders—are retained for reference for seven years and are periodically destroyed. For articles obtained from home, copies of contracts received from our London purchasing agents are retained for reference We also maintain priced ledgers of articles kept in stock.

(*b*) A list of firms and of suppliers is maintained. In cases where inferior articles are deliberately supplied the suppliers concerned are removed from the list and are notified to that effect.

Question 23. Prices and capacity. Yes. Performances is rather a delicate matter and might lead to actions for libel. But this would hardly appear to necessitate any central agency. To begin with a list of firms with their capacity, prices and performances might be prepared and sent to all purchasing officers, thereafter firms might be relied on to keep their clients posted as to their capacity and prices, which would also be kept up to date by tenders. As to performances, if a firm failed badly in a contract with one purchasing officer it would presumably be struck off his list, the fact might be notified by him to all other purchasing officers.

Question 24. I have no knowledge of any vessels except tugs and dredgers. The opinion of the actual men who work in them should be freely taken especially in regard to the details of construction. The designers and builders pay very little or no attention to the question of repairs that may have to be effected as the boats get older, with the result that heavy expenditure has to be incurred, which might have been avoided had provision been made in the original design for the inevitable repairs.

Question 25. In my opinion, yes.

Question 26. They should be recruited from men who have experience in the use of the stores they purchase.

Question 27. See reply to query 1.

The system adopted here is as follows:—

Question 28. The subordinates in charge of works prepare indents for articles required for use thereon. These indents after approval and countersignature, by the officers concerned, are passed on to the engineering storekeeper for compliance. The latter officer supplies the articles if with him in stock. If not, quotations are called for by the engineer from different suppliers or firms on our list and orders for supply are then placed, with the rate and time and place of delivery duly entered thereon. The articles as supplied are receipted by the storekeeper in a register specially maintained for the purpose or in a measurement book as the case may be. These are the records from which the supplier's bills are checked. Bill for suppliers made are sent, as and when received, to the storekeeper for verification and on receipt back, verified, they are checked in the engineer's office with the respective orders against which supplies are made as noted against each article.

The numbers of the bills are noted in the order against each article supplied and billed for to prevent a repetition of the claim *i.e.*, to prevent double payment.

Questions 29 and 30. I have no experience of the audit arrangements or of the personnel of the stores departments, but on general grounds interchange of personnel could appear to be advisable.

The Hon'ble Mr. H. H. G. MITCHELL, called and examined.

Witness had been Chief Engineer, Madras Port Trust, since 4th May 1919 and Senior Engineer, under Sir Francis Spring, K.C.I.E., Engineer Chairman, since 1905.

His own policy was to keep as little stock as practicable, so as to have the minimum amount of money idle and reduce opportunities for frauds. All small stores were bought in India as far as possible. In normal peace time schedules were prepared annually and tenders called for. At present owing to violent fluctuations in prices schedules were not prepared but frequent tenders for individual items were called for. The Port Trust did not bind themselves to take any fixed quantity. He was quite satisfied that he obtained the most economical result by this system.

In assisting Indian Industry Government must be careful not to shield them entirely from competition which was the only real incentive to improvement. He was afraid that centralised purchasing might lead to centralised selling to the disadvantage of small private purchasers.

A central agency holding no stocks and dealing only with annual demands would probably effect some economy but the great disadvantage was that it would divorce the consumer from the manufacturer. The more freedom consumers were allowed in making their own purchases, the more they would learn or discover of India's possibilities. He thought that Government mothered its officials far too much and he was strongly in favour of government engineers being allowed full freedom in purchasing plant and stores obtainable in India.

He was not aware of the existence of the Superintendent of Local Manufactures and the Government Test House and Laboratory in Calcutta and had had difficulty in arranging inspection of work and purchases in India. Generally, except in the case of certain articles such as cement and chains, which he tested at the harbour, he had to be satisfied with firms' own guarantee supplemented by inspection and rough practical tests after delivery. A test house in Madras would be very useful.

There was a want for consulting engineers in India. In his opinion better advice would be received from independent firms of consulting engineers than from experts in Government employ. If Government did establish a consulting engineer's branch, this should be dissolved as soon as private practitioners were available in India.

At Bombay, Thursday 5th February 1920.

PRESENT:

Sir FRANCIS COUCHMAN, K.B.E., M.I.C.E. (*President*).

G. H. COLLIER, Esq., C.I.E.
A. W. DODS, Esq.
H. N. HESELTINE, Esq., C.I.E.
Lieutenant-Colonel C. C. H. HOGG, C.M.G., R.E.
Brigadier-General H. A. K. JENNINGS, C.I.E.
LALJI NARANJI, Esq.
Rai Bahadur LALA MILKI RAM.

And the following co-opted members:—

E. M. PHOENIX, Esq., Joint Secretary to Government, Public Works Department, and
R. D. BELL, Esq., C.I.E., I.C.S., Director of Industries, Bombay.

J. C. HIGHET, Esq. (*Secretary*).

Engineer-Lieutenant-Commander R. H. ANSELL, R.I.M., Marine Store Officer, Bombay.

Written Statement.

Question 1. Yes. In time this central agency would replace the present Stores Department of the India Office. The absence of such an authority in India is, I believe, the reason why the spirit of the 1913 Stores Rules have been neglected. Even in small local purchases the central agency should be asked to supply and so prevent inter-departmental competition. I consider it a great weakness for any store depôt or department to possess purchasing powers other than through some such agency as proposed.

The proposed agency will be in close touch with the different provinces and their several resources and I feel certain that with some such recognised authority the standard of Indian labour and products will be raised.

Question 2. With regard to the Royal Indian Marine, I would suggest that a pattern room form part of this central agency, where patterns of all stores should be kept for guidance of the purchasing officers and parties tendering. A large percentage of the stores now purchased through the Indian Office Stores Department can be made in India if the necessary organisation and machinery is forthcoming. I feel sure that if material has the support of an organisation as proposed, manufacturing people will not hesitate to use such material. There is a want of confidence in raw materials made in India.

Question 3. No. The purchasing agency should be enabled to deal with all indents for stores. The existing government factories for certain stores can still supply other departments but only through the central agency. There would appear to be a certain amount of overlapping but I consider it negligible.

Question 4. Yes. The central agency will eventually become a sort of board of trade with its standards of requirements. If outsiders elect to make purchases under this agency, small departmental charges should be made.

The primary object of this proposed agency is to help to raise the standard of India labour and products. If this object is obtained the Government must naturally benefit from the improved conditions prevailing—so that the new department should not be considered from a purely financial aspect.

Question 5. Yes. Would suggest that no local agencies be formed.

Question 6. I do not favour the creation of local agencies, but local Governments and departments should possess the power to purchase stores locally to meet any very urgent demands. The central agency can always be advised and help accordingly.

Question 7. Yes. The greatest care should be taken in framing requirements and standards. No tender should be treated as unimportant in this respect. The idea that almost invariably the lowest tender must be accepted, is prevalent. I do not think that the audit department should comment on tenders as at present but the responsibility for settling tenders should rest entirely with the head of the department after he has been furnished with the views of the professional officers concerned.

Question 8. Yes. We must beware of building a sort of tariff wall around India. The proposed agency will in time be able to find out what stores, etc., India should specialize in *i.e.*, to say, what goods she can best and most cheaply supply. This can only be done if the agency keeps in touch with both countries and create a friendly commercial spirit between the same.

Question 9. Until the standard of Indian products and labour is raised there will need to be a certain amount of sympathetic treatment. The consuming department should primarily dictate as to the suitability of stores but should try to meet the wishes of the department responsible for the industrial development of the country.

Question 10. Yes. The purchasing and inspection of stores should be independent branches but working under one central department or agency.

Question 11. With regard to the Royal Indian Marine the technical experts belonging to the central agency would be sufficient to meet requirements, especially in view of forming a pattern room.

Question 12. Yes, tools, machinery, wire and manilla ropes, chain cables.

Question 13. The central agency should primarily be responsible for the inspection of stores. I consider it inadvisable to set up several organisations for the purpose. It is important that there be only one recognised authority for framing standards of requirements. Local purchasing agencies, if formed, can always procure the necessary information from the central agency.

For ordinary stores that require no expert knowledge the consuming department can always decide assuming that the stores are being purchased by a local agency.

Question 14. The proposed central agency embodies the spirit of the 1913 Store Rules—the necessary alterations being made with regard to the change of authority.

Question 15 (a) and (b). An answer to this question would only emphasise the advantage of establishing

manufacture in India keeping in view Imperial as well as Indian interests.

Question 16. Yes decidedly—Keeping in mind that the indents are scrutinised only with regard to the sources of supply.

Question 17. The department should be kept posted with all the market rates prevailing throughout the several provinces in India and the United Kingdom. The officers concerned should also keep in close touch with all the best technical publications. Most firms issue monthly price lists who can be asked to forward their respective lists to the proposed agency regularly.

Question 18. I consider *all* demands should be forwarded to the central agency. In the case of special stores, indenting officers can state their requirements even with regard to the source of supply. The central agency will be in a position to decide whether it is better to deal direct with the producers, or through the India Office.

Question 19 (*a*) *and* (*b*). No. The several consuming departments have their own store depôts. The central agency should not be concerned with the holding of stocks. It is important that the buying and holding of stocks should be kept separate. The necessity to meet any very urgent demands is always kept in view by the several government departments.

Question 21—

Year.	(*a*) Stores purchased abroad.	(*b*) Imported Stores purchased in India.	(*c*) Indian stores.
	Rs.	Rs.	Rs.
1910-11	5,25,765	74,570	17,53,868
1911-12	5,62,710	89,886	2,80,399
1912-13	5,38,725	1,65,043	3,72,877
1913-14	6,90,690	36,498	5,47,773
1914-15	4,86,945	5,05,326	6,50,960
1915-16	6,97,470	6,68,713	7,63,327
1916-17	18,49,515	48,63,925	27,35,196
1917-18	27,60,535	34,62,259	17,77,303
1918-19	37,40,790	24,04,976	23,88,810

Question 22 (*a*). Copies of all the official orders are kept in office for reference.

(*b*) A record is kept of all important incidents in dealing with firms in India.

Question 23. Yes. *Vide* answer to question 17.

Question 24. The future development of the Royal Indian Marine Dockyards will need to be decided before any new rules can be framed governing the building of large vessels. For the requirements of the several local Governments and departments, the present rules are very suitable.

The proposed central agency will of necessity be in close touch with all future developments of the ship-building industry in India which development depends only on the necessary plant and raw material being forthcoming.

Question 25. No. If such bodies elect to procure stores through the proposed government agency it would be for a recognised standard of quality.

Question 26. I consider that the experienced stores staffs of the larger railways and government store depôts should be drawn on for manning the proposed new departments. If this be done there would be trained men to be allotted where their experience could with advantage be made use of to the fullest measure, i.e., a man from a railway store depôt would be most suitable for the railway section, a man from a maritime store depôt such as Royal Indian Marine Dockyards for the marine section. All the experts can be chosen with regard to their qualifications.

Question 27. Not for government orders. Contractors who desire the help of the store agency should pay a percentage charge on orders.

Question 28. Copies of all purchase orders with bills are sent to the Controller of Marine Accounts, Calcutta, who it is understood audits them even to reasonableness of rate before paying the bills. Further, Inspecting Officers of Accounts are deputed about every six months to this dockyard and examine the purchase orders, ledger entries, etc.

Question 29. Yes decidedly—As it would ensure uniformity of audit.

Question 30. It would be an advantage to arrange interchanges of personnel but not a necessity. It is possible with the excellent technical publications to keep closely in touch with modern improvements and innovations.

Engineer-Lieutenant-Commander R. H. ANSELL, called and examined.

Witness had sixteen years' service in the Royal Indian Marine and had been Marine Store keeper for five months. During the preceding 18 months he had been Surveyor of Stores.

His stock comprised both ship and dockyard stores and also a small store of admiralty items for vessels of the Royal Navy. The total number of items was approximately 30,000. The annual indents were based on the consumption during the preceding three years and in normal times the compilation in consultation with consuming officers, commenced about May and was usually complete about October. In preparing the indents, articles which were known to be produced or manufactured in India were excluded, but there was no means of knowing India's full capabilities. The scrutiny of indents by the Indian Munitions Board had not caused any appreciable delay in their transmission. With a central agency which would be able to give reliable information as to what India could do, he thought that the preparation of home indents would take less time than at present. There was a very general prejudice against articles produced in India. Stores peculiar to the Royal Navy were obtained by direct indent on the Admiralty. Demands for stores which were common both to the Royal Navy and the Royal Indian Marine were combined in the indents which went to the Director General of Stores, India Office. The Admiralty Rate Book nomenclature was followed as far as possible. The stores and machinery obtained through the Director General of Stores, India Office, had always given great satisfaction. Difficulties arose only when special stores outside the Admiralty Rate Book had to be indented for and these were mainly due to misunderstandings because the description in the indent was not sufficiently clear.

Local purchases of imported stores were only made in emergencies. They generally cost more than the India Office supply.

His recommendations were based on the Admiralty practice in England under which odd purchases were rarely necessary. One economy of a central government purchasing agency would be that the urgency of certain purchases would not be so apparent as when made by individual departments and the sellers would not have sufficient information to induce them to attempt to take advantage of the emergency.

He had no pre-war experience in the marine stores. During the war, they had frequently to be satisfied with stores inferior to the accepted standard. Tenders were invited every six months for indigenous stores. Hitherto, these tenders had not, in his opinion, been treated seriously enough. For instance, it seemed to have been the common practice merely to name the article required—such as rope, manilla; paint, black;—without specifying any standard or test to be complied with or even requiring samples, and to accept the lowest

tender. The natural result was trouble when the stores came to be delivered and subjected to test. Steps were now being taken to improve matters and sealed samples were being introduced. All local purchases were inspected by the Surveyor of Stores and when particular expert inspection was necessary he could make use of the services of technical officers in the dockyard. For instance, textile goods were referred to the Master Sail Maker. The admiralty specifications and patterns were followed as far as practicable; but these were not such as to make manufacture in India impossible. During his service in the Royal Indian Marine, he had come in close contact with the Indian mechanic and was confident that with suitable machinery India was quite competent to take her place in the world's markets.

At present no tender could be accepted without prior reference to the Audit Department and in some cases the Audit Department had so far exceeded its legitimate functions, as he considered them, as to call for tenders of its own as a check on the recommendations which had been made by the Marine Store Officer after perhaps in consultation with the technical officers of the dockyard, and this too without giving the Marine Store Officer an opportunity of further supporting his recommendations or explaining them. With the central purchasing agency, it would be possible to secure uniformity of audit practice. At present there were frequent delays in payment which caused firms to ask higher price. Any firm was permitted to submit tenders for the six-monthly requirements but for casual purchases a list of approved firms was maintained.

He had not made any use of the Test House, Alipore, as most of the local purchases were made in Bombay, but he considered that a similar Test House in Bombay would be of considerable use.

Engineer-Captain C. F. Laslett, M.B.E., R.I.M., Inspector of Machinery, Royal Indian Marine Dockyard, Bombay.

Written Statement.

Question 1. Yes. Both for the purchase of stores in India and in United Kingdom. Much might be done by a central agency to foster the manufactures of India and make available local supplies of much that is now purchased at home.

Question 2. I do not think special arrangements are necessary for any department. Samples of stores required by each department would presumably be kept at the central agency as standards, and this would apply to all departments but see answer to question 9.

Question 3. I see no reason why the central agency should not deal with all stores purchased in India.

Question 4. See reply to question 3.

A percentage charge would be fair way of meeting the expenses of the local agency.

Question 5. Yes, or probably better still, the present purchasing agency for local Governments to be put under the control of and become a branch of the central agency.

Question 6. Impossible to settle until the scheme has been working long enough for experience to show.

Question 8. Yes. Very much of what is now purchased at home (Europe-made articles) could be purchased in India, probably quite as economically, and under the selection and control of officers who have a better knowledge of what is actually required in India.

Question 9. This will probably be the point on which there will be more trouble than any other matter connected with the scheme. If the scheme is to be worked at all, it is unavoidable that the greater part of the inspection shall be done by the central agency, but it is impossible for the different departments, etc., to surrender their right of rejection. Samples would of course be kept at the central agency as standards but would not always be able to be adhered to and the question of suitable substitutes must rest with the department whose special requirements are concerned. With this reservation I think inspection should be by the central agency.

Question 11. Possibly not a special inspection organization, but for the Royal Indian Marine and Dockyards, whose requirements are different to those of railways, etc., full powers of rejection will have to be observed.

Question 12. Yes. Machine tools, machinery, wire and manilla rope, steel and iron of all sections and all metals.

Question 14. Yes, I think so. The rules of 1913 should be modified so as to reduce what are now called 'home indents' to a minimum, the business of purchasing European stores being as far as possible dealt with and controlled by the central agency. The Indian and local knowledge of the agency would tend to prevent the mistakes which are lamentably common in the despatch of stores to India by the Director-General of Stores, India Office.

Question 15. I see no reason for limiting the circumstances. The purchase of European stores in India would tend—

(*a*) to encourage the holding of stock by firms in India;

(*b*) to increase the probability of firms establishing manufactures in India; both most desirable consumations.

Question 16. Only as to sources of supply.

Question 17. I cannot see that there would be any difficulty in this. As soon as such a department was known to be established the firms themselves would spontaneously supply this information, so far as firms in India are concerned and from firms at home the information could be obtained from the India Office of probably better from an appointed agency firm.

Question 18. See answer to question 14.

Question 19. I do not think that a central stock depôt would be necessary, the various departments would hold their own stocks, and therefore the central stock depôt would be an unnecessary expense.

Question 23. See answer to question 5. I should think that the purchasing officers would be more likely to be able to furnish this information to the central agency as they would obviously be in a position to obtain it easily and quickly. The rapid collection of such information by the central agency would only be feasible as regards prices in the place of its location. It would of course pass on the information received from the purchasing officers.

Question 24. Yes, I do not consider any modifications are advisable at present.

Question 30. I should think that both classes of interchanges would be desirable, but I also think that one of the objects aimed at in the formation of this central agency should be the taking over as far as possible of the functions now exercised by the Director-General of Stores' department and the consequent reduction of that department to very small proportions.

Engineer-Captain C. F. Laslett, called and examined.

Witness had been Inspector of Machinery, Royal Indian Marine Dockyard, Bombay, for about one year. Formerly, he had been Chief Surveyor of Ships, Calcutta. In his present position, he was head of the Engineering

Department in the Bombay Dockyard and Assistant to the Director for the administration of the Engineer Branch of the Royal Indian Marine. He had nothing to do with the purchase of stores or machinery. All supplies were arranged through the Marine Store Officer.

Provided that the central agency possessed a competent inspection branch, it would not be necessary for the different consuming departments to retain the right of rejection. Such a right was not exercised in the case of supplies obtained through the Director-General of Stores, India Office.

With few exceptions, the quality of the supplies obtained through the Director-General of Stores, India Office, had been satisfactory, but the articles were not always what had been asked for, particularly in the case of electrical stores. Lampholders of nine different patterns had been supplied to the dockyard from time to time. When it was desired to double the power available in the dockyard, a Diesel driven dynamo of one thousand amperes, exactly similar to one already in use, was indented for, but a machine of an entirely different type and polarity was supplied which could not be used as intended.

In his opinion, there were great possibilities of development in shipbuilding in India. Though the present rules regarding the building of new vessels for Government might appear to prevent private enterprise from getting orders for large sea-going vessels from Government, the number of these required was very small and they were usually of special types such as troopships and station ships, which India was not likely to be able to build satisfactorily for many years. He considered that the future of shipbuilding in India lay in slow-going cargo vessels which Government did not require.

He was strongly opposed to the building of vessels for the Royal Indian Marine being given out to private firms in India. The government dockyards had to be maintained and it was therefore economical for Government to give them as much work as they could undertake.

Repair work was occasionally given out to firms but the workmanship was inferior to that done in the dockyards.

He was certain that the dockyards resulted in economy to Government. If this was not so, it would be difficult to justify their retention. The dockyard charges had been investigated by two committees within recent years and he was not aware of any necessity for reinvestigation at present.

There was considerable advantage in requiring plans to be criticised by the Consulting Naval Architect in England as it ensured that the hull, engines and boilers would be of the best types.

He saw no objection to the length limit in rule 5 (*a*) of the present Shipbuilding Rules being increased from 120 to 150 feet; otherwise the rules should remain as they were. In altering rules, it was necessary to proceed on experience and he was satisfied that so far as private enterprise in India was concerned, no other modification of the present rules would be justified for at least 10 years.

At Bombay, Friday 6th February 1920.

PRESENT:

Sir FRANCIS COUCHMAN, K.B.E., M.I.C.E. (*President*).

G. H. COLLIEP, Esq., C.I.E.
A. W. DODS, Esq.
H. N. HESELTINE, Esq., C.I.E.
Lieutenant-Colonel C. C. H HOGG, C.M.G., R.E.
Brigadier-General H. A. K. JENNINGS, C.I.E.
LALJI NARANJI, Esq.
Rai Bahadur LALA MILKI RAM.

And the following co-opted members:—

E. M. PROES, Esq., Joint Secretary to Government, Public Works Department, and
R. D. BELL, Esq., C.I.E., I.C.S., Director of Industries, Bombay.

J. C. HIGHET, Esq. (*Secretary*).

Lieutenant-Colonel P. JOHNSON, C.B.E., D.S.O., of Messrs. John Fowler & Company.

Written Statement.

Question 1. Yes. Provided as follows:—

(*a*) That it is cost accounted and works on an ordinary commercial basis, its continued existence depending on whether it can pay its way or not.

(*b*) That no consuming officer or department is *obliged* to purchase his requirements from it.

(*c*) That it is realised that any stores purchasing organization must be of the nature of a middleman or agent acting as intermediary between producer and consumer and must possess a *negative* value unless a perfectly definite saving to the consumer can be immediately or eventually effected. Such saving may be in price, service, quality, etc., or may be a combined effect.

(*d*) That the only practicable test of such an organization is to make it non-compulsory and self-supporting though not profit-making. Though non-compulsory the services of the organization should normally be utilized unless advantage could be shown by not doing so. In practice it is anticipated that free use would be made of any effective stores organization by the smaller consumers especially, such as those who have not the facilities, or possibly the energy, to get favourable terms for themselves, and that it would be of great benefit to such. It is not anticipated that any benefit would usually be obtained by compelling the larger consumers to use it.

(*e*) That the essential difference between supplies of standardisable articles or goods, and plant or machinery which must be designed to meet special individual conditions and requirements, must be fully recognized, *e.g.*, structural steel sections, bolts, rivets, wire oil, much railway material, etc., lend themselves

selves readily to standardisation but plant or machinery for agricultural, irrigation, waterworks, municipal, public works department and many railway purposes generally requires to be specially designed or selected. The former are hereinafter termed 'ordinary stores' and the latter 'special stores.'

(*f*) That as regards 'special stores' the only permanently and universally satisfactory method is for the consumer to come into direct contact with the producer. The introduction of any third party whether commercial agent, middleman or government agency merely leads to confusion, expense and delay. India is littered with machinery which has been a costly failure due to the misguided efforts of third parties.

(*g*) That therefore *no* purchasing organization for special stores is required or advisable but action is required, in the matter of increasing the normal purchasing powers of the consuming officials with special provision for exceptional purchasing powers as and when necessary.

(*h*) That for the protection of the consumer or purchasing officer of 'special stores' the following provision should be made:—

(*i*) A 'special stores' directory should be issued to all purchasing officers who should not be permitted to deal with firms other than those listed without obtaining special authority. Nor should they be permitted to obtain from the firms listed any class of goods not specified against their names and which would be *only those* goods which had substantially been actually manufactured by the firm concerned. Excepting always that in the case of a firm undertaking to supply a complete plant in working order such firm may supply the necessary accessories provided that more than 50 per cent. of the invoice is for goods actually manufactured by themselves. The firms listed in the 'special stores' directory should be only approved *manufacturing* firms not agents or middlemen. The first lists should be made up from approved manufacturers in India and from the India Office lists of approved manufacturers in the United Kingdom who have established a proper branch house or houses in India.

(*ii*) The effect of such rules would be to greatly encourage the establishment in India of branch houses of British manufacturing firms. The technical knowledge and experience of the representatives of such firms is essential to the establishment and encouragement of Indian industries. Few, perhaps no important, Indian industries have been established without it. It is desired to emphasise the advantages accruing to purchasing officers from the establishment in India of British manufacturing firms: not only in the matter of selection of proper plant but even more so in the matters of the proper erection and starting of the plant and supervision of its initial running. Such service, which can only be rendered effectively by the manufacturers, possesses a value which is only now being partially understood or appreciated.

(*iii*) In return for such engineering service it should be stipulated that any complaints regarding the plant or service rendered should be brought to the notice of the manufacturer by the consumer and the former must be given every opportunity of putting matters in order. Repeated complaints by consuming officers regarding the plant or service of any particular manufacturer would lead to his suspension or removal from the 'special stores' directory. In addition a record of the failure of any plant would be notified in a stores gazette circulated to all consuming officers. Conversely a record of the success of any plant of an important or novel nature would appear in the stores gazette for the information of the consuming officers. Thus not only would British manufacturers of good standing be encouraged to establish themselves in India but they would be compelled to staff their branches with personnel of exceptional experience and ability who would in turn have to use every possible effort to ensure the success of any plant supplied.

(*iv*) Excessive prices for 'special stores' would be guarded against by the publication in the gazette of all important prices quoted and accepted with explanatory notes if necessary and especially if lowest prices not accepted. Excessive prices would be guarded against by the competition brought about by the establishment of British firms in India and also by the knowledge that suspension or withdrawal from the directory would eventually follow any attempt at profiteering.

(*v*) Purchasing officers would be dealing with accredited British manufacturers direct and in this connexion such firms are usually content with their manufacturing profit and do not expect their branches to do more than cover their costs of operating.

(*vi*) The balance sheets of firms or branches established in India are annually scrutinised for the purposes of income taxation. If excessive profits are being made such scrutiny would disclose it.

(*vii*) It would be inaccurate to suppose and unreasonable to expect that British manufacturers can establish branches in India for the supply of 'special stores' and give the technical assistance and engineering service demanded by the situation and still sell their products at factory costs *plus* nett charges for delivery to destination, erection, starting, etc. The contention is however that such small percentage as must be added to cover establishment charges in India is likely to be less than that required to cover the charges of an intermediary organization. But in any case it is thought that the system advocated is the only one which will ensure success in practice and avoid confusion, delay and costly failures, and that it is also the only one which will provide any encouragement to the manufacturers to establish themselves and eventually their factories in India.

(*viii*) Finally to still further protect and assist the consumer it is suggested that though the stores organization would not normally act in any purchasing capacity as intermediary between the producer and consumer, the latter should be permitted, but not compelled, to call for the assistance of the technical experts of the stores organization in exactly the same manner as a consumer in commercial life calls for the services of a consulting engineer. In a consultative or advisory capacity it is thought that such expert assistance would

often be invaluable to the consumer or purchasing officer and that free use would be made of such a facility. It is not suggested that such service should be rendered gratuitously as the ideal of making the stores organization self-supporting would be then impracticable. The services thus rendered should be charged for exactly as similar services are charged for by consulting engineers. The tendency to employ the experts of the stores organization in a consultative capacity would be increased by the fact that doing so would often relieve the purchasing officer of a certain amount of responsibility. Further he would get the benefit of the experience gained in other parts of India by the official consulted. A danger to be guarded against in this connexion would be the tendency that the employment of a consulting engineer would tend to relieve the contracting manufacturer of some responsibility but it is thought that on the whole the advantages of such a provision would be considerable.

Question 2. Not to begin with. Possibly some special arrangements might be demanded by circumstances arising out of the working of the organization.

Question 3. (*a*) Yes. All "special stores" as defined above.

(*b*) None.

Question 4. Yes, provided conditions as in answer to question 1. Especially when disadvantageously placed geographically even very large purchasing bodies might find a stores organization very valuable.

Question 5. (*a*) Yes, provided conditions as in answer to question 1.

(*b*) Each local Government should have *attached* officers from central stores department. For purposes of executive routine these officers would come under the control of the local Government but in matters of principle and broad organization under the authority of the central stores, just as in the army an Artillery or R.A.S.C. officer is attached to the Commanding Officer of a battalion, under whose orders he acts in matters of routine, discipline, movements, etc., but comes under the Director of Artillery or the Director of Supply and Transport in matters involving uniformity of practice throughout the Army. It is suggested that the Army system of organization should be followed because it is fundamentally sound and has since 1914 withstood successfully the most searching test to which any organization could possibly be subjected. It manages by means of an apparently inconsistent but eminently successful compromise to combine the best elements of centralisation and decentralisation.

Question 6. Answered above.

Question 7. Yes. As regards "ordinary stores" it is probable that economies are effected under the present system. Whether this could be proved or not I am unable to say but figures on the subject would be unconvincing unless they took into account all overhead charges such as rents, salaries, pensions, depreciation on buildings, stocks, etc., interest on capital employed, losses due to delays, full commercial rates for telegraph, telephone and postal services, etc.

As regards "special stores" the present system results in the consuming officer often failing to get what he requires or what meets his particular conditions, seldom getting it *when* he requires it and practically never getting the expert advice and engineering service without which complete failure must be frequent and partial failure almost universal. Also the present system makes it very difficult for the consuming officer to arrange for any alterations or modifications while the material is in process of manufacture.

Question 8. Yes, as regards "ordinary stores" only.

Question 9. By the consuming department

Question 10. Yes.

Question 11. Possibly. If so, it would become apparent from experience.

Question 12. No, but it is not suggested that such do not exist.

Generally speaking, detailed inspection of "*special stores*" as at present carried out under the India Office is dangerous, as tending to relieve the manufacturer of responsibility, largely serves no useful purpose and can often be regarded as a pure waste of public money. It is common knowledge that many manufacturers add a percentage to their prices to cover the cost of inspection *to them*.

Question 13. By attached officers from the central agency.

Question 14. Yes.

Question 15. On the condition that the name of the firm appears in the special stores directory *for the supply of the article* required. See also answer to question 1, paragraph 5 (*i*).

(*a*) Stocks in India would be much larger.

(*b*) The probability of the firm establishing factories in India would be greatly increased.

Question 16. The stores organization in London should be a branch of that in India and all indents should be scrutinized before transmission.

Question 17. Such methods should be developed from experience by the officials concerned. It is not likely that any one method would meet all cases. A London edition of a stores gazette would no doubt be of service.

Question 18. It would probably be found in practice that in cases where large quantities of articles are required from say Australia, it would be inadvisable to pass such indents through London, and that a direct representative of the central stores organization should be posted locally. Rates of exchange might seriously affect this question.

Question 19. Only as and when the necessity or advisability of it can be demonstrated by the actual working of the stores purchase organisation.

It would militate to a certain extent against the holding of stocks by government departments and private firms. This might or might not be an advantage. Every case should be judged on its merits. Generally speaking, I should be in favour of encouraging private firms to stock and against the holding of stocks by government departments or at central depôts.

Question 20. The location of the central stock depôts, if any, could only properly be decided after experience and careful consideration of the requirements in each case.

One of the dangers of stock depôts to be borne in mind would be the possibility of the shifting of the centres of production or consumption or both.

Question 23. Yes, specially as regards prices of "ordinary stores" and as regards performance and capacity of contracting firms for "special stores."

Question 24. No knowledge of shipbuilding.

Question 25. Yes, if compulsory. It would not constitute any interference with *legitimate* private enterprise if non-compulsory.

Question 26. The scheme outlined above is a simple business proposition. The best brains available should be secured by adequate salaries and intelligent recruiting which should take fully into account the previous experience and records of the recruits. Tenure of office should depend entirely on results. Subsequently, well educated young men who have passed successfully through appropriate courses of instruction might be taken on probation and passed through various branches with a view to gaining experience of the work and being confirmed in their appointments if found efficient.

Question 27. Does not arise.

Question 30. Yes.

Lieutenant-Colonel P. JOHNSON, called and examined.

Witness had based his views on his experience as the head of a department in the Ministry of Munitions. He had now been appointed to the charge of a department in the War Office and was severing his connexion with Messrs. John Fowler and Company whose representative he had been in India since December 1909. Messrs. John Fowler and Company specialised in agricultural machinery which did not lend itself as far as could be seen at present to manufacture in India.

He held most strongly that the use of a government central agency must not be made compulsory. If compulsory, he feared that there would be no incentive to economy and also that there would be a tendency for those who had at present made their own purchases to resent the introduction of the new procedure and to withhold their full co-operation. Provided no spirit of compulsion was introduced, he considered that it would be found that officials who did not make use of the central agency would be very few. The central agency should have power to criticise the purchases made by any officials who did not make use of it.

Every encouragement should be given to importers especially of special stores and machinery. By insisting on the supply of these through the India Office, the indenting officers were deprived of the assistance and advice which the experts employed in India by various firms could give. The best descriptions which many of the indenting officers were able to frame in their indents for special plant were generally so hopelessly inadequate as to require references for further information which added to the usual delay in supply through the India Office. He recommended that executive officials should be given much more liberty than at present in purchasing special stores.

Much of the inspection now insisted on by the India Office, Stores Department, London, was quite unnecessary and merely increased the cost. For instance, Messrs. John Fowler and Company had supplied road rollers to government departments in India, both through the Director-General of Stores, India Office, and through their own branch in India. For each one supplied through the India Office, probably four had been supplied through the branch in India. All were identical. The firm had only one standard of manufacture. To comply with the elaborate inspection insisted on by the Director-General of Stores, India Office, it was necessary to set aside materials for inspection, and the progress of the work through the shops was often delayed awaiting the convenience of the inspectors. Firms had to take all this into consideration when tendering. He would throw the responsibility for failure on to the firms themselves. No amount of inspection, however elaborate, could ensure the success of any machine of a fundamentally wrong design, or of a design unsuited to the conditions under which it was required to work.

He would insist on branches or representatives of British manufacturing firms, with whom Government did business in India, operating under the name of their principal firm in Britain as they would then be very careful not to blemish their good name. Many of the so-called branches especially in India at present were merely selling agencies.

It was essential that the directory which he had suggested should show which particular items of special stores could be purchased from particular firms. At present some firms, which had got their name on the government list because they could manufacture a certain class of article, took advantage of this to do a large trade with government in other articles for which they were merely agents. Inclusion in the government list was a great advertisement to a firm and was eagerly sought. The directory might include the names of firms who were not represented in India by a branch but this would only be with a view:—

(1) temporarily to provide facilities for purchasing officers to obtain goods manufactured by firms not directly represented in India;
(2) to encourage the establishment of branch houses of such firms in India.

Such inclusion in the directory therefore should be subject to some restrictions such as that the firm concerned established a branch in India within a given time, their failure to do so involving the removal of their name from the directory.

The purchasing officers should be permitted to deal direct with any branch or firm whose name appeared in the directory.

The publication of the quotations received by Government for important contracts would be useful even without a detailed specification of the supply accepted.

The establishment of a central government purchasing agency might affect the business of small mufassal stores which at present supplied the wants of the local public but relied to a large extent on the regular custom of the officials in their locality, but this was not regarded as any valid argument against the establishment of such purchasing agency.

In selecting the location of the headquarters of the central agency, it was more important that it should be in close touch with the headquarters of its customers than with the supplying firms. He was not in favour of Calcutta, Bombay or any other large commercial centre.

G. R. WEBB, Esq., Chief Stores Superintendent, Great Indian Peninsula Railway, Bombay.

Written Statement.

Question 1. My reply is in the negative for the following reasons:—

(*i*) In theory a central purchasing agency might effect economy by preventing competitive buying amongst departments, but there is the possibility that dealers in particular classes of articles combining to form a ring against a single agency to force up prices, and the work of the agency might be considerably hampered by combinations of dealers of this kind.

(*ii*) The concentration of purchases in one office would be a large and complicated organisation and owing to the multitudinous demands that would be made on it, it would not be able to meet supplies which individual departments would get for themselves in much less time.

Question 2. I can only answer this question with authority on behalf of the railways, my reply being in the affirmative. Consumable stores would no doubt be common to other branches of the service mentioned, but when you go into the particular or specialised wants of the locomotive, carriage and wagon, electrical and engineering departments of the railway, an officer more or less conversant with the technicalities of these departments would be essential.

Question 3. Yes, building materials for instance including timber used in the construction of houses, stations, offices, etc., particularly on the districts, purchases of which might with advantage be left to the officer in charge of the work.

Then there are breakable articles such as earthenware chatties, koojas and several other things, indigenous materials particular to the district where they are produced. See also reply to question 20.

Question 4. My reply to question 1 answers this, but assuming it is decided to obtain supplies through a central stores agency they should contribute towards the maintenance of such.

Question 5. My reply to the first portion is in the negative and to the second would leave purchasing to the department concerned.

Question 6. Would prefer leaving this to the several departments of Government to voice their opinions.

Question 7. I have no experience.

Question 8. I am of the opinion it would, if sufficient time is allowed, as tenders would have to be sent to England three weeks in advance of what they are issued here. On the other hand if tenders were opened simultaneously that is on the same date in England and India there would necessarily be considerable delay in settling the tender as tenders from England would have to be returned to India for consideration.

Question 9. I am of opinion that inspection should be dictated by the consuming departments, as they would know precisely the standard or specification necessary for their requirements; at any rate till such times as the country made article, or produce is brought up to the degree of standard necessary.

Question 10. It follows if the central agency arranges purchase they should have the ways and means for carrying out inspection as an integral part of that body.

Question 11. I hardly think so, unless they arrange their own purchases.

Question 12. All chemicals.

Paints both dry and moist.
Metals.
Oils and varnishes.

Question 13. I should say the latter. When on the Indian Munitions Board samples had to be sent to the Government Test House, Alipore, whereas as Chief Stores Superintendent, Great Indian Peninsula Railway, I send them to the Metallurgist and Chemist of the Railway which is far more convenient, saving packing, breakage, and probable loss in transit to say nothing of delay.

Question 14. In regard to the purchase of articles which are not manufactured in India it is stated in rule 3 (*a*) that such articles may be purchased when they are already in India at the time of order, and their price and quality are not unfavourable as compared with those at which similar articles could be obtained through the India Office, *and the cost of the supply does not exceed the limits prescribed at the end of rule 13.* The same limitation is prescribed for special purchases in India of articles dealt with in Rule 5. In view however of the fact that centralised or local agencies would be making large purchases on behalf of railways and other departments than have hitherto been made by them individually, and also because the tendency is to buy more in the country it would be necessary to increase the financial limits or powers of officers to make purchases in India laid down in Rule 13.

Question 15. Up to any extent providing quality and prices were favourable, and not greatly in excess of the home rate.

But the wording of this question is somewhat ambiguous. What conditions are implied—a percentage on the home firms f.o.b. price to cover freight, insurance, landing, etc., and Indian branch establishment charges—the current market rate at time of sale on material previously imported, or limitations as to quantity or quantities for which orders might be given?

(*a*) It would be necessary for them to carry stocks sufficient to meet demands made on them, which time would dictate.

(*b*) If home firms were prepared to do this and quality and price were right the manufacture in India should be encouraged.

Question 16. Yes, as it is possible by comparison of the various bodies the central department could act as a clearing house, though I hardly think the standardisation of locomotives, carriages or even permanent way material has sufficiently advanced for even railways to do this. Various surplus stores lists are scrutinised when preparing home indents, sometimes with advantage. With the standardisation of material it would prevent excessive accumulations by equalising stocks, as it is possible one department may be overstocked with certain items which another is wanting, and scrutiny of all home indents would check this. It would tend to prevent locking up of State money.

Question 17. It might be possible with major items obtained in the United Kingdom, by referring to invoices and the various publications of prices current. With regard to articles obtainable in India this would have to be obtained at the time. The price consistent with quality and available stocks in the country is a governing factor.

Question 18. By the word "abroad" it is understood to refer to intended purchases being made in countries other than Great Britain. Such purchase could be arranged through manufacturers' agents or representatives in the country.

Question 19. Yes, this in itself would be quite a good thing.

(*a*) If stocks at present held by government departments were readily available from central stock depôts, the stocks held by the former could be reduced to a minimum but I do not see how the question effects the holding of stocks by private firms.

(*b*) It would greatly depend on what purchases it is decided to make in the country. There is the question of carriage, and also on back carriage to be considered in dealing with this question.

Question 20. For the present I would suggest the location of these depôts at Calcutta, Rangoon, Karachi, Lahore, Madras and Bombay, unless experience dictates they should be centrally situated in the district which they serve, but then the question of carriage arises.

I am of opinion they should be maintained for Indian as well as for imported stores, except in the case of the former where the industries are confined to special parts of India, such as the manufacture of bamboo, date and coir mattings down Madras way, gunnies, jute and hessians in Bengal. These should be stocked and issued from the depôts serving those centres. I could instance other things, but these will suffice to show my reasons in replying to the questions.

Question 21. It is not possible to furnish figures for stores purchased by this railway for the period required by the Committee as the system of accounting for purchases under English and Indian separately came into force only from the year 1916-17—*vide* Railway Board's letter No. 50-S., dated 1st February 1916. The figures for the years from 1916-17 to 1918-19 have already been intimated to the Railway Board under letter No. 181 S. 14 of 10th December 1919.

Question 22. (*a*) Registers and summaries of tenders are maintained for all stores purchased, and are necessary for reference in comparing rates of subsequent purchases.

(*b*) No records of this kind are maintained, but the capacity and business propensities of the firms dealt with are known.

Question 23. Yes, I do. Information regarding the capacity and performances of contractors could readily be given by Deputy Controllers in the various provincial towns to the say Controller General at Headquarters assuming a central agency exists; who in turn could pass it on to others. There may be some little difficulty and delay in obtaining prices as this would have to be done when and as required. Otherwise any comparison would be vitiated owing to constant change in prices especially at the present time.

Question 24. Not a railway stores question.

Question 25. No. Not at all.

Question 26. Except that they should be specialised in the branches over which they will control.

Question 27. Please see my reply to question 2.

Question 28. The Chief Stores Superintendent is authorized to make purchases prior to sanction of petty Indian stores up to a limit of Rs. 500 for any single item (not for stock). Applications for purchases of articles of either European or Indian manufacture from Rs. 500 to Rs. 5,000 in value are entered in a separate wants book and submitted to the Chief Auditor and Accountant who forwards it to the Agent for sanction after certifying that funds are available. The wants books when sanctioned are recorded at an official meeting.

Applications exceeding Rs. 5,000 in value are submitted to the Stores Accountant, Parel, who verifies the previous purchase rate and stock on hand quoted on the purchase applications by the Chief Stores Superintendent. The applications are then forwarded to the head office, who pass it on to the Agent for special sanction after certifying that funds are available. These applications are also recorded at an official meeting.

Bills received from contractors are certified by the Chief Stores Superintendent to the effect that the material has been received in good condition. These bills are then handed over to the Stores Accountant who quotes the day book price and sends them to the bill section in the head office for audit and payment.

The following points are carefully attended to when auditing bills:—

(*i*) That bills when received are stamped with the date stamp of the audit office and are then registered.

(*ii*) That sanction to the purchase of materials quoted on the bills is correct.

(*iii*) That the certificate stating that the materials were received in good condition or otherwise is complete and is signed by the Depôt Storekeeper or some other responsible stores employee.

(*iv*) That the sum payable on each bill is recorded thereon in figures and words.

(*v*) That each bill is signed by a responsible officer in the necessary places. (Signatures impressed with a stamp are not accepted.)

(*vi*) That each bill is properly filled up, stamped 'original' and allocated.

(*vii*) That no erasure or alteration of figures is made in the bill. If corrections are necessary they must be made in ink and initialled leaving the original figures legible after being crossed out.

(*viii*) The items in each bill are checked with those in the wants books and purchase applications sanctioned by the Agent.

(*ix*) The arithmetical accuracy of each bill is checked, errors being corrected and initialled by the head of the section.

(*x*) Any discrepancy discovered during the process of audit is investigated and the matter is taken up with the Chief Stores Superintendent.

(*xi*) The bills when paid are marked off accordingly in the C.O. 6 register giving reference to the C.O. 7 number and date on which the payment was made to the contractor.

Question 29. No. This question is very carefully watched by our audit department; even sanction to purchase over Rs. 500 for a single item, and all items for stock have to go through them prior to submission to Agent.

Question 30. I think this quite a good idea.

Mr. G. R. Webb, called and examined.

Witness had been twenty-two years in the Stores Department of the Great Indian Peninsula Railway and Chief Stores Superintendent for 22 years.

Under examination, witness adhered to the views expressed in his written replies. His policy was to buy imported stores in India only to meet immediate demands. His general experience was that the stores obtained on home indents were better and cheaper than those bought in India.

He thought that a government test house in Bombay would receive enough custom to justify its establishment; but it was improbable that the Great Indian Peninsula Railway would make much use of it, as they had two special chemists on the Railway and facilities for testing metals and oils in the locomotive shops.

C. B. Pooley, Esq., Executive Engineer, Public Works Department, Lake Whiting District, Bombay Presidency.

Written Statement.

Question 1. I am generally in favour of the formation of a central agency for purchasing stores on behalf of departments of the Government of India subject to the following conditions:—

(*i*) Prompt supply.

(*ii*) Establishment of an information bureau at each provincial headquarters properly equipped with samples and catalogues which can be sent on application to indenting officers.

(*iii*) The rules for indenting must be simple and references to several officers for compliance should be unnecessary.

(*iv*) The local Governments and indenting officers should not be unduly tied down.

Reasons (*a*) Encouragement to the industries of the country.

(*b*) British manufacturers are likely to establish factories and well-stocked branches in India.

(*c*) The quality of local products is likely to improve provided proper standards are set up and careful inspection during manufacture is insisted upon.

(*d*) The existing practice of indenting most stores of European origin through the India Office, in London, is unsatisfactory.

(*e*) It is probable, that after the introduction of the Reforms Scheme in India, a demand will be made that all machinery and stores required for India be either purchased in India or obtained from abroad by tenders called for in India.

(*f*) Probable economy.

(*g*) Possibility of reducing cost of manufacture by adoption of standard articles to suit general requirements of all departments.

Question 2. The following scheme is suggested for the Public Works Department indents:—

(*i*) Executive engineers in charge of divisions must maintain stores and workshops as heretofore.

(*ii*) Petty supply articles such as paints, oils, nails, screws, etc., comprising hardware and oilman's stores should be indented for by six monthly indents.

(*iii*) Estimates of probable requirements should not be submitted in advance for petty supply articles.

(*iv*) Articles indented under ordinary tools and plant such as pickaxes, phowras, mining bars, etc., will also be indented on six-monthly indents and probable requirements may be estimated in advance for the first two or

three years after which the practice should be discontinued.

(*v*) Officers of the Public Works Department should have the following powers of direct purchase in the open market in India which should apply both to imported and indigenous articles:—

Officer.	Limit to which a purchase can be made.
	Rs.
Executive Engineer in charge of a division	500
Superintending Engineer Superintendent of Works	2,500
Local Government or Administration .	Full powers.

(*vi*) Purchases should be made under the powers in paragraph (*v*) above in case the articles required are not available from stock with the local controller of stores and a certificate should be required for such purchases that "serious inconvenience and delay to works in progress would be caused unless purchases were made direct."

(*vii*) It is essential that information bureaus be established at each provincial headquarters, which should be in a position to supply indenting officers with samples and prices of standard articles; also with catalogues of all leading manufacturers both in India and abroad. The importance of indenting officers being able to obtain accurate information of articles available and their prices cannot be overestimated and, if run on business-like lines, must result in reduction of correspondence and early compliance with the indents.

(*viii*) Practically all indents submitted by the Public Works Department are framed in the first place in the offices of the executive engineers whence they have to be submitted to superintending or chief engineers for approval. On receipt of such administrative approval, the indents should be passed on direct to the local controller who should supply the articles indented direct from his stock. In case any of the articles indented are not in his stock, he should pass on the indents to the Controller-General in India who should arrange the necessary supply.

(*ix*) Individual indents for standard articles or for standard types of machinery should not be referred either to the local Director of Industries or to local experts under the Director of Industries. By referring indents to such officers, it has been found from experience that serious delay and protracted correspondence is likely to result. The Public Works Department must be treated as an expert department that knows what it requires. The functions of the experts attached to central or local agencies should be to advise the controllers on the best types of standard articles available in the market, to advise on improvements in the manufacture, to furnish information and assistance to indenting officers when standard articles are not indented or when any special types of articles or machinery are required.

(*x*) The Controller-General and the local controllers should be required to send monthly statements of indents received with information as to how the supply has been arranged to the local Directors of Industries who will then have an opportunity of pointing out the desirability of obtaining any type of article, in future, from industries under their care. To refer all indents beforehand to Directors of Industries and their experts will certainly result in serious delay and inconvenience to indenting officers and to the works in their charge.

(*xi*) Local controllers must stock standard articles of the type usually required and such stocks should be carried at provincial headquarters.

(*xii*) A properly equipped research institute is essential at each provincial headquarters. This institute may be directly under the charge of Director of Industries, but controllers and indenting officers should be permitted to correspond direct with the officer in charge of the institute.

(*xiii*) The inquiry bureau should be in charge of a special officer who may be subordinate to the local controller. The functions of the inquiry bureau would be to maintain a complete stock of samples of all standard articles stocked by the Stores Department, also of articles manufactured in the province and of other articles likely to be in demand. To prepare monthly price lists of all standard articles in the local stores and to furnish such price lists to any officers requiring them; to prepare and keep up-to-date illustrated catalogues of articles kept in stock or generally procurable; to maintain a complete library of all catalogues of manufacturers both in India and abroad.

Question 3. All classes of stores should be purchased by a central agency.

Question 4. I am of opinion that it would be advantageous for—

(*a*) local and *quasi*-public bodies,
(*b*) company-owned railways, and
(*c*) British colonies and protectorates which buy stores in India to make their local purchases through a central agency.

The India stores agency should charge a small percentage on value of stores purchased through them.

Question 5. I am strongly of opinion that local Governments should purchase through a central stores department. The measures of decentralization necessary in the case of the Public Works Department have already been detailed in paragraph (*v*) of reply to question 2 above.

Question 6. I would recommend the creation of a central stores department having local controllers at the headquarters of each Provincial Government.

Question 7. No suggestions.

Question 8. The establishment of a central stores department in India might render possible the introduction of simultaneous tendering in India and England for important contracts on behalf of Government, such as rails, rolling-stock and other materials required, for large railway and other projects. I am, however, of opinion that simultaneous tendering would lead to considerable delay and could not be attempted except when time permitted. In my opinion it would be far more satisfactory to transfer the India Stores Department from England to India but retaining a branch in London under a capable controller with inspectors, laboratories and an organization for despatching materials to India.

Question 9. I consider that it is undesirable that the policy of inspection should be solely dictated, either by the consuming, or by the department responsible for the industrial development of the country, and would recommend that a joint committee be established to meet at periodical intervals for the purpose of framing and revising the rules to meet the necessities of both the departments.

Question 10. I am strongly of opinion that inspection should be carried out generally by a central agency, which should be quite independent of, but working under the same control as the agency for the purchase of stores.

Question 11. As far as the Public Works Department is concerned no special inspection organization is required, in my opinion.

Question 12. I am strongly of opinion that specialised inspection is advisable for most classes of articles required for the Public Works Department; in particular I would specify steel, paints varnishes and oils.

Question 13. I am strongly of opinion that inspection should be carried out by a central inspection agency.

Question 14. In my opinion the Stores Rules of 1913 need modification, irrespective of whether central or local agencies are established. In replying to question 8 above, I have recommended the wholesale transference of the India Stores Department from England to India, but even if such transfer did not take place, it would still be necessary to modify the Stores Rules and in the case of the Public Works Department to give full powers to the local Government or Administration for purchases made under Rule 3 (*a*). The condition—"*that the price and quality are not unfavourable as compared with those at which similar articles could be obtained through the India Office*" is also difficult to comply with in practice. There are cases in which considerable latitude is necessary for indenting officers to procure the best type of machinery to suit the local conditions. Three such examples may be quoted—

(*i*) a hydro-electric installation.
(*ii*) an aerial ropeway proposition.
(*iii*) sluice gates of a particular design.

I have submitted indents for stores required, under the three headings mentioned above, but before indenting it was necessary to consult the manufacturers and to inquire from them in advance about the different types of standard designs they could offer which would be likely to suit the local conditions; unless such correspondence takes place the stores department would probably have to purchase a specially designed plant to suit the local conditions, at a greatly increased cost; whereas in the cases quoted above the experts attached to the India Office merely elaborated the specifications, and orders were placed as recommended by the indenting officer. In one case, inspection could not be made by the India Office owing to the supply being made from abroad and the Secretary of State relaxed the rule on this particular occasion. In my opinion, the rules for the purchase of plant and machinery for extensive schemes, should provide for such contingencies, so as to facilitate the co-operation of all concerned.

Question 15. There would be no difficulty about arranging the conditions for the purchase of European stores (whether in India or in the United Kingdom at the time of purchase) provided the India Stores Department had its headquarters in India. I am also of opinion that the purchases of European stores through established Indian branches of British manufacturing firms should be encouraged with a view to inducing British manufacturing firms to establish Indian branches and even Indian factories. This concession would undoubtedly encourage (*a*) holding stocks in India by the firms, (*b*) establishment of manufacture in India.

Question 16. Unless the India Stores Department is shifted from England to India I would not recommend the scrutiny by a central department in India of all home indents before their transmission to the Director-General of Stores; in my opinion, such scrutiny is likely to lead to delay and unnecessary correspondence.

Question 17. I can suggest no practical method which would apply to all classes of stores, plant and machinery, etc.

Question 18. In this connexion please refer to my reply to question 14 above, in which I have given examples of the three types of plant which cannot always be procured through the Director-General of Stores.

Question 19. In my opinion it is essential that the Government of India should form central stock depots at all provincial headquarters. As far as the Public Works Department is concerned it will still be necessary to stock a certain amount of articles, plant and machinery, etc., at the headquarters of each district and also at sub-divisional headquarters, as at present; when however, the plant was no longer required, it should be returned to a central plant agency which would take care of the plant, repair it where necessary, and redistribute it according to demand.

(*a*) It would also be possible to hold smaller stocks of stores in some cases.
(*b*) As regards private firms, they should be encouraged to hold even larger stocks as indicated in reply to question 15 above.

Question 20. I approve of the formation of central stock depots and consider, they should be situated at the headquarters of each province or administration. They should maintain stocks of Indian as well as of imported stores.

Question 21. Information not available in my office.

Question 22. As far as district offices in the Public Works Department are concerned no record is maintained of the equipment and records of success of firms dealt with. It is, however, usual to only deal with such firms as are on the government lists.

(2) As regards maintaining records of prices paid for stores, rate lists are maintained showing price paid for every article generally in demand from year to year.

(3) Tenders are also invited annually for petty supply stores, for supply of petty articles to the whole district during the year. Records are not maintained for other classes of stores purchased, but it is usual to call for quotations and generally to accept the lowest offer.

Question 23. I do not consider that it would be feasible for a central agency to collect and disseminate to purchasing officers prompt and reliable information regarding the prices, capacity and performances of contracting firms.

Question 24. No experience of shipbuilding.

Question 25. In my opinion there is no reason why the purchase and inspection of stores for company-owned railways, and local and *quasi*-public bodies by a central agency should interfere with the legitimate sphere of private enterprise, especially if tenders were called by the Stores Department on the lines at present generally adopted by company-owned railways.

Question 26. I consider that purchasing and inspecting officers of central or local stores departments should be highly educated and highly-paid officers, who should also be liable to transfer from one local depot to another. Such officers should be generously treated by Government as regards housing, salary, etc. Otherwise I have no suggestions to offer.

Question 27. Yes, I am of opinion that the cost of the central and local purchasing agencies should be met by a percentage charge on orders placed with them.

Question 28. The Accountant-General, Bombay, is the officer responsible for audit of Public Works Department accounts who may please be referred to.

A register is maintained by all executive engineers, detailing all purchases of imported stores, and quoting authority for each purchase. This register is inspected at the annual inspection of an executive engineer's office by the Accountant-General.

Subdivisional officers usually indent all stores required for works from the executive engineer who either supplies them his stock, or arranges for the supply.

Annual contracts are often entered into for the supply of petty stores, by calling for tenders publicly. The executive engineer verifies rates in all indents before passing them. Bills paid for stores are audited in executive engineers' offices by comparison with approved indents and sanctioned tenders.

Question 29. I am of opinion that the creation of a central or local stores department would make it far more difficult to exercise an efficient audit on the purchases, because there would be no possibility of comparison; it would, however, be possible to ensure fuller compliance with the rules in force.

Question 30. In case the India Stores Department is not transferred from England to India I am certainly of opinion that it is desirable to arrange interchange

of personnel between the home and Indian Stores departments. I would also recommend that any of the personnel in the local purchasing departments should be liable to transfer to any other local or central agency.

Mr. C. B. POOLEY, called and Examined.

Referring to the purchase of English stores through the India Office and particularly to plant and machinery (as distinct from ordinary tools and plant, which term included standard articles) required by the Public Works Department, witness stated that the existing arrangements for indenting for plant and machinery of European origin from the Director General of Stores, London, would be satisfactory provided the existing rules were made somewhat more elastic. For instance, executive engineers should be allowed to correspond *direct* with the Director General of Stores, London, and to obtain his advice on the type of plant which would best suit the local conditions and also preliminary estimates of the cost of such plant. Again, the rule stating "*that the name of the supplier should not be specified in the indent*" should be modified. Under the existing conditions, Executive Engineers had often to rely on the experts with firms in India or with the Indian branches and agencies of British manufacturers for information which they required for preparing estimates and indents on the India Office. This was quite unfair as the firms supplying the information seldom got the opportunity of tendering for the supply.

He was all in favour of purchasing through branches or agents of British manufacturers provided these had technical experts on their staff in India. Indenting officers should either be allowed to specify the name of the supplier or else the India Stores Department should arrange to supply indenting officers with the information required, preferably by means of a branch office in each presidency town in India.

He considered that inspection was essentially required. During his service of 17 years he had never received any inferior material from the India Stores Department. His only complaints were delay and the difficulty of making a department situated at such a distance understand his needs. The latter difficulty was enhanced by the rigidity of the rules. If the rules were relaxed and direct communication with the India Stores Department allowed and encouraged the main difficulty would, in his opinion, be removed as far as the Public Works Department was concerned.

The Public Works Department must be treated as an expert department and their indents should be sent direct to the Stores Department and not to the Directors of Industries. Delay and correspondence must result if indents have to be sent through any additional office and the Directors of Industries could be kept informed of indents made and orders passed by means of monthly lists which could be rendered to them by the local stores department.

As regards the supply of standard articles, as apart from the special articles of plant and machinery previously referred to, it should be permissible to indent for such either in India or from England.

He considered that an information bureau should be established in each presidency town. The functions of this bureau would be to inform indenting officers what type of articles were available in India and England; to keep samples of standard articles for the guidance of Indian manufacturers; and to maintain a library of catalogues of as many manufacturers both in India and abroad as possible. He also advocated that the stores departments both in England and in India should issue catalogues of standard articles which they were prepared to supply at short notice. They might also circulate monthly or quarterly price lists of such standard articles. All important manufacturers had well illustrated catalogues and by issuing such catalogues it would be far easier for the indenting officers to specify their requirements and also for the stores department to understand what was required. Telegraphic indents would also be facilitated.

As regards local purchases, officers of the Public Works Department should be granted increased powers to enable them to carry out the works in their charge expeditiously without being unduly hampered by rules as was often the case at present. It was often impossible for the executive officers to foresee their requirements; for instance, in dealing with foundations or difficult situations, additional plant was often required and it was cheaper and in the interest of the work to purchase what was required from the nearest source available. He thought that the increase of the financial limit, imposed on executive engineers for purchases made under Rule 5 of the existing Stores Rules, to Rs. 2,500 would meet all practical needs. In purchasing locally the executive officers might ask for simultaneous quotations from local firms and from the stores department.

If the stores department did not carry any stock, local officers might consult them or seek their advice as may be required, but it should not be obligatory either to make local purchases through the stores department or, to get their approval for purchases made, as such procedure would merely increase correspondence and delay and was likely to hamper work. All qualified civil engineers knew what they wanted in the way of tools and plant and they should be treated as experts and should not be unduly tied down by rigid rules.

He did not consider that the services of a government consulting engineer for structural steel work would be made much use of by the Public Works Department, Bombay, as they used stone mostly for bridges. Any case which might arise in which advice was required would be met, he suggested, by appointing the bridge engineer of some railway company as consulting engineer to Public Works Department.

At Bombay, Monday 9th February 1920.

PRESENT:

Sir FRANCIS COUCHMAN, K.B.E., M.I.C.E. (*President*).

G. H. COLLIER, Esq., C.I.E.
A. W. DODS, Esq.
H. N. HESELTINE, Esq., C.I.E.
Lieutenant-Colonel C. C. H. HOGG, C.M.G., R.E.
Brigadier-General H. A. K. JENNINGS, C.I.E.
LALJI NARANJI, Esq.
Rai Bahadur LALA MILKI RAM.

And the following co-opted members:—

E. M. PROES, Esq., Joint Secretary to Government, Public Works Department.
R. D. BELL, Esq., C.I.E., I.C.S., Director of Industries, Bombay.

J. C. HIGHET, Esq. (*Secretary*).

Captain N. F. G. WILSON, C.M.G., C.B.E., Director, Royal Indian Marine, Bombay, called and examined.

(*Witness was not asked to submit written replies to questionnaire.*)

He saw no objection to Marine Department indents having to go through the central agency, provided no delay occurred and no attempt was made to force the supply of Indian substitutes which did not come up to the fixed patterns. It should be remembered that the Royal Navy drew some supplies from Royal Indian

Marine stocks and the Royal Navy were not as easily pleased as the Royal Indian Marine and constantly criticised the quality of supplies. The volume of complaints had increased enormously when it became unavoidable during the war to supply certain Indian made stores to the Royal Navy. If the Admiralty patterns were available in India for reference and comparison, he thought that the Royal Navy would be quite willing to accept Indian made stores provided the quality was properly safeguarded. For Royal Navy stores, the supply must be up to specification and in his experience this was generally difficult to secure in India. The Marine Store Officer was responsible that all supplies to Royal Navy ships were up to the Admiralty standard and this was ensured at present by obtaining supplies from the Admiralty itself. He was not certain whether the Admiraly would accept inspection other than by one of its own officers. A proposal was now afoot that the Marine Store Officer, Bombay, should be an officer trained in the Store Department of the Admiralty so as to bring the Royal Indian Marine methods into line with the Royal Navy. So far as Royal Indian Marine stores were concerned, the Marine Store Officer would take instructions from the Director, Royal Indian Marine, who would co-operate in seeing that Indian manufactures were given a fair chance. The great trouble was that Indian supplies were so often not up to sample. Proper inspection facilities would inspire confidence and result in more being obtained in India than at present.

He thought that it would be an advantage to be permitted to purchase machinery from branches of British firms in India. The higher price which might have to be paid owing to the restricted competition would be balanced by the benefits of earlier supply and the certainty that what was supplied would be what had been asked for, which was not always the case with supplies obtained through the India Office. He could see no particular advantage, however, in purchasing in India ordinary expendable stores which had to be imported.

Normally about 5,000 men were employed in the dockyard in Bombay and about 3,000 in Calcutta. During the war, the strength at Bombay had risen to about 7,000 men. The work in Calcutta was practically all on inland water vessels, both building and repairing. In Bombay, the work was mainly the repair and overhaul of sea-going vessels including the East Indies Squadron, the Royal Indian Marine and vessels belonging to the Sultans of Zanzibar and Maskat and also Persian Government vessels.

The dockyards were run on self-supporting lines, though he would not say that they were self-supporting at present. In place of the overhead charges which private firms had to provide against, the following percentages were at present being added to the actual labour and material cost of work done in the dockyards :—

	Per cent.
For Admiralty and other Imperial services	10
For Colonial and Foreign Governments, Port Trusts, Municipalities, Guaranteed Railways, Semi-government undertakings	25
Native States and Officers of the Royal Navy	30
Officers of the Royal Indian Marine, Dockyard Officers and employees of the Royal Indian Marine Dockyards .	Nil

These percentages had been fixed by a committee after an investigation of the exact cost of running the dockyards; but their adequacy was again under consideration and would be decided as soon as one clear year of normal work had elapsed. It was, however, practically impossible to arrive at what the overhead charges in government dockyards should be for comparison with private firms, as the land occupied had been obtained free of cost and was now of enormous value.

A fair amount of the work now done in the dockyards might be done by private firms, but he would not say that Government would get better or cheaper work by this means. The dockyards had to be maintained because of the work to be done on vessels of the Royal Navy, of which the plans and arrangements could not be exposed to private firms. There was therefore every reason that the facilities available should be utilised to the fullest on other government work.

The dry-dock in the Bombay Dockyard was 600 feet long but could only take vessels up to 52 feet beam and 22 feet draft. When larger vessels had to be dry-docked, the Hughes' dry-dock was used but a section of the dockyard hands was sent down specially to carry out the necessary work.

If the work in government dockyards was restricted to the repair and upkeep of Royal Navy and Royal Indian Marine vessels, it might be possible to reduce the staff but only very slightly; and every now and again extra staff would have to be collected for rush of work. He did not consider that the essential work of the dockyards was likely to increase in future.

As regards the existing rules governing the building of government vessels, he had never known of any department or local Government requiring sea-going vessels of over 120 feet in length and therefore the rules applied only in fact to vessels for the Royal Indian Marine, and he had never suffered any inconvenience from them. He considered the reference required to the Consulting Naval Architect to be a good and wise provision as securing the benefit of the latest ideas in ship design. There was every possibility of shipbuilding developing in India. He would have no objection to the length limit in rule 5 (*a*) of the present Shipbuilding Rules being increased from 120 feet to 200 feet. He did not consider, however, that the rules as they stood restricted private shipbuilding enterprise in India.

H. L. RICHARDSON, Esq., Nominated by the Bombay Chamber of Commerce.

Written Statement.

As it was not possible to answer all the questions in each section, the Chamber decided to embody in one statement their replies to each group of questions.

Questions 1 to 8. The Chamber advocate the formation of central agency for purchase on account of all departments of the Government of India and local Governments, but they also advocate the formation of local agencies in the various provinces who should have as free a hand as possible and to whom the central agency would exist mainly as a reference and a check.

As the Chamber is decidedly of the opinion that it would be to the advantage of local and *quasi*-public bodies, company-owned railways and British Colonies and Protectorates which buy stores in India, to make their local purchases through the central stores agency, they consider that the bodies in question should contribute towards the maintenance of the agency.

With regard to the purchase of stores by departments of the Government of India as opposed to that by local Governments, the Chamber having recommended the adoption of a system of decentralisation, consider that departments of the Government of India should also obtain their requirements through local agencies wherever practicable.

The Chamber have no observations to offer regarding the introduction of simultaneous tendering in India and England beyond expressing the opinion that the

establishment of a central stores department would render the introduction of such a system possible. In the same way they wish to point out, in connection with the existing system, the delays which now occur under the same.

Questions 9 to 13. The Chamber in this connection are in favour of the adoption of some system such as that set forth in Appendix to the questionnaire whereby the inspection becomes the duty of a separate department and organisation under the central agency. They consider, however, that officials of this department should have the necessary expert knowledge of all classes of articles that they may be called upon to handle.

Questions 14 to 18. In the opinion of the Chamber it naturally follows from the creation of the agency they have outlined above that the Stores Rules of 1913 require considerable modification. They consider that, purchases of European and other foreign stores (whether in India or abroad at the time of purchase) should be made through established Indian branches of British manufacturing firms under similar conditions to those adopted in the case of established merchant firms in India. The grant of this concession would, in their opinion, tend towards firms increasing their holdings of stocks in India and further would give encouragement to such firms to establish manufacture in India.

With regard to all home indents, the Chamber consider that the same should be carefully scrutinised by an efficient central department in India, before submission to the Director General of Stores.

Questions 19 to 20. The opinion of the Chamber with regard to this question is that the formation of central stock depots by Government in India is inadvisable as it is outside the scope of the new department which should be regarded purely as an agency and in no sense a trading concern.

Questions 21 to 30. The majority of the questions asked under this section can hardly be answered by the Chamber of Commerce and the Chamber have, therefore, confined their attention to two questions only viz., Nos. 23 and 27. With regard to the first, the Chamber consider that it would be both feasible and advantageous for the central agency to collect and disseminate to purchasing officers prompt and reliable information regarding the prices, capacity and performances of contracting firms. In the same way, they consider also that the cost of the central and local purchasing agencies should be met by a percentage charge on orders placed with them.

Mr. H. L. RICHARDSON, called and examined.

Witness was a partner in the firm of Messrs. Richardson and Cruddas, Bombay.

The Bombay Chamber of Commerce favoured purchase by local agencies as they thought that the smaller dealers, whom it was desirable to encourage, would then receive more business than they were likely to from one central purchasing agency. These local agencies would be branches of the central agency. If one central purchasing agency were established for all India, combining and buying all government requirements, he did not fear attempts at cornering supplies as there was sufficient competition to check any such tendency.

As regards simultaneous tendering he suggested that the last day of receipt in India might be the date of posting of tenders of British firms in London.

A list of approved firms should be maintained but this should not be restricted to branches only. Agents or even merchant firms in India should not be debarred from tendering for Government requirements. He considered that purchasing more in India even from middlemen would tend towards the development of manufacture in India. It would make the middleman realise the volume of work and enable him to appreciate the additional gain to be made by taking advantage of Indian facilities such as cheap labour, indigenous material, etc. The publication of all government requirements in India would have as good an effect in this direction as the purchase from middlemen. Every requirement should be published and not merely a selection made by some government official. Government would, however, have to show a decided preference to articles made in India. He would recommend the acceptance of a lower standard of finish in the Indian made article in the initial stages of manufacture.

Consulting engineers, or a government department, with a staff capable of drawing up specifications and preparing designs and working drawings would save engineering firms in India a great deal of the expense which was now incurred by many firms being asked to tender to Government to their own designs. It would also help firms by securing more uniformity.

The consulting engineers, or department, should be responsible also for the inspection. He had no complaint against the present system of inspection of government work done by his firm. Engineering firms welcomed inspection.

The inspector's duties were very important and his pay must therefore be good.

He considered that the establishment of a government test house in Bombay would be quite justified.

In his opinion the selection of Calcutta as the headquarters of the central agency would not result in any disadvantage to Bombay.

G. H. THISTELTON DYER, Esq., Deputy Director of Industries, Bombay.

Written Statement.

Question 1. Yes.

It will lead to large purchases of Indian manufactured goods.

It will help to increase the standard of such goods.

It will encourage the laying down of more works in India.

It should have the effect of changing the present rule by which goods bought by the Director-General of Stores are charged to indenting officers at Rs. 15 to the pound sterling instead of at current exchange rates.

Question 3. All stores which can be purchased in an economical manner by a local agency *locally* or by consumers themselves.

I think that the use of the central and local agencies should be optional, at any rate at first, provided proper safe-guards are introduced.

Question 4. I believe so, if it is efficiently managed.

Yes. It should be run on business lines.

Question 5. See answer to question 3.

I advocate the formation of local agencies working in close touch with a central agency.

Question 8. Yes, until there is sufficient competition in India between Indian firms and British firms with branches and works in India.

Question 9. The consuming department.

Question 10. Yes.

Question 13. As far as possible by a central inspection agency, but by working together a good deal of assistance

could be given by the technical staff of the local industries departments.

Question 14. Yes.

Question 15. If the firm is approved and quotes the most favourable terms to specification I do not think that any other conditions are necessary. I have always maintained that it will be greatly to the good of India if reliable British firms are encouraged to open branches and hold stocks in India in preference to relying on agents. If officers are allowed to deal with such branches in fair competition with firms in India, I feel sure that it will lead to the establishment of workshops for repairs and manufacturing by the branches which will, in time, become individual companies carrying on the same traditions as the parent firm.

Question 16. Yes.

Question 17. By encouraging branches of home firms to set up in India. These branches will have current home prices available for the information of the scrutinizing department.

Question 19. Only when necessary. It is a bad system which is to be avoided, but it is probable that depots for distribution will be found essential.

(*a*) If goods can be supplied quickly there is no need to stock for long periods. The extension of local purchase and the development of industries in India will reduce the amount of stock held if such stocks are properly inspected from time to time.

(*b*) If Government are going to carry large stocks I have no doubt that private firms will reduce the capital they have to lock up in the form of stocks.

Question 23. Yes, this is an important function of both central and local agencies.

Question 27. Yes.

Question 29. Yes, but such an audit should be carried out in a broad-minded manner. Endless explanations regarding the reason why an article was purchased for 4 annas instead of As. 3-9 will only lead to friction. Officers who purchase do their best as a rule but need assistance. In cases where the audit discloses that advice is persistently disregarded, it will be easy to forbid the culprit from making any purchases except through an agency.

Question 30. Most distinctly. The wider the experience given both in purchasing and the local conditions in which goods are used, the more efficient will the personnel become.

I often wonder if the excellent officers in the London Stores Depot have had Indian experience and really understand our difficulties. On the other hand, I doubt if the average indenting officer realises the amount of trouble that is taken to carry out his requirements from the scanty information which is so often given on the indent form.

I suggest that the best arrangement will be to make the London Stores Department in England a branch under the control of the central agency in India. A small branch might also be established in Australia.

Mr. G. H. THISTELTON DYER, called and Examined.

Witness had been appointed Mechanical Engineer to the Bombay Government in 1912. His duties were to inspect municipal pumping stations and generally to look after mechanical work for different departments of Government. The Government Central Workshops and Stores were under his control. The post of Mechanical Engineer had now been placed in abeyance, and he had been appointed Deputy Director of Industries.

He was most strongly of the opinion that all consuming officers (*e.g.*, Public Works Department executive engineers) should be given a chance of testing what business capacity they possessed in the purchase of stores and plant, and so long as an officer was found to purchase satisfactorily it should be optional for him to make use of the central agency. Any officer who proved inexpert in buying would be ordered to purchase from the central agency. It would take several years for the central agency to get going, and at first, at any rate, its use should not be compulsory. He had no doubt that the purchasing agencies would be found very useful and that the majority of consuming officers would go to them voluntarily, and they would certainly be less inclined to criticise its initial shortcomings than if its employment was made compulsory. In time the central agency might arrange running contracts for certain commodities and the consuming officers should then be permitted to order direct from the suppliers against the contracts made by the central agency. He preferred the idea, however, of the purchasing being in the hands of local agencies allied with the Directors of Industries and having Provincial, not Imperial, staff, the central agency being mainly advisory. Departments of the Government of India would indent on the central agency who would ask the appropriate local agency to negotitate purchase if necessary. He would have local purchasing agencies, but an all-India inspection service, the latter forming the main connecting link between the local agencies and the central agency.

Experts were now being engaged under the Directors of Industries to help with advice the starting of new industries. They were necessary whether Government were purchasing stores or not. A considerable saving in inspection staff would be effected by employing these experts to assist the inspectors.

He doubted whether there would be enough work for a consulting engineers' branch in the central agency, and in any case the designs supplied by firms in competition were generally the most economical though of course it was desirable to standardise as far as practicable.

In his written reply to question 15 he had contemplated the maintenance of a list of reliable firms, Indian and also British, who had branches or representatives in India. He would start with a large list including all Indian firms whose works had been inspected and were considered capable of working up to a reasonable standard. He would include British firms who kept representatives in India capable of supplying technical information and advice and not merely a selling agency, as the latter form of business was not, in his opinion, likely to help India.

He would have all home indents examined first by the local agency and then by the central agency. If the central agency concurred in the order going out of India the indent should be returned to the indenting officer who would forward it and carry on any further correspondence direct with the Director General of Stores or Indian Government agency in Great Britain.

As Mechanical Engineer to the Bombay Government he had started a workshop at Kirkee for overhauling machinery which he had found was a work which private firms did not care about undertaking. This workshop was also used for making patterns and samples and for experimental work but never for any work which should be got from private firms.

At Bombay, Tuesday 10th February 1920.

PRESENT:

Sir FRANCIS COUCHMAN, K.B.E. M.I.C.E. (*President*).

G. H. COLLIER, Esq., C.I.E.
A. W. DODS, Esq.
H. N. HESELTINE, Esq., C.I.E.
Lieutenant-Colonel C. C. H. HOGG, C.M.G., R.E.
Brigadier-General H. A. K. JENNINGS, C.I.E.
LALJI NARANJI, Esq.
Rai Bahadur LALA MILKI RAM.

And the following co-opted members:—

E. M. PROES, Esq., Joint Secretary to Government, Public Works Department.
R. D. BELL, Esq., C.I.E., I.C.S., Director of Industries, Bombay.

J. C. HIGHET, Esq. (*Secretary*).

* Major G. H. WILLIS, C.I.E., M.V.O., R.E., Master of the Mint, Bombay.

Written Statement.

Question 1. I am of opinion that the establishment of a central agency with local branches at big centres for the purchase of stores in general use by many departments, whether manufactured in India or imported, will conduce to economy and efficiency provided that it is run on the right lines. It is essential that such an organisation should look on itself as the servant and not the master of the departments it supplies, and it is to the inversion of this view that I ascribe much of the difficulty between departments in India and the India Stores Department. Economy will result from the knowledge of such an agency of the cheapest market, and efficiency will be attained by the general high level of quality which the agency should ensure.

Question 2. If an agency be formed I see no reason why any special arrangements should be made for varying departments, provided it starts simply as a supplier of stock articles and not of special stores in use only by one or a few special departments. As stock articles I may instance nails, screws, steel beams, rods and plates of ordinary sizes, files and hand tools generally, Portland cement, paints, oils and ordinary chemicals, etc., etc. An agency started in this way will, if properly run, gain the confidence of the departments it supplies and for their own sakes they will gradually extend their purchases through the agency, first to articles such as ordinary machine tools, lathes and so on, and later to their more specialised requirements.

Question 3. Unless the agency has a home branch the India Stores Department must continue to exist as the medium of supply of specialised and larger machinery, but for efficient working of that department it is essential that there should be both on its administrative and inspection staff officers with a considerable personal experience of Indian conditions. The lack of Indian experience in the Stores Department has been one of the chief causes of its inefficiency.

Question 4. I think it would be well not to start the agency on a larger scale than will suffice for government departments only. With a modest start and the gradual accumulation of experience more real good is likely to result. Later, when the agency feels its feet, it will be easy to expand it, if thought desirable, to deal with the requirements of the other corporations named if they express a wish to utilise its services.

Question 5. A central purchasing agency with local branches should be eminently suitable for the purchases of local Governments. It might be well to consider the advisability of having at the head quarters of the agency a liaison officer from each major division of the Empire to watch the interests of his Province.

Question 6. I do not favour the creation of local agencies but of local branches of a central agency.

Question 7. I presume this question refers to calling for tenders by the Munitions Board. I do not know the system on which the Munitions Board worked, but from my long experience of the Bombay market I consider that the system adopted by the Board worked very imperfectly at least in the earlier stages, and resulted in all rates soaring. I know that in some instances I was able to get things more cheaply from my regular contractors and by enquiry in the bazaar than the Munitions Board was doing. This was so notably in the case of timber and of small stores such as screws. I am speaking now only of the earlier days of the Board when certain articles were supplied to me through the Board.

The system of the Mint is found to work very well in practice. Stores of local manufacture used in large quantities are the subject of an annual contract which is advertised. Items but seldom required are tendered for on enquiry by several merchants and the best tender taken, the rates being checked by frequent enquiry in the appropriate quarter of the bazaar by men not known to be in the employ of the Mint. The wholesale merchant is dealt with wherever possible, and in the case of imported stores, the purchase of which in India is sanctioned by the rules, the actual importer unless the quantities required are very small.

Question 8. I foresee a considerable amount of overlapping and inefficient working if simultaneous tendering in England and India were introduced unless the English agency who calls for the tenders is to be a home branch of the Indian agency. It would probably be found that suppliers who had established branches out here were asked for duplicate tenders to their great annoyance, and it would hinder the establishment of new comers who would argue that being enabled to tender in England there is no need to establish and maintain a staff in India. It is in the interests of the country, I take it, firstly, that indigenous supply should be encouraged as far as possible and secondly, that if India cannot produce in sufficiently good quality at a reasonable price, the most suitable imported article should be obtained. These two desiderata are more likely to be attained by calling for tenders in India only than by simultaneous tendering as the indigenous product would reap the full advantage of proximity and the overseas supply would be tendered for by firms with branches in the country who would be conversant with local conditions and, where erection and putting to work formed part of the contract, would have at their disposal a competent staff. At the start tenders called for in India only would probably be higher than if called for

at home as well, but when British firms found that they could only get contracts by maintaining a staff in India they would soon come into line and competition would then bring costs down to the same basis as at present, while the country would be benefited as a whole by the opening of these new branches of home firms and the consequent general competition in the markets.

Question 9. The policy of inspection should be conducted on a give-and-take principle, the consuming department having a final say. The introduction of the British Engineering Standards for all articles that they cover would enormously facilitate inspection work and would leave, except as regards military equipment, comparatively few articles regarding which the inspection staff and the consuming department are likely to disagree. Ultimately the specification of the consuming department must be the sole guide to inspection, but the inspection staff should be empowered to suggest or even to press for modification of a specification before its final adoption, provided always that the inspection staff are technically thoroughly competent. Such a case might arise where an article of local manufacture, cheaply and easily obtained, would do the work required without danger to life and limb or to plant but would have a shorter life or require greater care in use. In the interests of the industry of the country such an article should be used rather than the more efficient imported article which it may be expected the consuming department would prefer.

Question 10. I should prefer a central inspection agency with inspectors stationed near the place of manufacture or the sources of supply. The inspection staff should be wholly independent of the purchasing staff but their direction should be closely linked with and under the general control of the administrative head of the whole department. It is of the highest importance that the inspection staff should be fully manned, well paid and indubitably competent technically.

Question 11. Being in charge of a Mint where there are many wholly distinct trades carried on necessitating many specialised tools and stores I am unable to instance any article of which I would not trust the inspection to an inspector acquainted with the general class of article in question and with Indian conditions. It is probable that it is only really necessary that military departments, for some of their requirements which must be exactly interchargeable, would require a special staff though I see no reason why the ordinary staff with training in the exact requirements of the military should not suffice. (This in no way refers to the inspection staff of ordnance and other factories which must of course be maintained.) It is probable that other departments will press for their own inspection staff but I consider that this should be resisted. It is possible that liaison officers from the bigger departments stationed with the central inspection agency might provide a cheap and satisfactory solution. By the bigger departments I mean the big railways, the Dockyard and the Public Works.

Question 12. This is answered above.

Question 13. As stated in my reply to question 10 again I prefer a central inspection agency with local branches and possibly provincial liaison officers with the central headquarters. The liaison officers suggested in my reply to question 6 above could combine the duties of looking after both purchase and inspection.

Question 14. I trust that if this purchasing agency comes into being the necessity for any stores rules such as now exist as directions to consuming departments will disappear. The purchasing agency should, in my opinion, buy everything possible in the country so long as the quality is suitable and the price not exorbitant. Anything not so obtainable would then be purchased in England by the home branch of the agency without any hampering rules. I look to this policy, if given effect to, to bring prices to the proper level by competition not only for Government but for the country generally and to encourage indigenous industry.

Question 15. Purchases of European stores, whether in India or in the United Kingdom at the time of purchase, though Indian branches of home firms should be allowed to the largest possible extent. As stated above this will induce other firms to open in India thereby increasing competition and lowering prices, and will encourage firms to stock largely articles of common use. Further if there is likely to be reasonable profit by manufacturing in India firms will be more likely to inaugurate the manufacture if they possess organised selling branches in India having knowledge of the conditions and of the markets.

Question 16. Scrutiny of all home indents by a central department in India is unobjectionable if it does not cause too much delay. I should strongly advocate it in the interests of the country if I could be sure that the scrutinizing agency would have an efficient personnel who would deal with the work in a broad minded manner.

Question 17. Unless a central purchasing agency is established as proposed above, I see no possibility of maintaining accurate up-to-date information of prices in India and England. If, however, the central purchasing agency with a home branch were established there should be no difficulty whatever in getting complete accurate information by enquiry, and by calling for tenders, and as regards the United Kingdom by reference to the various periodicals which deals with this point. Such an agency would be supplied, or more properly snowed under, with catalogues and price lists with correction sheets from firms of all sorts; and a well devised and properly maintained card system would provide the means for the immediate determination of the price, within a small margin, of most articles.

Question 18. I hold strongly that machinery for power installation, electrical, pumping, etc., etc., should invariably be purchased in India from or through reputable firms who have established branches out here and not through the Stores Department. Tests of machinery made on the maker's bed plate in England are comparatively useless, and it is in every way preferable that the contract should provide for erection and for tests of the plant as a going concern on site. Any other method must prove expensive and unsatisfactory, as divided responsibility is inevitable.

Further where products of British Dominions and Colonies are in question, and experience has shown them to be as good or better value for money than supplies received through the Director General of Stores, departments should be allowed to purchase them if they desire. I may instance the products of the Ceylon Rubber Mills which have supplied this Mint with rubber valves, etc., which are far superior in every way to anything supplied by the Stores Department and, though considerably higher in first cost, are much cheaper in the end than the home article owing to their much longer efficient life.

Question 19. It might conduce to economy to form central stock depots for imported articles and for Indian manufactured articles in common use by many departments. If the present rules regarding the purchase of imported stores remain in force the stock depots would have to be on a very large scale. But if the central purchasing agency, with an inspection branch as discussed above, were formed and tenders for most articles called for in India only, the holding of considerable stocks by importers would be stimulated to the great benefit of the country generally; and it would not be necessary to have large stock depots for articles of general use as running contracts could be made with the importing firms for supply direct to the consuming department as required. All departments would still require to maintain small stores for current expense and also for articles special to the department, and providing the procedure above were followed it seems problematical as to whether central stock depots would pay their way.

Question 20. Assuming that the present procedure or some not greatly modified form continues so that imported stores have to be bought through the Stores Department, I would suggest the formation of stock depots

at or near the five larger ports with subsidiary depots to be supplied from the depots at the ports at say six of the larger railway junctions in India.

Question 21. I give the statement called for this Mint—

YEAR.	(a) Stores purchased abroad.	(b) Imported Stores purchased in India.	(c) Indian Stores.
	Rs.	Rs.	Rs.
1910-11	14,651	8,038	40,170
1911-12	48,168	55,512	90,838
1912-13	93,058	8,745	1,10,486
1913-14	1,15,060	25,854	56,175
1914-15	4,39,258*	20,096	27,523
1915-16	4,95,692*	19,955	58,287
1916-17	23,816	63,517	2,55,819
1917-18	1,18,977	46,621	2,26,644
1918-19	2,38,048	59,143	2,46,199
TOTAL	15,86,737	3,07,481	11,18,146

* Includes Copper from Australia.

Question 22. The prices paid for stores are recorded in the stores ledger when purchases are received. The equipment and records of success of firms dealt with by the Mints are a matter of common knowledge in the Mints where the personnel changes but slowly.

Question 23. I consider that an efficient central agency should certainly be able to provide the required information promptly.

Question 24. I know nothing of shipbuilding.

Question 25. The only possible interference that occurs to me is with the practice of consulting engineers and chemists. Of these there are but few in India and those not of the highest standing. I consider that this might safely be ignored if it be eventually decided to place the services of a central purchasing and inspection agency at the disposal of company-owned railways and *quasi*-public bodies.

Question 26. Generally it is essential that the direction staff of a central purchasing department should be endowed with common-sense, tact, energy and some considerable knowledge of actual engineering work under Indian conditions in more than one province and should be of undoubted integrity. The inspection staff in addition to suitable technical education whether engineering, chemical, textile or other, must have had actual Indian experience in their particular line to be of real use. Needless to say that they also should be of undoubted integrity. Pay should throughout be on such a level as to diminish temptation to bribery, and money spent in this way will return a very handsome dividend on investment. The personnel should be ample for the work as scamped work due to over pressure will have far-reaching effects which will not only endanger the success of the whole scheme but will inconvenience seriously the departments dependent on the agency for their supplies.

The general scheme of organisation shown in Appendix I to the List of Questions, as prepared by Mr. Coubrough, commends itself to me as likely to be suitable, with the addition of liaison officers from the bigger departments (see replies to questions 6 and 13 above) to be linked with the Controllers, and further associating the Provincial Directors of Industries with the Controller of Inspection and Intelligence.

As regards recruitment, this in the first place must be wholly in India, imported personnel being useless for sometime after their arrival. It should be possible to obtain sufficient suitable persons to start the new department from the railways, the public works and other government departments. All first appointments should be made probationary for say two years, the permanent post of the holder being kept open for him, and there should be no hesitation in weeding out those not found suitable in any way.

Question 28. There is no outside audit for the purchase of stores by the Mint. The Mint Master decides rates, and arranges for periodical stock-taking, a complete verification being made every fourth year, and one-third of the balances being verified in each of the other years.

Question 29. From what knowledge I have of the rules in force for audit of stores in departments I trust that, with the establishment of a store purchase and inspection department in India, the audit rules will be completely overhauled with a view to simplification. A careful enquiry into and revision of the rules seems to me to be urgently called for.

Question 30. As stated above I hope for the abolition of the India Stores Department and its replacement on a much smaller scale by a home branch of the Stores Department of India. If this takes place then I consider that there should be interchange both of purchasing and inspection personnel between the Indian and the home branches, the latter being supplied with staff from the Indian department, though in the first instance it might be partially manned by selection from the existing staff of the Director-General of Stores, the remainder being provided from this country so as to ensure the much needed Indian experience.

Major G. H. WILLIS, called and examined.

Witness had been Mint Master in Bombay since March 1915 and had previously officiated as Mint Master in Calcutta and Bombay since 1909. Prior to that he had held for five years a post in Simla in which his duties were those of a consulting mechanical and electrical engineer to the since abolished Military Department.

The procedure in the Mint was to obtain imported stores required regularly by annual indents on the Director-General of Stores, India Office, and to purchase anything else in India as required. Country stores, except coal and coke, were obtained through a general contractor at schedule rates. All purchases in India were examined on delivery at the Mint.

He had contemplated a central purchasing agency, with its own branches in various centres, purchasing on running contracts rather than making large purchases periodically against combined demands. Separate and distinct provincial purchasing agencies might be workable, provided they could be relied on to keep in close touch with each other, but he was afraid that the interchange of views and intelligence would lapse before long and that co-ordination and uniformity of procedure would disappear, whereas a central agency would naturally keep all its branches fully posted.

For imported stores the central agency should deal direct with the actual importers and not with the retail dealers. It was difficult at present to get in touch with the actual importers. In Bombay most of the hardware trade was in the hands of large importers who specialised in some one branch and acted as distributors to small firms. The policy of a central agency should be to encourage an increase in the number of importers, specially of representatives of actual manufacturing firms who would stock a complete range of that manufacturer's products. Government concerns, such as the Mint, would then be able very largely to reduce their stocks of ordinary stores. The value of the stocks of stores, of the kind he advocated purchase through importers, held by the Bombay Mint averaged in pre-war days about Rs. 1,60,000. There would be no necessity to hold this stock if quick supply could be relied on from firms in India.

The branches of the central agency should be granted considerable powers of purchase.

Possibly Government would obtain the best result by allowing consuming officers to arrange their own purchases at their option, either directly from approved importers or through the purchasing agency. It then becomes necessary for the purchasing agency to show some advantage either in price, quality or convenience in order to justify its existence by getting and retaining the consuming officer's custom.

The central agency should commence by undertaking supply of a few general requirements and enlarge its sphere gradually. Any attempt to centralise all purchases in a central agency would only result in a catastrophe. He feared it would be found however that the majority of officers would seek the assistance of the central agency to save themselves trouble.

In calling for simultaneous tenders in India and in Great Britain, to avoid duplication it would be necessary to inform the London representative of the central agency which branch firms or agencies had been invited to tender in India.

It would be a great help to indentors to be allowed to carry on any subsequent correspondence as regards minor matters with branches or representatives in India without having to go through the central agency, but no modification in the essentials of the contract affecting cost should be made without reference to the branch agency, concerned or in more important purchases to the central agency.

He thought that more extensive purchases through branches and representatives in India would certainly lead to other firms coming out to India.

It was difficult to suggest a scale of pay for the inspection branch. One establishment in Bombay which formerly started their juniors on Rs. 200 per month were now paying Rs. 700. The pay must be liberal to attract men of energy and integrity. He suggested Rs. 600 rising to Rs. 1,200 for the staff doing actual inspection, Rs. 1,400 to Rs. 2,000 for the chief inspectors in Bombay and Calcutta and at least Rs. 2,500 for the head inspector at headquarters, if pensionable.

The senior inspectors would, in practice, act to some extent as consulting engineers for those branches of engineering in which they were qualified.

He thought the best service would probably be obtained from a firm of consulting engineers well staffed by competent engineers in all the principal branches of engineering preferably connected with some eminent firm in London. It must of course be recognised that any one man could only be competent as a consultant in one branch of engineering, only in one part of the branch. It stood to reason that for every thing which was being manufactured successfully in India now there must be someone competent to act as consulting engineer.

In the latter part of his written reply to question 9, he had in mind fire-bricks among other things. The Indian fire-bricks which were now being used in the Mint gave about three-fourths of the life of the average English brick and about ½ the life of the best English brick. Yet, in spite of the more frequent replacement necessary, the Indian fire-brick worked out cheaper than the English. His remarks did not apply to anything in which safety due to quality or strength was involved. Provided strength was sufficient he would not be too particular about finish.

He thought a government test house in Bombay would be made much use of. It should be started on a small scale and extended as required. It should not be controlled by the inspection staff though every facility should be given to the inspection staff to consult those in charge and, if desired, to witness tests in which they were particularly concerned. It would be able to do the assay and chemical tests of minerals which the Mint was at present asked to do and also might undertake the standardisation of weights and measures. In fact the test house should follow the lines of the National Physical Laboratory in England.

In his opinion test houses would be very important factors in the industrial development of India and tend to improve the accuracy of work and workmanship generally. Since the public had been encouraged to make use of the testing facilities at the Mint the consumers' interests in the purity of gold and silver had been protected, and consumers were being rapidly educated to demand the positive evidence as to fineness afforded by mint certificates.

P. J. GAHAN, Esq., Controller (Sales), Indian Munitions Board, Bombay.

Note on proposed Government Stores Organization.

In writing this note it is assumed that it is the intention of the Government of India to establish an organisation to control the purchase, storage and distribution of stores and material for government and semi-Government departments and bodies with a view to:—

(1) taking full advantage of the industrial possibilities of India and fostering and encouraging local production so as to improve and develop it;

(2) effecting economy and more efficient and universal control than exist at present by specialised purchase and inspection.

As the proposal to form a government stores department was the outcome of the Industrial Commission's investigations into the latent possibilities of the development of Indian industries, (1) and (2) may be placed on an equal footing.

II. In making any suggestions on this subject one's mind naturally turns to what one considers the weakest point in the existing structures for the purchase of stores for Government and public bodies. To ensure future stability it is essential to eliminate this weakness. To my mind the weakest point is supervision or rather the want of supervision; not local, or what may be called domestic supervision but supervision of each particular department by independent expert outside authority.

III. Preserving, however, the theory, that whatever the machinery may be that is set up for the purchase, storage and distribution of stores and material, it must be laid on a foundation of efficient expert supervision, it is now necessary to consider:—

(1) The enquiries and investigations which the Committee will find necessary to make in order to enable it to decide what the most efficient form of machinery ought to be, and

(2) The probable result of these enquiries and investigations.

IV. We will deal first with III (1), *i.e.*, enquiries and investigations, considering the matter under the heads of

(*a*) purchase.

(*b*) storage and distribution.

An inspection of, and enquiries from, the principal purchasing and storing organisations in each province might be made in order to ascertain the following information regarding (*a*) purchase and (*b*) storage and distribution:—

(*a*) *Purchase.*

(1) Principal classes and approximate quantities of stores purchased:—

(*a*) in India, of European or non-Indian manufacture,

(*b*) in India, of Indian manufacture,

(*c*) through agents in India from the United Kingdom, or elsewhere out of India,
(*d*) direct from the United Kingdom or elsewhere out of India.

(2) To what extent purchases of indigenous goods are made:—
(*a*) from manufacturers,
(*b*) through agents,
With details of prices.

(3) Details of prices paid for and sources of immediate and original supply of other stores in general use having regard to whether, where accredited local agents exist, purchases are made through them or not.

(4) Reasons governing the above purchases and general outline of methods of purchase, an important point being methods by and source from which information is obtained, regarding fields of supply and manufacturers' prices.

(5) Powers of purchase of different officials.

(6) Extent and nature of supervision exercised as regards the purchase and inspection of stores.

(7) In addition to obtaining the above information the Committee might by local enquiry in each province ascertain the approximate quantities available and capacity for further output of stores which are in principal demand and sources of production of such stores.

(*b*) *Storage and Distribution.*
This is allied to (*a*) *Purchase.*

(1) Principal items of stores which are:—
(*i*) bought in considerable quantities for stock and then issued against various demands,
(*ii*) bought for direct consumption.

(2) Rules or procedure regulating quantities of stores purchased periodically with chief reference to the basis on which minimum quantities of stock are held and the reasons for fixing these minimum quantities.

(3) Procedure governing demands on stores departments by consumers.

(4) Opinions of consumers regarding principal items of stores and materials, reasons for special preference for certain stores and details of any tests that may have been carried out regarding them.

V. We will now proceed to consider III (2), *i.e.*, results of enquiries and investigations.

The Committee has before it a mass of information regarding the principal classes of stores purchased.

After sorting, grouping and tabulating this information there will, I think, be revealed:—

(1) a number of organisations independent of each other most of which are pursuing their own methods oblivious to or ignorant of the best that is in the methods of others, suffering from a peculiar insularity bred of long-standing custom and sadly in need of what may be called a bureau of information in the shape of an up-to-date central controlling organisation.

(2) a number of systems of purhase, storage and distribution most of which are unenlightened, unenterprising and sometimes unhealthy, and

(3) a great deal of extravagant waste due principally to want of knowledge of the best markets for various commodities.

As an example, it will probably be found that cotton waste to be used for the same purpose on different railways is bought in various centres, from various people, at various rates and of various qualities. Again, one railway will use an Indian-made lock, whereas another requiring the same description of lock for the same purpose insists on importing its requirements little or, no encouragement being given in such cases to the local manufacturers to improve their standard if improvement is really necessary. Matters like these call for early correction.

VI. One cannot anticipate all the different questions that the Committee would find itself called upon to consider after collecting the information detailed previously.

I have endeavoured to give above a couple of ordinary examples, but the information that the Committee would collect should enable it to decide upon:—

(1) the best form which the new organisation should take to start with, and
(2) the channels into which its main efforts should be directed.

In conjunction with the local directors of industries, whatever organisation is set up, could immediately proceed to set right a great deal that is at present wrong.

Allowing however that it is not possible at present to detail the exact organisation that will be required and the precise activities of its different branches, some remarks may be offered as to the general form the department might assume and its work.

In this connection I beg to invite a reference to paragraphs 196, 197 and 198 of the Industrial Commission's Report. The recommendations therein contained appear to embrace in general what is necessary to make a beginning.

It would appear advisable once the Committee concluded its investigations that the decision as to whether an organisation should be set up or not should follow as quickly as possible.

VII. The first step would be to appoint a Director-General of Supplies (I use this designation as it appears more appropriate than Director-General of Stores), and directors of supplies in the various provinces. All these officials' branches would form part of the Industry Department and would be kept in touch with matters effecting the production of articles and material with which they had to deal.

The facts and figures collected by the Committee would be before each local director of supplies who should be authorised to call on the existing purchasing organisations to, as a start, submit to him indents for their periodical requirements. He would arrange for such indents to come to him simultaneously from different sources and would, in the case of material available in his province, enter into contracts for supplies.

Reports on all such contracts would be sent to the Director-General of Supplies who would need to have a special intelligence branch which would tabulate and examine such reports received from different provincial directors of supplies. This branch in the director-general's office would serve purely as a bureau of information and act as a connecting link between the different provinces. This would not interfere with the right of provincial directors of supplies to communicate with each other. In the interests however of the development of industries throughout the country it appears necessary that information regarding the resources of each province should be communicated throughout all the provinces as widely as possible. The best means of doing this and of ensuring the most efficient encouragement of such industries, as far as they are affected by government demands, appears to be through the medium of a central department that is continually in touch with what is going on throughout the country.

Very soon the activities of the local directors of supplies would increase and what was required of them would be more clearly revealed.

With this would come the necessity of establishing specialised branches of experts both at headquarters and in the various province each dealing with a particular class or classes of supplies. The local directors of supplies would then assume the positions of administrative heads of the provincial supply organisations

whether or not they maintained direct control of any special branch.

The intelligence branch of the director-general's office referred to above would keep provincial directors of supplies in touch with the activities of other provincial directors so that they should be in a position to take full advantage of the resources of every province. As a general rule, however, purchases would not be made by local directors of supplies outside their own provinces. When this was advisable or necessary, indents would be sent to the Director-General of Supplies to be dealt with.

Similarly all indents for supplies which a local director could not meet and for supplies which it was considered should be imported would be sent to the Director-General.

Gradually the intelligence branch of the director-general's office would find itself in possession of a very great deal of useful information which, it appears to me, would in many cases point to the advisability of concentrating large demands at headquarters and of placing contracts and orders from there for supplies to various provinces. I think there is no doubt that in many cases this would result in increased economy and efficiency. Objection might be raised to this on the score of the likelihood of delay. It would, therefore, be necessary to maintain an entirely adequate and capable staff and to organise a system of expeditious working.

VIII. The concentration at headquarters of the purchase of certain stores in large demand means of course the curtailment as far as these purchases go of the powers of the provincial departments of industry. This, it has been pointed out, should not be brought about in direct opposition to the wishes of local Governments. It is necessary, therefore, to offer a suggestion as to the best means of effecting centralisation where it is considered it is needed, without delay, confusion and friction. It is not possible to say what objections and obstacles may be met with but I think in practice the best solution will be found by establishing a system of frequent personal inter-communication between the various officials of the department. I would like here to offer a few remarks on this point.

It appears to me a matter of primary importance that all establishments should be so staffed as to permit of the officials in charge of each branch making regular occasional visits to other centres. It has always been my experience that a very great deal of time and energy, spelling in the long run the loss of a considerable amount of money, is wasted in correspondence, misunderstandings, mistakes and increased work through one branch not being conversant with the details of the working of another. One day spent in interviews and inspection is worth a hundred letters and circulars. I would, therefore, advocate that all heads of branches should be compelled periodically to visit each other and headquarters and that headquarters officials should similarly keep in personal touch with the provincial supply branches.

By the introduction of a system that will permit of frequent visits between officials there will grow up a feeling of understanding and sympathy between them, and the information, knowledge and advice, that will circulate, will, I am convinced, be the means of considerable saving in money.

To revert, in connection with this matter, to the question of the centralisation of purchases, I think, that frequent and reasonable discussion backed by the knowledge each head of a branch will acquire of the workings of the department as a whole will do more to solve and settle questions such as this, than months of correspondence. This, I think, is applicable throughout in regard to the successful working of any department.

The above outlines, in general, part of the form and activities of the organisation. The questions of storage and distribution can hardly be dealt with until the practical experience of the branch and the information collected by the Committee indicate the best lines on which to proceed.

In effect, the establishment of the supplying organisation will considerably reduce and in cases abolish existing organisations. I do not think the transition from a series of system to one system will present much difficulty. Present departments mostly deal with both purchase, and storage and distribution. The powers of purchase will pass practically wholly into the hands of the government supply department while existing storage and distribution from depôts will probably continue at least for some time, but under control of the government supply department.

The whole scheme indicates very radical changes but I am of opinion that the most radical changes are necessary in order to ensure proper encouragement of Indian industries and to bring about efficiency and economy.

IX. The conversion of several small organisations, good and bad, into one large one leads us to the very important question of supervision. The responsibility that was previously diffused has now been concentrated, and it is therefore increasingly necessary that due precautions should be taken to preserve efficiency.

The necessity for an ample and energetic form of supervision and inspection cannot be exaggerated and I do not think that any expense should be spared in establishing this.

I am entirely opposed to what I have previously described as "domestic supervision." An official who is efficient and maintains an efficient department should welcome rather than object to his own work and that of his department being constantly examined.

I would therefore suggest the following:—

(*a*) inspection and passing of stores, and

(*b*) a staff of experts directly under the local director of industries should be employed to check and pass material and stores purchased. This staff would carry out their duties in conjunction with men employed in the stores supply branches but would be subordinate to the director of supplies only inasmuch as they would be at his disposal and would have to carry out his orders as to when and where stores were to be inspected. The local director of industries would have the final word regarding any difference of opinion that might arise.

In addition to this there should be a supervising staff directly under the Director-General of Supplies who would be continually visiting different centres and who would be authorised to report on all matters connected with the supply branches. This staff should be composed of senior men who should each be provided with inspection clerks for the purpose of collecting detailed information. Their reports would be sent in duplicate, one copy to the Director-General of Stores direct and one copy to him through the director of supplies and the director of industries who would each have to forward his remarks on the report.

The maintenance of such establishments would necessarily be costly, but I am of opinion that the increased efficiency and economy that would result through their activities would more than compensate for their employment.

X. In concluding this note I would like to urge that whatever the organisation might be that the Government decides on the question of personal communication between officials should receive most sympathetic consideration.

Written Statement.

Question 1. Yes.

Government is pledged to support Indian industries. An integral part of this support consists in the guaranteeing by Government that it will utilise to the full, efficient local, natural and manufactured products. This guarantee cannot be made unless some mode of central control is introduced in the purchase of material. The present purchasing organizations are firstly not

equipped with the means of judging of the efficiency of various products and of obtaining exhaustive information regarding local resources, and are secondly not controlled to the extent necessary to ensure their rendering any real help to existing or contemplated industries. The stores purchase rules lay down in general the policy to be followed in obtaining stores in India and by importation. The machinery that exists, however, for the carrying out of this policy is run on various principles by the different organizations in charge, and is unconnected as whole. A local manufacturer, therefore, has in general small chance of obtaining any substantial help from such organizations. His success in getting orders from Government depends on his being able to persuade the particular officials in charge of departments having the power to purchase, that his goods are, all things considered, cheaper than those obtainable from other sources. He might (*a*) be supplying a very good article, the increased production of which it would be advantageous to the Government and the country to encourage, or might (*b*) be distributing an inferior type of goods which for the time being at any rate he manages to get rid of at the expense of Government. Now at present there is no proper means by which in the case of (*a*) the knowledge of the availability of the article is conveyed to organizations to which it may be useful, or by which in the case of (*b*) efficient inspection and test will reveal the unsuitability of the stores and be in the long run a help inasmuch as they will bring about an improvement in quality. The difference, it seems to me, between the present and the proposed systems is the difference between unadvised and more or less unchecked individual effort and systematic controlled combined endeavour.

A central purchasing agency might on a larger more complicated scale be likened to the stores department of a railway. It has the same relation to the various services that a railway stores branch has to the different departments on a railway. The parallel is not equal on account of the vast difference between the extent of activities but the underlying principle appears to me to be the same. It is recognized that it is neither economical nor efficient for each department of a railway to run its own stores branch. The result from the railway's domestic standpoint would be increased prices, diversity in qualities of the same material and the locking up of additional money on account of increased stocks. This is on a larger scale what is happening now.

To deal with these three points separately:—

(*i*) A few large contracts in place of several smaller ones mean reduced prices.

(*ii*) Centralizing purchase means introducing uniformity of quality and as a result economy, improvement in quality, and general increased efficiency in the work for which material is required.

(*iii*) There are at the present time large quantities of material in the stores depôts of railways and public services for which there is no "turn-over" year after year. Lists of such stores are supposed to be circulated between services periodically but the circulation is often spasmodic and the result of it almost negligible. Such surpluses would, under an efficient central controlling agency gradually disappear and not be repeated. The saving under this head alone would be very great.

Question 2. I do not consider any special arrangements are necessary for any particular department. Any general scheme evolved for the central purchase of stores should be applicable to all demands.

Question 3. (*a*) Yes. Please see answer to question 5.

(*b*) Please see answer to question 5.

Question 4. (*a*) Please see answer to question 5.

(*b*) Yes.

Question 5. [Answer embraces answer to questions 3 and 4 (*a*)].

As an answer here I give below an extract* from the notes I have already submitted on this subject.

I am of opinion that any scheme settled on for the general purchase of stores by Government should embrace purchases for local Governments by the local agencies of the central organization. If the scheme is to endure at all it must be a success and if it is a success it appears to me that local Governments, quasi-public bodies, etc., would be agreeable to obtain their supplies through it. The organization therefore might start by obtaining supplies for departments directly under the Government of India. After that it will rest with those who control the departments to persuade local Governments, etc., to obtain all their requirements from the central organization.

Question 6. This is dealt with in answer to question 5 above.

Question 7. I have no experience of this matter.

Question 8. I cannot at the moment see that this would be advisable or successful. Important contracts mostly carry with them important details and it is often the case that specifications of such undergo alterations due very often to improved suggestions that are made either by tenderers or the requisitioning departments. This necessitates final settlement on the spot by the parties concerned. In this connection I beg to refer also to answer to question 15.

Question 9 to 13. I give below an extract ‡ from the note which I have already submitted on this matter.

Each purchasing organization would deal with a particular group of stores and would carry with it its local and central inspecting officers who would all be experts in the branches they belong to. Stores of any very special nature requiring inspection by high technical authority would have to be specially dealt with and the services of such authority requisitioned from wherever available.

Question 14. Yes, I think it would, but in what respects cannot be said until the details regarding the new organization are decided on.

Question 15. I am greatly in favour of the purchase of requirements practically wholly in India. On my railway (Bengal-Nagpur Railway) it was the practice to obtain the bulk of our stores by orders placed on local firms and the results were I think on the whole satisfactory. Firms to whom enquiries were regularly sent established telegraphic code systems with their branches and with manufacturers in England and we obtain material in the shortest possible period delivered at our depôts. Large consignments of stores such as special sizes of spring steel could be imported within ten weeks after our placing orders and special urgent small demands were fulfilled in as short a time as five weeks. I think the majority of large business houses in India would soon introduce systems by which they could communicate all details of requirements to their home offices and direct indents on London by Government could be reduced to a minimum. With the prospect of regular demands being received big firms in India would be willing I think to hold stocks of material for which there were repeated enquiries and the necessity therefore of the Government carrying large stocks would be reduced. With the competition that would be introduced and a check kept on prices I think a system of local purchase would in the long run prove an economy.

Question 16. Yes, I think all home indents should go to a central department for scrutiny before transmission to Director General of Stores, London.

Question 17. It seems to me that information regarding home prices will only be necessary in special cases and periodically when it could be obtained in communication with the organization in England.

Question 18. This depends on where the stores are available. If they are to be obtained from a country from which enquiries can more easily be made from

* Reproduced as paragraph VII of Mr. Gahan's note at pages 104 *ante.*

‡ Reproduced as paragraph IX excepting last sentence of that paragraph at page 104.

‡ Reproduced as paragraph IX of Mr. Gahan's note at pages *ante.*

India than from England it might be done by direct enquiry from the sources of supply. All stores purchased in the British Isles however should be procured through the Director General of Stores, London.

Question 19. Yes, in time central stock depôts might be established for the Government in India—

(*a*) This would lessen the quantity of stocks which are at present held by government departments and would get rid of a good many surplus stores which now exist.

(*b*) Without recommending that the Government should give firms guarantees as regards taking up stocks I think that with a system of frequent and large purchases in India it is fairly certain that firms would on their own responsibility import and hold in stock material in continuous demand. Of these stocks the Government would be aware and this knowledge would naturally effect the quantities of material held by Government.

Question 20. As a start depôts might be formed in Calcutta, Bombay and Madras. I think experience will show where it would eventually be necessary to establish other centres. Depôts should hold stocks of all stores.

Questions 21 and 22. No answers as my department is not a purchasing concern.

Question 23. Yes, this is one of the purposes for which I have advocated the establishment of an intelligence department in the office of the authority who will control the new organization.

Question 24. I have no experience of shipbuilding.

Question 25. I do not think so. This all depends however on the success or otherwise of the new organization.

Question 26. No special views. Staff should of course be experts in the lines on which they are engaged and I consider should from top to bottom be paid at higher rates than staffs of other executive departments. At present the general impression which is to a considerable extent correct is that most purchasing organizations are open to a certain extent to bribery. High rates of pay will not remove this entirely but will reduce it to an extent that will be a saving to Government.

Question 27. I believe this is the system in force at present and it seems to be sound.

Question 28. No answer as mine is not a purchasing department.

Question 29. The creation of a central purchasing organization with local branches means standardization and in this respect it will lead to more efficient and easier audit.

Question 30. I would not advocate interchanges of personnel between Home and Indian Stores Departments except that officials might be sent on deputation periodically to keep themselves in touch with affairs in general. Conditions of practical working differ too much to allow the system to be a success. Interchange of personnel in India brought about at suitable intervals would no doubt be an advantage as it would give those concerned a useful and general experience.

Mr. P. J. Gahan, called and examined.

Witness had been nine years in the Stores Department of the Bengal-Nagpur Railway. His services had been lent to the Indian Munitions Board in May 1917.

He advocated that all purchases should be made in India even of imported articles. His experience on the Bengal-Nagpur Railway was that firms in India through whom English stores were purchased had arranged to hold stocks in excess of the immediate requirements of the railway. This was the case even with stores peculiar to the Bengal Nagpur Railway, which firms were not likely to sell to the public or the other railways. Purchase in India even from selling agencies would, he thought, help the expansion of Indian manufactures.

He had not found the surplus stores lists of other railways of much real assistance. The central agency should certainly receive full information about all stores surplus with government departments and railways and keep an eye on their disposal.

He thought that if one central agency were established it would be found practicable to effect a reduction in the staff, both superior and clerical, in the stores departments of railways.

At Bombay, Wednesday, 11th February 1920.

PRESENT:

Sir FRANCIS COUCHMAN, K.B.E., M.I.C.E., (*President*).

G. H. Colliee, Esq., C.I.E.
A. W. Dods, Esq.
Lieutenant-Colonel C. C. H. Hogg, C.M.G., R.E.
Brigadier-General H. A. K. Jennings, C.I.E.
Lalji Naranji, Esq.
Rai Bahadur Lala Mileki Ram.

And the following co-opted members:—

E. M. Pross, Esq., Joint Secretary to Government, Public Works Department, and
R. D. Bell, Esq., C.I.E., I.C.S., Director of Industries, Bombay.

J. C. Highet, Esq. (*Secretary*).

J. C. K. Peterson, Esq., late Controller of Munitions and Director of Industries, Bengal, and now of Messrs. Tata Sons, Limited, called and examined.

(*Witness was not asked to submit a written statement.*)

Witness suggested an organisation in which the Controller General of Stores would have under him a number of special purchasing branches for special articles, *e.g.*, (1) cotton textiles, (2) jute, (3) oils. The heads of these branches would all be located at headquarters and would, if necessary, have special assistants representing them at other places. This aggregate of branches would constitute the imperial organisation. In the provinces, each director of industries would have under him a stores branch, which would deal with all provincial indents. The director of industries would, at his discretion, pass on items from provincial indents, to the central purchasing organisation, *e.g.*, in Bombay, the director might not feel that his staff was competent to purchase textiles and would prefer that these should be purchased

by the textile branch of the imperial organisation. He might stipulate, however, that purchases for his province should not be made outside the province without special reference to himself. The position of the director of industries as head of the provincial stores purchasing organisation would secure that as much as possible of the provincial requirements was purchased within the province, and this might be done even at some sacrifice in price in order to meet local sentiment. Purchases outside the province would generally be effected for him by the imperial organisation. On the other hand, the provincial organisation would, when necessary, execute orders for the central organisation, or supervise the execution or inspection of an order placed by the central organisation in the province. This could be arranged without the central authority exercising executive power over the provincial department of industries. The provincial director of industries would be justified in assisting the imperial organisation as his assistance would be for the benefit of local industries. The purchasing staff under the administrative control of directors of industries would be members of the Imperial Stores Department. Local representatives of the special branches (*e.g.*, textiles) of the imperial organisation would not be under the administrative control of the local director of industries. These arrangements would secure the right degree and kind of co-operation between the provincial departments and the imperial departments, and would cover the circumstances of provinces so widely different as Bengal with headquarters at Calcutta and the Central Provinces with headquarters at Nagpur.

There were no inherent reasons why the whole organisation should be cumbersome. It was quite capable of being organised on business like lines. Some consumers might prefer to make their own purchases, but he was sure there were very many who would be glad to be relieved of the responsibility of buying for themselves and to have their purchases effected by a properly organised stores department.

Purchasing officers need not have any very special technical knowledge but need only have sufficient general technical knowledge to enable them to understand the indents and suggest or in some cases accept alternatives. Detailed and expert technical knowledge will be available from the inspecting branch. The purchasing officer in the provinces would probably be a deputy director of industries.

Inspectors would be of two classes. The lower grade requiring a trade training and no great amount of scientific knowledge would probably be obtainable on salaries ranging from Rs. 500 monthly upwards. This class would probably reach a maximum of about Rs. 1,200. There would be special technical inspectors who would have to be paid according to qualifications, say, from Rs. 1,000 a month upwards. These men would not only inspect but advise and be of great help in the improvement of manufacture in India. There would be an Inspector General paid Rs. 2,500 to Rs. 3,000, chosen for administrative ability and not necessarily possessing expert knowledge, who would be independent of the Controller-General of Stores, but both should come under the same department. It is necessary that there should be no wide gulf between the purchasing and inspection branches, and if both the Inspector-General and the Controller-General were directly under a department of the Government of India with only the Member in charge as the sole superior authority of both, administrative difficulties would probably arise in reconciling differences of opinion between purchasing and inspecting officers. This difficulty would be diminished if both the Inspector-General and Controller-General were under an executive head like a Member of an Imperial Board of Industries.

In many lines, no inspection is necessary, *e.g.*, jute manufactures which would be bought in the open market through an officer who was himself an expert. Government would not be the largest purchaser and would naturally accept standard trade qualities. In such cases insistence on inspection only made the purchases more expensive. The Inspectors should not be mere detectives rejecting articles which were not up to specification, but should assist manufacturers in reaching the specification. In special cases, it would be advantageous to have as purchasing officers men who had sufficient technical knowledge to enable them to inspect and test accurately their own purchases and who would be of material assistance to manufacturers in improving the quality of their output. In such a case no independent inspection would be required. The present Assistant Controller of Oils and Paints, Bombay, was a special case of this kind.

In the case of *running contracts*, there was no real danger of manufacturers quoting higher rates to ensure against a probable rise in the price of raw materials. It should be cheaper to make contracts for a year for such articles as linseed and castor-oil than to purchase from hand to mouth. Normally, there is a certain time of the year when linseed and castor-seed are cheaper than at other seasons, and if contracts are placed at that time, the manufacturer ensures against a rise in the price of seed by covering himself and purchasing seed for forward delivery.

He thought that a depôt of some kind would be necessary for inspection, storage and despatch. The central purchasing organisation would have a depôt in Calcutta, and there would be depôts at all provincial headquarters under each of the directors of industries which could by arrangement be utilised by the imperial organisation.

He could see no particular advantage in attaching the India Store Department in London to the central agency in India, unless it was brought directly under the Government of India.

At Bombay, Thursday, 12th February 1920.

PRESENT:

Sir FRANCIS COUCHMAN, K.B.E., M.I.C.E., (*President*).

G. H. COLLIER, Esq., C.I.E.
A. W. DODS, Esq.
Lieutenant-Colonel C. C. H. HOGG, C.M.G., R.E.
Brigadier-General H. A. K. JENNINGS, C.I.E.
LALJI NARANJI, Esq.
Rai Bahadur LALA MILKI RAM.

And the following co-opted members:—

E. M. PROES, Esq., Joint Secretary to Government, Public Works Department and
R. D. BELL, Esq., C.I.E., I.C.S., Director of Industries, Bombay.

J. C. HIGHET, Esq. (*Secretary*).

W. J. McCAULIS, Esq., Chief Storekeeper, Bombay, Baroda and Central India Railway Company, Bombay.

Written Statement.

The answers given and views expressed are my own. The Home Board of this railway though treating the purchase of stores in India in a very broad-minded manner, still insist upon the ordering of many items of English manufacture through them. There may

be objection on the part of the home Board to any radical alteration in the existing procedure.

Question 1. Yes, but subject to the central agency being built up gradually. By this I mean that the agency should at first only deal with such items for which there is a large and fairly regular demand. Additional items could be easily arranged for, as experience demonstrates their necessity. I strongly deprecate a central agency plunging into multitudinous items of which the consumption is irregular or fleeting. A large lock up of capital and inevitable loss would result.

The advantages of a central agency working on the lines advocated, are that the heavy purchases involved, should command lowest possible rates, speedy supply to those dependent upon the central agency, favourable shipping rates and quick despatch by steamers or goods trains from port or place of origin.

Question 2. Yes. As soon as a central agency begins to cater for material other than items in very general use by the majority of its dependents, then it would be essential for spetialists in the various classes of material peculiar to the departments mentioned in the question, to arrange for such purchases.

Question 3. Yes. Locomotives and their spare parts, machinery, bridge work, oils, petty indigenous stores, items urgently required which can be purchased locally, timber other than "ordinary" sleepers, spare parts of non-standard wagons, permanent way material of non-standard sections, rubber goods, water-proof clothing, diving apparatus, electrical and telegraph material of sorts peculiar to any particular department, glassware.

These purchases should be made by the existing agencies.

Question 4 (*b*), Only when the supply can be delivered within the time that the item or items are required for use.

Percentage charges should be levied on all articles supplied.

Question 8. Yes, for many but not all items.

Question 9. By the consuming department, at least until the department responsible for the industrial development of India has a staff which is highly specialised in the items to be inspected.

Question 10. Except for comparatively unimportant items, or such that there is little difficulty in determining the quality, the inspection of stores should be carried out by an inspection staff which is entirely independent of the purchasing agency.

Question 11. Not to my knowledge, provided that the inspection staff is competent.

Question 12. If by "specialised inspection" is meant inspection by technical experts, I consider that the majority of items not covered by the exceptions mentioned in my answer to question 10, require specialised inspection.

Question 13. I consider that local inspection agencies would become inevitable.

Question 14. I consider that the store rules of 1813 require broadening very considerably. My experience is that many English firms are very keen to maintain stocks of English material, and to obtain out-of-stock items in the shortest possible time. Further I have noticed that the extravagant prices charged by English firms ten to 15 years ago, have vanished, and that many items either ordered from stock or by importation, very closely approximate Home prices.

To fetter the hands of a purchasing agency by "narrow" rules or to discourage the keen competition amongst English firms to supply material at reasonable rates would in my opinion be wrong.

The fewer rules and the less fettering of a purchasing agency will produce the best results. Abuses can readily be checked by an auditor checking English prices against those paid in India.

Question 15. Make concessions to firms on the lines quoted in answer to previous question. They will then be only too willing to hold stocks and where possible establish manufacture in India, in course of time.

Question 16. No. Existing delays due to various scrutinies cause far too much delay, and it is most undesirable that any additional delay should be counselled.

Question 17. I consider that the number of articles would be large, with an ever-increasing tendency. The information could be obtained, were an official appointed with extensive purchasing experience in England, and monthly or quarterly lists sent by him to India. An Auditor could then check the majority of items that he might wish to check.

Question 18. Copper, tin, zinc, lead, American machinery, tools and hardware, timber, sponges, medical glassware, cement, turpentine.

Question 19. Central stock depôts would be most essential.

Question 20. At or near large railway centres. Indian stores should not be maintained at them.

Question 21. I give below the information required during the years as available from our records.

The figures are for the broad gauge system of this railway only. It may be taken that approximately the same amount of money has been expended in purchases for the metre gauge system.

Year.	Stores purchased abroad.	Imported Stores purchased in India.	Indian Stores.
	Rs.	Rs.	Rs.
1912-13	89,95,596	..	..
1913-14	95,83,825	48,25,310	*29,36,320
1914-15	79,10,256	50,75,558	*23,45,444
1915-16	46,85,288	18,95,957	*32,05,086
1916-17	14,06,975	26,18,600	*29,34,880
1917-18	10,59,352	39,30,691	*19,19,373
1918-19	27,03,079	67,90,732	8,39,192

* Includes figures for purchase of coal.

Question 22. (*a*) Ledgers for the various classes of stores purchased both from abroad and in the country are maintained by the Stores Audit Department and their records furnish information in regard to rates, date of purchase, source of supply and particulars as to whom and when such stores are issued. The stores audit section are housed in the stores office and ready reference to ledgers is always obtainable.

(*b*) Dealings are with approved merchants whose *bonâ fides* are examined when necessary by inspection of their stocks, etc. Firms found unreliable are struck off our books.

Question 23. No.

Question 25. Question not understood. I shall be pleased to try to give an answer, if the last ten words of the question are made intelligible.

Question 26. A leaven of men with experience of the materials they have to deal with, is most essential. Such men can visualise material required on indents, even though varying nomenclatures are used, and make the best ward-keepers or indent clerks.

A fair proportion of the stores staff should be men who can draft a letter on a remark or very few hints from an officer, while the remainder of the staff need only be of the calibre usually in evidence in most offices.

Question 27. Yes.

Question 28. Quantities are checked by the section that receives the material, and receipts are certified on the invoices. Prices and amounts are checked by the bill section of the stores department against accepted tendered rates, contract prices and supply orders and further checked by the general audit department. A further check is made by the general audit department from their records of payments made, which would at once stop any double payments.

Question 29. My answer to question 14 indicates my opinion of the "fuller compliance with rules."

Question 30. Yes.

Mr. W. J. MacCaulis, called and examined.

Witness had joined the stores department of the Bombay, Baroda and Central India Railway in 1902 and had been Chief Storekeeper for five years. He dealt with stores required for the metre gauge system as well as the broad gauge system.

Four regular indents were sent home every year at quarterly intervals each covering roughly one-fourth of the stores headings. This distributed the work evenly throughout the year. These indents took three or four months to prepare and supply usually commenced from four to five months after despatch of the indents. The time for preparation could be reduced considerably by curtailing correspondence between the various officers and by direct discussion with the heads of departments concerned. If central stores depôts for imported stores were established on a big scale it would be impracticable to work to annual or even quarterly indents. There would have to be a steady flow of indents, say, fortnightly.

There was no object in stocking what could be purchased as required, and so long as prices were found to be reasonable he favoured the purchase of imported stores in India. In his experience the price was on the whole greater but the difference was not very marked and not more than the quicker supply was worth. He was able to compare prices with invoices for supplies from Home and he kept himself posted with up-to-date information. He usually extracted all comparatively small demands from the draft annual indents and purchased them locally.

He did not recommend advertising for tenders for imported stores in India. It was preferable to invite tenders only from firms of proved reliability. Encouragement to importers would certainly not discourage the establishment of new manufactures in India.

Many consumers had their own pet fancies as to what suited their work best and it was impossible to eliminate this personal factor entirely. It was for this reason that he had included oils in his reply to question 3. He had also included locomotives, machinery and bridge work as these pre-supposed a designing department in the central agency which he had not contemplated.

He was doubtful whether there was any real need for a test house in Bombay. The quality of Indian made steel was certified by the government Metallurgical Inspector. When imported iron and steel had to be bought it was subjected to simple hot and cold tests, but he was generally able to judge the quality by the fracture. The Bombay, Baroda and Central India Railway had their own chemists at Ajmere.

Rigid inspection was necessary for very special articles only.

In his opinion the government stores rules were unnecessarily restrictive. The condition in rule 2 (*a*), that a substantial part of the process of manufacture of the articles purchased in India should have been performed in India, might be desirable but it was not sufficiently important to be made a rule. It was almost impossible to make the exact comparison of price required by rule 2 (*b*) and purchases in India would generally be economical even though the price was slightly higher. The financial limits prescribed in rule 13 for purchases made under rule 3 appeared to him to be much too low. It was surely unnecessary to tie the hands of the head of a large department and prevent him from closing quickly with firms when good terms were offered.

The surplus stores lists circulated by railways were of little value.

Reduction in railway stocks would follow increased purchasing in India but even if railways made use of the central agency comparatively little reduction in their stores staff would be feasible.

JEHANGIR BOMANJI PETIT, Esq., and N. M. MUZAMDAR, Esq., nominated by the Indian Merchants' Chamber and Bureau, Bombay.

Written Statement.

Question 1. We advocate the formation of a central agency for purchases on account of the departments of the Government of India. Such a central agency is necessary to prevent competition between the provincial purchasing departments and the waste involved in the present system of local purchase by individual officers. It will tend to bring some uniformity and standard in specifications for the whole of India, and thus to introduce a much required standardization and economy and purchases on a large scale, which will be of great benefit to industrial development.

Question 3. Stores required by provincial departments need not be purchased by the central agency, but by the director of industries in collaboration with the provincial controllers of stores. To avoid competition and waste of effort, it will be arranged that the local directors of industries, when their provincial indents have been received, may put themselves into communication with the Controller-General of Stores who will be in a position to advise them as to purchase within their province or outside. If, for instance, the Director of Industries of Bombay finds from information supplied to him by the Controller-General of Stores that particular articles required by officers in his province are available at reasonable rates in Bengal, indents can be placed with the purchase agency in Bengal through the Controller-General of Stores.

Question 4. It will be advantageous for the local and *quasi*-public bodies, company-owned railways and British colonies and protectorates which buy stores in India to make the local purchases through a central stores agency. They may be charged a certain percentage as commission for such purchases undertaken on their behalf. Any system of purchases that would have the effect of enabling a body to obtain stores at lower prices than they would, were they to purchase on their own, ought to be welcomed both by them and by the Government.

Question 5. Answer to this is given in question 3 above.

Question 6. We favour the creation of local agencies of local Government in a modified form only, as suggested above. We are for a central agency for purchases on account of departments of the Government of India and also for acting as a medium and a referee for purchases by local Governments. Local directors of industries with a provincial controller of stores will be the purchasing officers on behalf of local Governments, but they will have to consult first the Controller-General of Stores in order that they may familiarise themselves with the condition of markets in other provinces. Whenever it is found by the central agency that purchase can be effected at economic rates in any particular province, taking into account the price, the source of supply and locality of consumption, it will advise the directors of industries accordingly.

Question 7. One of the greatest evils of the existing system is that very little attention is paid to the advisability of purchasing articles made in India.

Question 8. The establishment of a central stores department would render possible the introduction of simultaneous tendering in India and England for important contracts on behalf of Government.

Question 9. The policy of inspection should not be 'dictated' by the consuming department. The consuming department will send specifications and the inspection department should see that the inspection

satisfies the specifications. The latter will work under the department responsible for the industrial development of the country. It is to be feared that if the consuming department is to be entrusted with the work of inspection it will greatly complicate the machinery required, and there will be several difficulties started in the way of purchase, may be even of suitable articles.

Question 10. Inspection should be carried out by an agency independent of but working under the same central agency for the purchase of stores.

Question 13. With regard to the modified scheme of local purchase suggested by us, we are of opinion that inspection should be carried out by a central inspection agency and that it is not necessary to create local inspection agencies.

If private manufacturers or merchants want for survey purposes services of any member of the staff of the inspection department they may be loaned out on payment of certain fees.

Question 14. The creation of a central agency for the purchase of government stores will necessarily introduce modifications in the Stores Rules of 1913. Thus, for instance, in the place of the first rule with regard to the articles manufactured by the Indian manufacturers, we should like to have it provided that all articles that are produced in India in the form of raw materials or manufactured in India from materials produced in India should by preference be purchased locally even if there is a slight difference in quality and price between the indigenous articles and the foreign articles. The rule No. 4 will also have to be changed as attempts should be made to purchase all the required articles locally. The experience of the Indian Munitions Board has proved that, if efforts are made to secure articles locally-made, it will be possible to tap several hitherto unknown sources for the supply of the same.

Question 15. There need not necessarily be objection to purchasing European stores through established Indian branches of British manufacturing firms provided Indian manufacturers of a similar kind are not available.

Question 16. Yes.

Question 17. This should not be a very difficult matter, for the leading commercial firms always manage to keep themselves posted with regular information regarding prices of articles both here and in foreign countries. The proposed commercial intelligence organization in India and abroad, if it is linked up in some way with the British Consulates in foreign countries, will be able to supply the necessary information. With regard to local information, we assume that the commercial intelligence organization in the country will collect, collate and distribute all information regarding internal trade and industries.

Question 19. We would not as a rule approve of the formation of the central stock depôts by the Government of India. If such depôts are generally established, it would mean heavy and irregular purchases tending to inflate prices all around. The experience, gained during the war recently, points to the fact that once the consuming departments are given liberty to accumulate large stocks of the articles required by them, they will do so almost with a vengeance. We understand that purchases made by some of the departments of the Munitions Board were sufficient to cover the requirements of a big army for several years.

Question 23. It will be feasible for a central agency to collect and disseminate to purchasing officers prompt and reliable information regarding the prices, capacity (*vide* answer to question 17) and performances of contracting firms. The nature of the work done by the central agency will however depend upon its personnel. This work should be carried on business lines and not under the restricting influence of red tape.

Question 25. We cannot think so—*vide* answer to question 4.

Question 26. We have only to suggest that sufficient scope should be provided for the employment of indigenous abilities and attainments in the new departments. We have to note with regret that in the Indian Munitions Board only three officers out of a personnel of over three hundred were Indians. All the leading commercial houses are staffed by Indians and even European commercial houses have on their staff capable Indians. There is no reason why Indians cannot be obtained if efforts are made to secure them.

Mr. JEHANGIR BOMANJI PETIT, and Mr. N. M. MUZAMDAR, called and examined.

The Indian Merchants' Chamber and Bureau was representative of all branches of industry and commerce and was the foremost association of Indian merchants in India.

They considered that the establishment of branches in India by British or foreign manufacturing firms would as a rule not be to the ultimate benefit of India and should not therefore ordinarily be encouraged. All large purchases for Government should be made by advertising for tenders not only in India but in all countries in a position to offer supplies, so that the tax-payer in India would receive the benefit of the best prices to be had in the world's markets. In deciding the tenders, however, preference should be given to goods manufactured in India whenever they were of suitable quality, even though the price was slightly higher. By the use of the telegraph and with the assistance of the British Consular Trade Agents they saw no difficulty in ascertaining the reliability of firms in foreign countries from whom favourable tenders might be received. Similar transactions were carried out daily in the ordinary course of business and there was no reason apparent to them why Government should not follow ordinary commercial practice. A list of approved firms was not only unnecessary but undesirable. There was a very general impression that the privilege of being allowed to compete for the supply of stores to India through the Director General of Stores, India Office, was much too restricted to the disadvantage of India.

If the production of any article on a large scale was confined to one particular locality in India, they thought that it would be best if the purchase of Government of India and all local Governments' requirements were arranged by the central agency. In all purchases, middlemen should be eliminated as far as possible and all dealings made direct with the actual manufacturers or their accredited agents.

The Bombay Chamber of Commerce and Bombay Piece-goods Association and other Indian Chambers and Mill Owners' Association already provided a suitable machinery for the inspection and survey of Indian textile goods and no special government organisation was necessary for the purpose.

Witnesses considered that a government test house in Bombay would be a help in the development of industries, and would be made use of very largely by private manufacturers and firms. It would not interfere with any private interests.

They were absolutely and emphatically opposed to the location of the headquarters of the central agency in Calcutta. Geographically and in every other important respect, Bombay was undoubtedly the best and most suitable place to be selected for the headquarters of such an organisation. Business and industrial aptitude seemed to be in the blood of the Bombay people. The inception of all the greatest advances in the commercial and industrial development of India could be traced to Bombay. Through Bombay the country would respond to meet the requirements of Government. The Bombay business touch was unique. Nowhere in India was there such close co-operation between Indians and Europeans as in Bombay. The Indians in Calcutta were not so inclined towards industry as those in Bombay

European interests were too prominent in Calcutta for it to be the proper base of the development of Indian industries. If for any reason, Bombay could not be selected, then it would be preferable for the head-quarters of the central agency to be located with the Government of India.

In recruiting for the agency, preference must be given to Indians when their qualifications were equal. A deliberate effort must be made to train Indians to qualify them for all posts in the agency. Witnesses instanced the wonderful success which had attended the persistence of the pioneers of the cotton industry in Bombay as an example of what could be accomplished by deliberate efforts to train Indians. The purchasing section of the agency should be manned with businessmen and not with civilians.

At Bombay, Friday 13th February 1920.

PRESENT:

Sir FRANCIS COUCHMAN, K.B.E., M.I.C.E., (*President*).

G. H. COLLIER, Esq., C.I.E.
A. W. DODS, Esq
Lieutenant-Colonel C.-C. H. HOGG, C.M.G., R.E.
Brigadier-General H. A. K. JENNINGS, C.I.E.
LÁLJI NARANJI, Esq.,
Rai Bahadur LALA MILKI RAM.

And the following co-opted members:—

E. M. PEOBS, Esq., Joint Secretary to Government, Public Works Department.
R. D. BELL, Esq., C.I.E., I.C.S., Director of Industries, Bombay.

J. C. HIGHET, Esq. (*Secretary*).

H. LEES, Esq., Chief Storekeeper, Bombay Port Trust.

Written Statement.

Question 1. This question cannot, from my point of view, be replied to in the unqualified affirmative.

Assuming that the term "central agency" means the establishment of a number of agencies in the Presidency towns of Bombay, Calcutta, Karachi, Madras, Rangoon, etc., which are centres of import trade in India, to meet the requirements of each province, as it is hardly conceivable that the formation of only one central agency for the whole country is contemplated, the establishment of central purchasing agencies would undoubtedly afford assistance to the officers of government departments stationed in the provinces away from the Presidency towns, and constitute an advance on the principles followed of obtaining stores at present.

The upcountry officer labours under a disadvantage in having to buy much of his requirements from a distance. The drawbacks in such cases are apparent. Loss of time in obtaining particulars and prices, the lack of competent inspection of, and supervision over, supplies sent, delay and correspondence involved when supplies are rejected, and the absence of a representative on the spot to pursue enquiries promptly when articles of an unusual type, or difficult to obtain, are required.

The advantages of having a central agency in such cases are evident. Such agencies in the large markets, under the direction of competent officers, would obtain stores and provide for their inspection, and relieve the district officers of much trouble, and as they would doubtless purchase on a large scale in order to meet the requirements of a number of departments, prices might reasonably be expected to be more favourable.

From the point of view of departments established in Presidency towns, railways which have their stores headquarters and *quasi*-public bodies such as the Bombay Port Trust located wholly within such cities, I am not sure that the formation of a central agency to purchase stores on behalf of such undertakings would constitute an improvement. As regards the special difficulties which would have to be contended with in the Bombay Port Trust by the acceptance of any proposal to utilize the services of a central agency for the purchase of stores, I shall have more to say later in the reply to question 4.

The institution of such agencies to take over the purchase of stores of departments located in Presidency towns, interposes between purchasing departments and sellers a stage in buying operations, the introduction of which I cannot endorse as I am a believer in direct action and consider anything which tends to centralization when there are officers on the spot, competent and authorized to act, a waste of time.

This opinion might be modified were I in possession of comprehensive and reliable data of the operations of the central agencies under actual working conditions but I speak from a Bombay Port Trust point of view and am at present of opinion, as will be seen later, that, under the conditions prevailing in the Trust, no central agency for the purchase of our stores can ever be a satisfactory proposition.

Question 3. Locally produced articles such as bricks, sand, lime, country timber, furniture, pottery and roofing tiles, matting etc., should not be purchased by central agencies but should be obtained by district officers in their own districts for obvious reasons.

All imported goods and extra territorial productions should, I consider, be procured through the central agencies.

Question 4. Having in view the conditions under which stores are required to be supplied to indenting officers of the Bombay Port Trust, a *quasi*-public body, I am not in favour of arranging purchases of port trust requirements through a central stores agency, except in cases where the whole output of any commodity is manufactured or controlled by Government and is not available by the ordinary means of local purchase.

Another factor to be taken into consideration is that only by close and prolonged acquaintance with the demands made on these stores, is it possible to accurately determine the necessities of a body of indentors, among whom are a number of seafaring men and others who are not in a position to clearly indicate their requirements. Experience enables us to comply with demands but that experience can not be communicated to a third party as many indentors are not capable of furnishing a satisfactory purchasing specification on their requisitions, though they have a perfectly clear idea of what they want, nor can this department provide the same

in the absence of necessary details and the numerous trade lists which would be required.

The ramifications of the work in a port trust are extraordinary, and for diversity and variety, I should imagine are hardly equalled in any other type of concern in the country. Besides its railway which takes the usual types of stores used on such undertaking, the Bombay Port Trust absorbs marine, workshop, docks, hydraulics, building, road, water service, electrical motor, medical and office stores on a large scale. A considerable proportion cannot be stocked, as demands besides being uncertain and infrequent are most varied, for example, out of a flotilla of between 60 and 70 vessels barely any two, I believe, are alike.

Much of the marine work is of an urgent nature, the interposition of a central agency between the market and this department would necessarily involve delays which should be avoided, and the large number of minor special purchases that have to be made in the course of our work, are best made direct.

The result of my conclusions in the matter therefore, is, that it would not be advantageous for the Bombay Port Trust to make its purchases through a central agency.

Question 19. The formation of central stock depôts appears to me to be necessary if loss of time in meeting demands is to be avoided. In a case like ours, the holding of stocks would not be affected in the slightest as I purchase all requirements which are procurable in the country, from local markets, and by frequent replenishments from supplies held by dealers, avoid the holding of large stocks.

Question 20. Such depôts should be located in the large towns where purchases are made as they would be more effectively under the local controller and in case of the stores bought in the same market, double handling by rail would be avoided. Both Indian and imported stores, in regular demand should be stocked.

Question 21. Owing to this department having existed as a separate organisation since the end of 1914 only. I regret the figures from 1910 asked for, cannot be given as earlier statistics have not been kept.

During the five years ending 31st March 1919, the value of the purchases of Port Trust stores was Rs. 1,60,42,238 of this amount approximately, Rs. 40,00,000 for stores purchased abroad—of the remaining Rs. 1,20,00,000 about 50 per cent. has been paid for imported stores purchased in India and 50 per cent. for Indian stores (including coal).

Question 22. Records of all prices paid are kept in rate books.

A card index to embody this work is being introduced.

We keep no record of success of firms dealt with as the reliable contractors are known by experience. Should any firm on the books cause much dissatisfaction, the issue of tenders, enquiries and orders to them is stopped.

Question 23. Certainly not in regard to all stores, under present conditions, which, I imagine, will last for some years yet. It would be practicable in cases of stores for the supply of which contracts for an extended period were entered into, but the fluctuations in rates of imported stores which constantly occur, render the dissemination of reliable and up-to-date information regarding prices of the latter, a practical impossibility.

As regards the capacity and performances of contracting firms I should think these would be matters of greater interest to the central agencies than to indenting officers. The latter will look to the agencies for their supplies and the dependability of firms, seems to me to be the concern of the agency which has to procure the goods.

Question 25. I do not think so as it seems to me that the formation of central agencies implies the transference to such agencies of the functions of purchase and inspection at present exercised by individual departments.

Question 26. Owing to the short space of time at my disposal I have had no opportunity of considering any suggestions as to the recruitment and organization of staffs of central agencies; moreover I consider such suggestions could not be properly thought out in the absence of information or data which would give some acquaintance with the demands and problems which would have to be met.

On looking at the scale of salaries proposed on page 9 of the appendix to the questionnaire, it appears to me that the remunerations proposed do not err on the side of prodigality when the enormous volume and value of material, which may be expected to pass through the hands of officers, should anything like a comprehensive scheme mature, be taken into consideration.

Question 27. It seems a business proposition to charge a percentage on purchases made on behalf of departments, to meet the cost of central agencies. Such percentage should, however, be very small. When spread over purchases to a large extent, it would amount, in the aggregate, to a considerable sum and unless it could be shewn that the cost of stores supplied through the central agencies was appreciably less than those purchased by the departments direct, loss would be incurred by departments as any reductions that could be made in establishment by the transfer of purchasing operations to the agencies would be practically negligible, in fact I am not sure that expansion instead of reduction in stores establishments would not be involved.

Question 28. Rates for contract stores are audited by the Accounts Department from copies of schedules supplied them. Non-contract items are checked against accepted tender rates or in cases of open orders on my personal authority obtained on sanction slips.

Mr. H. Lees, called and examined.

After 14 years' service on the Great Indian Peninsula Railway, of which 11¼ were spent in the stores department, witness had joined the Bombay Port Trust as Chief Storekeeper in September 1914.

In his purchasing operations he was directly responsible to the Chairman of the Port Trust and was not hampered by any rules, except that contracts made for supplies for a year or more had to be accepted by the Port Trustees.

Special technical supplies which had to be imported, *e.g.*, hydraulic machinery, lighthouse gear, etc., were obtained through consulting engineers in London. All other imported stores were purchased in India. In an organisation like the Port Trust it was almost impossible to estimate a large proportion of requirements even a few months ahead. A list of approved firms was maintained and for the great majority of orders for non-contract items of any importance tenders were invited from firms on the list and not called for by public advertisement. All tenders for annual contract items were invited by public advertisement. All supplies were looked over by him but no special tests were applied. Only well-known brands were purchased and the suppliers were held responsible for satisfactory service and had usually to make good anything which proved inferior in use. The advantages of purchasing imported stores in India whether actually in the country at the time of ordering or not, were quick delivery and consequently reduction of stocks and their concomitant evils. He had never made any detailed investigation into the comparative prices of imported stores purchased in India and in the United Kingdom. His impression was that taking everything into consideration it was cheaper on the whole to purchase in India. In normal times he had always found sufficient competition amongst firms to secure orders to ensure reasonable prices, and generally several firms had the stores required in stock.

The central purchasing agency would be of no use to the Port Trust unless it could show a saving in time and work and this would be practicable only if the central agency held a large comprehensive stock from which immediate delivery could be given. The stock

held by the central agency would then be regarded as a reserve in place of the stocks held by firms but no reduction in the stock now held by the Port Trust would be feasible. It might prove advantageous to make use of the central agency for supplies for which it arranged bulk contracts but only if the delivery could be regulated so that it would not be necessary to increase the storage accommodation.

From his experience he could not say that increased purchases through merchants in India would have any tendency to encourage development of new lines of manufacture in India.

In his opinion government test houses would be most helpful to new industries in India and there was room for one in Bombay.

A certificate of quality from a government test house might induce the higher authorities to enforce the use of the same quality and make of stores by all their subordinate consuming officers. This the witness had generally been unable to get them to do at present with the result that the stores purchasing officer was obliged to take the line of least resistance and the standard for an article used by several consuming officers was set by the consuming officers with the most expensive taste.

Major C. F. Marr, M.B., I.M.S., Medical Storekeeper to the Government of Bombay.

Written Statement.

(*N.B.—These answers must be taken as referring to the Medical Stores Department only.*)

Question 1. These already exist as each medical store depôt is its own central agency for the purchase of stores from contractors, agents and tradesmen within its own circle of supply.

Question 2. Medical store depôts at present act as central agencies for purchase of all locally obtainable medical stores required by other government departments—no other special arrangements are necessary.

Question 3. Medical store depots are competent to effect purchase of all locally obtainable medical stores.

Question 4. Such bodies under (*a*), (*b*) and (*c*) as are permitted to do so by the local Government or Government of India effect purchase of their medical requirements through the agency of the medical store depots. I am of opinion that all bodies other than purely government or *quasi*-government should obtain their requirements of medical stores through the open market. Such bodies as we supply contribute directly towards our maintenance by paying us a percentage on the cost *plus* the cost of its importation of every article which we supply to them. I think it is right that they should do this.

Question 5. We at present act as agents for local Governments—no additional decentralisation is necessary.

Question 6. All departments of the Government of India should obtain their requirements of medical stores through our agency.

Question 7. The existing system by which Government calls for tenders is in my opinion sufficient and efficient.

Question 8. This could be done by this department with its existing machinery. The Office of the Director-General, Indian Medical Service, could arrange the tendering in India simultaneously with the tendering in England by the India Store Depôt, London.

Question 9. The policy of inspection should be dictated by the consuming department.

Question 10. The inspection of locally purchased stores is at present carried out by the medical storekeeper and in the case of drugs by the local Government Chemical Analyst. I consider this inspection is efficient and should continue. The inspection of imported stores is done by the India Store Department before despatch to this country. They are again inspected on arrival in India by the Medical Storekeeper and the Chemical Analyser to Government if necessary.

Question 11. All medical supplies require special inspection organization. The present inspection organization is I consider sufficiently specialized.

Question 12. Please see answer to question 11.

Question 13. Please see answer to preceding questions under this head.

Question 14. Should this committee recommend that medical store depôts be treated as central agencies for the purchase of locally obtainable medical stores, the Stores Rules of 1913 should be slightly altered, so that the financial power of the Director General, Indian Medical Service, and the medical storekeepers to Government under Rules 3 (*a*) and 5 be increased. I would suggest the financial powers of the Director-General, Indian Medical Service, should be on level with Rule 13 (*d*) (*i*) and those of a medical storekeeper with Rule 13 (*d*) (*ii*) no other alteration of the Stores Rules appears necessary.

Question 15. It is advisable from every point of view that British manufacturers should be encouraged to form large branches in India. So far as drugs are concerned no European firm will do much in this way until some form of Drugs Act is passed by the Government of India.

Agencies in India of European firms hold practically no stocks locally but import only against actual orders or a known consumption. In my opinion the purchase of European stores by Government through established Indian branches of European firms would not affect to any great extent (*a*) or (*b*) unless a Drugs Act were passed and the India Store Depôt abolished or transferred to India.

Question 16. Yes.

Question 17. The only business-like method is for purchasing agencies to communicate their requirements and terms of business direct to manufacturing firms or their agents. It is then easy for firms or their agents to supply the purchasing agencies from time to time with up-to-date rates. A record of these should be kept. Such record if kept properly should considerably facilitate and accelerate the placing and delivery of orders.

Question 18. The present method of obtaining stores from abroad through the agency of the Director-General of Stores should only be departed from in cases where it would be more economical to obtain them otherwise. We have in this department obtained some raw materials in this manner—such as calumba radix from the Protectorate of Zanzibar. I cannot think of any special classes of stores which should be collectively treated in this manner.

Question 19. In this department central stock depôts exist in the form of the five medical store depôts in Bombay, Madras, Lahore, Calcutta and Rangoon.

(*a*) The amount of stocks held by Government should be as small as is consistent with efficiency and safety. This amount can be calculated only on the past experience of each department and must of necessity be unfixed and sliding in accordance with estimated demand which again will depend, so far as Government is concerned, on the general situation.

(*b*) The holding of stocks by local private firms is not normally much affected by the formation of central stock depôts.

Question 20. These central stock depôts should be situated as far as possible in the seaport towns, and maintained for both Indian and imported stores.

Question 21. I cannot supply this information but it can be obtained from the Director-General, Indian Medical Service.

Question 22. (*a*) A special record is kept of prices paid for stores and equipment and this in itself is practically (*b*) a record of the success of firms dealt with.

Question 23. In case of our department this is already done to some extent, and is found to be very useful.

Question 24. I have no knowledge.

Question 25. No.

Question 26. The recruitment of the superior grades should be on the All-India-Cadre System and in accordance with requirements both educational and numerical. The inferior grades should be locally recruited and not liable to transfer.

Question 27. Yes.

Question 28. Our bills are sent for audit to the Controller of Military Supply Accounts, Calcutta, from whom all particulars as regards that audit can be obtained. I have no intimate knowledge of the measures he employs.

Question 29. Yes.

Question 30. It is always very desirable that any two departments working in conjunction to attain one object should have an intimate knowledge of each other's local conditions and to efficiently effect this interchanges of personnel are very necessary.

Major C. F. Marr, called and examined.

Witness had 18¾ years' service in the Indian Medical Service, and had been in the medical stores department for four years.

The medical stores department was already a centralised purchasing agency staffed by experts and no change of system was necessary.

If Indian grown drugs were to be exploited to the fullest it was necessary that the medical stores department should be assisted to get into direct touch with the growers, who were generally ignorant of the best methods of culture and particularly of the best time for gathering the crops. The Superintendents of Botanical Gardens rendered useful assistance in this direction, but he thought that the Forest department should be able to give more help than hitherto.

Imported drugs were only purchased in India in emergencies. Large stocks of English made drugs of good quality were usually held by dealers in Bombay and the prices of these were on the whole very reasonable though higher as compared with the prices of supplies received through the Director-General of Stores, India Office. Increased local purchase of imported drugs would not lead European firms to establish factories in India. He had been informed by several firms that they could do nothing in this direction unless the public in India were protected by legislation against adulterated drugs and the British Pharmacopial Standards were made compulsory.

It would be of considerable advantage if the machinery for obtaining urgently required stores through Director-General of Stores, India Office, could be accelerated.

N. B. Saklatvala Esq., nominated by the Bombay Millowners' Association.

Written Statement.

Replies received from the Bombay Millowners' Association.

At the outset it should be made clear that this Association is primarily concerned with the purchases made by Government of textile materials, and it should be understood that the remarks which follow have been offered with a view to government requirements for that particular commodity.

Question 1. It would be a distinct advantage to have a central purchasing agency with its headquarters at the seat of Indian Government presided over by a man of great ability, integrity and experience. This central agency should have under its control local agencies, in the most important centres of the country, directly responsible to itself. The purchases for all government requirements should be made by the central agency and the central body should be in a position to act intelligently and expeditiously. The advantages of this system would be that the total requirements of Government would be handled by one responsible authority which should have, at its command, all the necessary information from all the local bodies. This would avoid competition among local bodies, but the latter should be encouraged to send all such criticisms as are likely to help purchasing, *e.g.*, prevailing rates of articles in their own districts, special features wherein their requirements differ from those commonly used, remarks on supplies received against former indents, etc. The central agency can then place orders on a standardized basis as far as possible and can place them advantageously on a large scale and with dealers either in India or in foreign countries as circumstances would warrant. Although central purchasing is advocated, some drawbacks of this system should not be lost sight of. In actual practice, it is found that the central agency ensures economy and efficiency but their operations are liable to cause delay and some confusion.

Question 4. In order not to make this organization more unwieldy than necessary, it would be good policy to allow *quasi*-public bodies to make their own purchases, unless there are special reasons to depart from this.

Question 7. During the war Government were asking for tenders for supply of different kinds of cloths. The chief centres of supply being Bombay, Ahmedabad, Madras and Cawnpore, there was some confusion in the distribution and acceptance of orders from Simla. Bombay teemed with petty dealers who somehow managed to get first hand information and bought up likely government requirements from manufacturers and sold them to Government at good profits. The business was somewhat better managed towards the end of the war. It would be good policy for Government to get into touch with actual manufacturers or their accredited agents.

Question 8. This is possible if the orders are not of an urgent nature. The central store department could ask for tenders both in India and foreign countries for the total government requirements.

Question 9. The department responsible for the industrial development of the country should dictate the policy of inspection but the consuming department should be given every facility to place their views before them and these should receive careful attention.

Question 10. The inspection department should be quite separate and independent of the purchasing department, but both these should be under the control of the chief of the central agency.

Question 12. Textiles are the articles of special interest to the Association and the only specialized inspection asked for is that the purchasers and inspectors should be well qualified men and in close touch with the markets.

Question 13. Either special inspectors of the central agency should be travelling about different centres or this work may be entrusted to local agency under control of the central agency. It would be unnecessary waste of time and perhaps not so satisfactory for goods to be inspected in Delhi, which are bought locally for local consumption.

Question 14. During the war, the Munitions Board have made large purchases of Indian manufactured goods and the principle has been fairly well established of purchasing Indian manufactured goods for various government requirements. If now when foreign goods

are once again available, the rule laid down is followed that Indian made articles will be purchased in preference to foreign, provided the quality is sufficiently good and the price not unfavourable, it would satisfy India's claims. This will not only stimulate existing Indian industries but encourage the establishment of new ones in India.

Question 15. What India does not manufacture, should certainly be purchased direct in the foreign countries or through Indian agencies of well-established concerns. Although purchases through Indian agencies of foreign manufacture will certainly encourage them to maintain stocks in India still the fact should not be lost sight of, that direct purchases would introduce competition for quality and price of articles.

Question 17. When the central agency is once organized, up-to-date information of prices and quality of articles both here and abroad will be easily available through the usual business channels.

Question 19. Holding of some stocks of different materials will be a necessity to a certain extent, but these should be kept down as much as possible as a general principle. There should be a strong scrutiny kept over stocks and their accumulation avoided. It should not, however, be lost sight of, that the maintenance of stocks up to a certain extent would be found useful for smooth working of the departments and a timely purchase of forward requirements may at times ensure economy.

Mr. N. B. SAKLATVALA, called and examined.

Witness had not special reason for recommending that the headquarters of the central agency should be at the seat of the Indian Government except that it would then be in close touch with the highest officials interested in the supplies. Bombay would be the best centre from which to deal with textile purchase and no matter where the headquarters of the central agency were located a branch in Bombay would meet the case.

The ideal head for the central agency would be a man of so many varied parts that it was difficult to frame a specification which it would be practicable to fill. He should possess business capacity and have broad views and be above suspicion. The experts under him could supply the technical advice.

The delay and confusion which he feared from a central agency might be minimised by having travelling assistants whose business would be to keep in touch with both the suppliers and consumers and report any troubles to the central agency.

The central agency should maintain a list of approved suppliers and invite tenders by letter and not by public advertisement. He thought no one would have any reasonable cause for complaint if this were done generally. The disadvantage of advertising for tenders was that many offers would be received from persons who had not the goods to supply but were merely speculators.

The selling practice of the mills varied. Some sold direct; others sold through agents; while others sold to independent middlemen. The central agency should endeavour to deal direct with the mills.

He considered it bad policy for Government to buy made up uniforms through tailor contractors who made their own arrangements for the cloth. It would be more economical for Government to buy the cloth direct from the mills and make up the clothing in Government factories.

In his opinion the purchase of imported stores from branches or agencies in India with technical staff induced manufacturers to consider manufacture in India. There was not the same inducement when purchases were made from middlemen. He therefore recommended that increased purchases should be made through branches or agents in India, but the fact that a firm had a branch or a technically staffed agency in India should not give it the monopoly of supply to Government. Firms not represented in India should be given a chance of quoting at the same time. The head of the central agency should be free to purchase wherever cheapest and best supplies could be obtained.

A good deal of competition which the Indian cotton industry had to meet was from Japan whence he understood cotton goods were landed in India in subsidised shipping.

So far as his experience went he thought Indian mills could supply practically the whole of government requirements of cotton goods.

To help new industries he would give preference to the Indian manufacturer if quality was satisfactory provided the price was not excessive.

He thought that government test houses would be a considerable help towards industrial development as people would have more confidence in purchasing Indian made articles the quality of which was supported by a certificate from a government test house and he recommended the establishment of a test house in Bombay.

K. S. FRAMJI, Esq., Superintending Engineer, Public Works Department, Central Division, Poona.

Written Statement.

I consider it necessary that the public works department should have not only a special inspection organization of its own, but some preferential treatment as regards powers of local purchases. This is a highly technical department with an expert staff qualified to make their own selections and purchases of materials, which they should be allowed to do as, unlike most other departments, they have to deal further with the adaptation and use of the materials, in the details of construction. On the principle therefore that the man who constructs his works should have choice of his own materials and stores, as he knows best what his requirements as regards standard of quality are, the ideal system for the public works department would be one which gives the engineer the fullest freedom to go direct to the local business houses or to local firms' representatives, discuss matters with them, indicate exactly his requirements, and place orders directly with the firm, his demands being modified, if necessary and possible, to suit conditions of market with regard to suitability of materials and stores readily available, and ruling prices. But, with the burden of heavy work he has to do at present, the executive engineer, has not the time nor facilities to undertake this additional work as it would mean that he himself would have to do the inspection and the testing (or arrangements for testing, at all events) of the stores purchased by him directly, for which he cannot spare the time. The other alternative would be for him to get the inspection and testing done by a special staff through some other agency, which would, however, form a sort of dual control over purchases, an overlapping of work. Hence I propose a somewhat modified scheme.

So far as the public works department is concerned it seems to me necessary to remove the restrictions imposed on it by the Stores Rules of 1913, which require public works engineers to obtain articles of European manufacture from the Director General of Stores, India Office, and, under very special circumstances, from local firms, and to practically reverse them so as to render it possible for engineers to obtain all stores of European manufacture and Indian manufacture (whether from imported materials or not) from local firms in India

with the option of indenting on the India Office Store Department in exceptional circumstances. This will forthwith remove the difficulties and disabilities under which the department is at present labouring, owing to the very highly restrictive nature of the existing rules for purchases of articles of European manufacture. The facilities afforded by the Test House at Alipore should be extended, and, if necessary, similar test houses be established at other centres like Bombay, Madras, etc. Further, Government have a mechanical engineer under them in the public works Department, and I would suggest that his sphere of work be enlarged and extended to include, under him, a competent staff who would do the inspecting work of stores purchased in India by the public works department and of testing the quality (directly by its staff when possible, and with the help of the Test House at Alipore, etc., in all other cases) to see whether quality of stores, etc., is up to the standard. The proposed organization under the mechanical engineer will also act, for the officers of the department, as a information bureau, obtaining a thorough knowledge of local manufacturers and their capabilities, and keeping touch with mechanical engineers under various local Governments so as to give advice as to when and where goods should be obtained locally or from manufacturers or industrial concerns in other provinces. The same organization can give advice whether an indent for any special article should or should not be sent to India Office, and will examine and scrutinize all indents on the Director General of Stores before submission to him to see whether they are clearly drawn out with proper instructions and details. This will have the further advantage of concentrating all indents in one man, the Mechanical Engineer to Government, who would also be in touch with Home prices, Home specifications and the Director General's running contracts.

The executive engineer will be empowered, as at present, to enter into annual contracts, and make direct local purchases, for the supply of petty stores and materials which are required in small quantities from time to time for original or repair works, while the mechanical engineer, assisted by a competent qualified staff, will fix up running contracts with approved firms for the supply of materials of all kinds required in large quantities, the approximate annual requirements of each district being previously indicated to him by the executive engineers of the districts. He will also advise on the type of article best suited for any special purpose, and would, generally speaking, be in a better position to specify and contract for the best type of articles available and also to encourage indigenous industries by finding out what can be obtained from such sources. But, in the case of articles required for special specific purposes, *e.g.*, water meters, sluice gates, etc., the executive engineer concerned should be authorized to have the last say in the matter of the kind to be obtained and the source from which they are to be obtained, the inspection and testing being still done by the mechanical engineer's staff.

Besides holding a small stock of *new* plant and machinery of the types ordinarily used in and required by the public works department (*e.g.*, steam rollers, portable engines and pumps) the Mechanical Engineer to Government would have control over and be virtually in charge of all the plant *in use* or *previously used*, which latter he could keep judiciously scattered about the Presidency in local executive engineers' store yards, transferring it from place to place where required. This will ensure the equable distribution of available stock of plant, and proper and general use being made of it; it will also tend to the use of more efficient machinery for each specific purpose.

Such, in brief outlines, is the system and organization I advocate for introduction, to meet the requirements and special nature of work of the public works department, in supersession of the existing system of purchases enforced by the Stores Rules of 1913, and in preference to any other organization of the nature contemplated by the Indian Industrial Commission (Chapter XII of their Report) consisting of an Imperial Department of Stores, with a Controller General of Stores at its head, to purchase and inspect stores and with a stores branch in each provincial department of industries to deal with the wants of *all* purchasing departments of Government. My proposals for the public works department, if given effect to, will have the undoubted advantage of removing the drawbacks and unfavourable features described below in this note of the existing system. It will also lead to greater efficiency, and in my opinion, when worked out in details, to greater economy as regards cost of establishment (and therefore as regards cost to works, of materials so purchased) than in any of the systems of the nature suggested in Appendix I of the notes issued by the Stores Purchase Committee with their "questionnaire." Besides, the proposed system will have the special advantage of its possessing sufficient elasticity for being modified and adapted or switched off to any other system or for even being done away with altogether when the recommendations made by the Public Works Department Re-organization Committee (as contained in Chapter IV of their Report) are given full effect to. In dealing with the system of execution of works by the public works department that Committee has shown disapproval of the existing methods of conducting works by petty contracts and by departmental labour and has strongly recommended that all works of any magnitude or importance should be executed by contract, preferably lump-sum contracts. The Report says (page 25):—

"At present the number of regular contractors and contracting firms available in India for the execution of public works is very limited, but we recommended that the policy of Government should be directed to the encouragement of the growth of such a class. We are of opinion that this can most suitably be done by inviting tenders for complete works and by the introduction of the system of lump sum contracts and our recommendations are therefore framed on these lines. We realize that advance must be gradual, but we believe that, if our proposals are accepted, a class of contractors will grow up to whom it will be possible to entrust work without the necessity for the present detailed subordinate supervision."

Also (page 32),

In paragraph 28 of this chapter we have proposed that contractors should be encouraged to supply all materials required for their works, contracts being given for complete works and where possible at lump-sum rates. The present stores rule restricts this privilege to approved firms of standing and repute, who are important structural contractors, whose command of capital, plant and labour are a guarantee against any risk of abuse and who are not likely to risk the removal of their names and the loss of reputation resulting from the supply of inferior materials and stores. At present the names of nine firms only, eight in Calcutta and one in Bombay are included in the list of such approved contractors. We are not in favour of this arrangement and consider that contractors should be permitted to supply all materials required for the execution of their contracts, the engineer in charge specifying the required quality or branch, preference being given where possible to Indian manufactured articles."

If there was a government purchasing and stores-supplying department on a large scale under a Director General of Stores in India and the local Director of Industries, the public works department, like other departments, would perforce have to buy and obtain all stores, plant, etc., from such an agency. If contractors of the kind described in the above-quoted note are put under the same obligations, it will act as a serious deterrent to would-be contractors, as they would naturally prefer, in their own interests, to buy materials and plant in the open market, so long as these comply with the engineer's specifications. If, on the other hand, no such obligations are to be placed on contractors, and if works are henceforth to be done, on a large scale, by contract system as recommended by the Public Works Department Reorganization Committee, the scope of work and functions of any of the proposed central and local government agencies for the purchase of stores, etc., would be nullified to some extent and considerably reduced in bulk and importance as the public works department, which is one of the largest purchasing departments under Government, would no longer need to go to it or require its help. This, to my mind, is a matter for serious consideration and one that renders it necessary why the case of the public works department should receive separate and special treatment. A further reason for such treatment is furnished by the suggested transfer of all public works (in the roads and

buildings branch of the public works department) to the local boards as recommended by the Public Works Department Reorganization Committee, a recommendation which, I believe, the Government of India are willing to give effect to at an early date.

The freer local purchase of stores in India would result in healthy competition among local business firms and in economy, due to saving in expenditure incurred on their direct importation. There are many articles which could be obtained more economically, like steam rollers, portables, iron and steel pipes, if local firms are given sufficient encouragement to produce these on a large scale, which they are competent to do. It cannot be said that this would result, ultimately, in increased cost of stores, as local firms would soon realize that if their prices were inflated and unfavourable the contract would be lost to them and indents placed with the India Store Department. Further, it would be desirable in the interests of industrial growth and encourage private enterprise to give greater freedom to the public works department to obtain all stores in India as far as possible from local firms. This will still establish the necessity for maintaining the Stores Department of the India office, at any rate for several years to come till industries in India developed so as to enable public works department engineers to obtain stores from that source, if circumstances made this at any time necessary or desirable in cases where machinery and materials have to be made for some special purpose and according to any special designs and specifications and have to be inspected and tested by experts.

Some of the objections and disadvantages urged against a rigid enforcement of the existing Store Rules of 1913, considered generally, and with special reference to the public works department are :—

(*i*) General delay, which must necessarily occur as indents take a long time to reach the India Office and for shipments to arrive thus retarding progress of important works ; while there is additional delay at times in cases where articles are not properly described in the indents, and correspondence ensues.

(*ii*) Articles sent out not always complying with specifications, so that the exact requirements of the indenting officers are not always fulfilled. Besides, firms supplying the stores are not responsible for safe arrival. In the case of free local purchases this would not be so, as differences or disputes, as also compensation for damages, could be easily settled by the firms sending out their representatives to the places of delivery and settling matters on the spot.

(*iii*) Absence of economy.

(*iv*) Discouragement of branches of British manufacturing firms being established in India, of maintenance of stock in India and of private enterprise generally.

(*v*) Lapses occuring in the allotments on works when articles indented for from the India Office do not arrive, contrary to expectations, before the close of the official year. Besides when articles are received late in the official year and the actual amounts paid are much in excess of the estimated amounts, heavy excesses occur on the estimates or allotments, to regularise which there is no time or opportunity. This would not occur in the case of local purchases, as information about delivery and rates would be available in good time.

For other departments of Government which have to make purchases only to a small and limited extent. I would suggest that the Director of Industries with his staff of mechanical engineers, act as a purchasing and inspecting agency, dealing with indents, which could be complied with either by making local purchases or forwarding them on to the Director General of Stores, India Office. Exceptions may, if desired and claimed be made in the case of the military works services and the state railways (engineering branch) which may be dealt with on lines similar to those proposed for the public works department, as they, too, are large purchasing departments and the nature of works done and of expert staff employed are analogous.

I do not advocate the formation of central stock depôts, either for stores available and purchased in India, or for imported stores. This is never a statisfactory arrangement, is wasteful in that capital is locked up, and has the effect of increasing prices of stores due to percentage charges for establishment being added on and to extra charge for packing a second time when articles are issued to indenting officers from such depôts. There is also the risk of deterioration and damages.

I am not in possession of figures of expenditure on stores purchased by the public works department for the whole of the Bombay Presidency, but the figures given below relate to purchases made in the Central Division (comprising six districts) since 1910 :—

	Rs.
(*a*) Stores purchased abroad . .	5,81,537
(*b*) Imported stores purchased in India	7,30,164
(*c*) Indian stores	4,82,223

No special registers are maintained in the public works department for recording prices paid for stores purchased by it, but counterfoils of requisitions (public works department form No. 115) on which petty stores are purchased locally are kept on record for three years in the executive engineers' offices. Also the monthly price lists issued by business firms in Bombay are recorded for reference for at least a year. In the case of articles of European manufacture purchased in India under Rules 2, 3 and 5 of the Stores Rules of 1913 a register is maintained which gives the prices paid for the stores so purchased and reasons why they were purchased locally. Quotations are obtained from various firms before an order is actually placed with any particular firm.

It is suggested that, if the Mechanical Engineer to Government is entrusted with the duties defined above, he should maintain in his office a regular up-to-date engineering catalogue library and also maintain lists of current Indian and Home prices of stores, plant and machinery, and issue a quarterly or half-yearly return giving information regarding current prices, as also capacity and performances of contracting firms.

As regards the measures in force in the public works department for auditing purchases of stores, it may be explained that when materials are received either directly by the sub-divisional officers or in the executive engineers' stores they are recorded in the departmental measurement books with full particulars as regards number, sizes, etc., by officers and subordinates, in accordance with the prescribed rules on the subject. When the bills are preferred (either original bills of firms or bills prepared on departmental forms) the rates in the bills are first checked with the firms' original quotations accepted by the executive engineer or with the rates entered in the previously approved requisitions (Form No. 115) and the bills are then passed. The officer in charge of a sub-division is held responsible for all the stores belonging to it, while the storekeeper attached to each executive engineer's office is entrusted with the custody, preservation and issue of the stores under his charge and with the keeping of the required returns relating to them. This system works quite satisfactorily and does not call for any more efficient audit purchases or custody of stores.

Mr. K. S. Framji, called and examined.

Witness had nearly 23 years' service in the Bombay public works department, most of which was in the roads and buildings branch.

In preparing his written statement he had in mind engineering plant as well as general stores.

The organization, which he had proposed should be instituted by each local Government for the local purchase, inspection and testing of engineering plant, should be in the charge of an officer possessing the same qualifications as the late Mechanical Engineer to the Bombay Government and not necessarily an officer doing the same duties as the Mechanical Engineer, which post had now been abolished. A qualified mechanical engineer would be necessary for the job as he would also have charge of all government engineering machinery and plant in use or lying idle in each province.

He was not aware that the staff of the Superintendent of local Manufactures and Test House, Calcutta, included a special Inspector of Castings who inspected cast iron pipes made in India. But according to Rule 13 (Stores Rules of 1913) the financial limits are so small that purchases allowed to be made in India under Rule 1 of articles like cast iron pipes made in India from Indian materials, are of very little help and the services of the inspector would be seldom required. The financial powers of public works department officers (executive engineers and superintending engineers) to enter into contracts are very low and limited, and when such articles are required in large quantities, as they generally are, the rule is of little practical value. The same remarks are applicable to purchases made under Rules 3 (*a*) and 5.

A test house would be useful in Bombay.

At Bombay, Monday 16th February 1920.

Present:

Sir FRANCIS COUCHMAN, K.B.E., M.I.C.E. (*President*).

A. W. Dops, Esq.
Lieutenant-Colonel C. C. H. Hogg, C.M.G., R.E.
Brigadier-General H. A. K. Jennings, C.I.E.,
Lalji Naranji Esq.
Rai Bahadur Lala Milki Ram.

And the following co-opted members:—

E. M. Proes, Esq., Joint Secretary to Government, Public Works Department.
R. D' Bell, Esq., C.I.E., I.C.S., Director of Industries, Bombay.

J. C. Highet, Esq. (*Secretary*).

F. Palmer, Esq., C.I.E., Partner in Messrs. Rendel, Palmer and Critton, Consulting Engineer to the India Office, London.

Written Statement.

Question 1. So far as my knowledge goes, and it applies mainly to railway requirements, I am of opinion that a central agency for the purchase of stores of Indian origin or manufacture would be advantageous. My reason for this opinion is that it would largely remove competitive buying which method has as great a tendency to increase prices as competitive selling has in reducing prices. Further the placing of the large orders which would be brought about by collective buying, orders that may be both large in quantity and in period (*i.e.*, spread over a long period) should result in cheaper prices than those obtaining under the present system of each undertaking purchasing on its own account, in comparatively small quantities and regardless as to whether prices paid are anything better than moderate.

Anything short of collective buying for *all* departments would probably result in an inflation of prices by the introduction of another agency to compete with those already existing in the purchasing of stores.

Question 2. I do not think any special arrangements are required for railway supplies.

Question 3. I do not know of any class of stores of Indian origin which need be excluded from the control of the central agency.

Question 4. From my answer to question 1, it will be seen that I favour collective buying by the one agency and it follows that all competition such as that which would arise from any other bodies or agencies purchasing in the same market, should be eliminated. The cost of the central purchasing organisation should of course be distributed over the purchases made, probably by means of a percentage addition to the actual cost.

Question 7. My experience is mainly confined to purchases made in England on indents received from India.

Question 8. I am of opinion that it might be extremely useful in certain cases to obtain simultaneous tenders in India and England. At present the postal service tends to make the matter somewhat difficult, but with a return to normal conditions and to a mail service which ensures delivery of letters in London within fourteen days of their despatch from Bombay, there would be no great difficulty and very little delay in obtaining tenders in both countries for stores produced in both. The procedure to be followed in such cases would have to be defined, but there is no difficulty in devising a satisfactory scheme.

Questions 9 to 13. I am not at all sure that I understand what is meant by "the policy of inspection." If the standard of quality is meant, I think it of the greatest importance to establish specifications indicating exactly the quality, in all its meanings, aimed at, and it is equally of importance to set the standard at a high level. It is difficult enough to get first class material and workmanship when a high quality is demanded and it would easily result in unsatisfactory, perhaps very unsatisfactory stores being supplied, if a lower standard is laid down.

In the interests of India and Indian manufacture generally it seems essential that the best should be aimed at and a very notable example of what can be accomplished by insisting upon only the best quality is afforded by the success of the Tata Steel Works in producing steel of a very high order. I cannot too strongly emphasise this point, that quality should be of the first importance throughout, as if a second class

standard is accepted to begin with it is extremely doubtful if the best will ever be attained.

Whether the standard of quality should be set by the purchasing agency or the consumer seems to me entirely immaterial, seeing that both are, generally speaking, but branches of the one institution the Government of India. The main point is to establish a high standard by agreement between the central agency, the consumer and (most important this) the manufacturers or producers and then deal with the question of control of inspection as a domestic matter.

After the necessary standards have been established, the question of inspection is simplified in regard to its functions, but the physical performance of the duties is a matter which needs much consideration.

So far as steel products are concerned, the case is believed to be already met by the establishment of an inspecting agency at Tata's Works and in the event of other steel works being built, it is more than probable that the industry will be more or less centralised in the same neighbourhood. But in the case of manufacture not confined by narrow geographical limits, it is quite possible that inspection may be distinctly costly either because a number of inspectors would have to be maintained at various centres and not be fully employed or, alternatively, inspectors kept at headquarters would have to make very long journeys occupying considerable time in order to carry out the inspection necessary.

On the whole I am in favour of the purchasing agency taking entire responsibility for the stores supplied in regard to price, quality and quantity. To make the consumer responsible for any one of these three duties would result in friction between purchaser and consumer.

Inspectors must obviously have special knowledge of the particular articles they are called upon to inspect if the examination they make is to produce the desired result. An inspector of (*i*) oils, paints and varnishes or, (*ii*) steel products, or, (*iii*) textiles, or, (*iv*) leather and saddlery, must have an intimate and practical knowledge of the methods of manufacture and it is difficult to imagine that any one man can possess real technical knowledge of more than one of the four sections enumerated. Other equally distinct manufactures call for specially qualified inspectors and it will probably be necessary to employ a much larger inspecting staff than that allowed for in any of the estimates of cost which have come before me.

The question of local *versus* central headquarters for inspectors which has already been referred to can only be determined by experience but it is obvious that where there is sufficient employment for an inspector at any centre of industry it will be economical to station one there. To begin with, it will almost certainly be necessary to adopt both methods retaining at headquarters only such inspectors for whom sufficient employment can not be found in a compact area producing the articles they are qualified to inspect. It will be a great mistake if, with a view to keeping down the cost of inspection, officers are called upon to examine articles the manufacture of which they are not properly qualified to inspect. For instance it would be worse than useless to expect an inspector of one of the four groups named to be able to vouch for the quality of articles in any other of the groups.

Question 15. I am not in favour of the purchase of European stores from Indian branches of British manufacturing firms as I do not think the best competition can be obtained in this manner unless all the British firms concerned are represented in India. In case that condition is ever reached it appears to me that the stores must eventually bear the cost of the Indian agencies in addition to the cost of manufacture. Inspection of such stores should be made during the process of manufacture if the best and most economical results are to be obtained. The holding of stocks by Indian branches is a further cost which has to be carried by the goods.

I advocate most strongly the manufacture in India of all stores which can be economically dealt with in this country, but I am opposed to the supply in India of stores mainly manufactured in England, generally without any inspection whatever on behalf of the purchaser or consumer, and more often than otherwise with very limited competition in regard to price. On the other hand it may be expedient and desirable to encourage the manufacture in this country of stores now obtained from England by allowing the purchase here of articles partly manufactured at home and completed in India. It is impossible to lay down any hard and fast rule governing such cases. Each one must stand on its own merits subject to the general principle that wherever a substantial part of the manufacture can be carried out in this country, it is highly desirable to encourage the Indian industry in the hope that more and more work may be contributed to the article in this country. In these cases it is necessary that inspection on an accepted standard should be applied to the work done both in England and in India.

Question 16. It follows from the opinions I have already expressed that indents on England should be scrutinised by the central purchasing agency in India with a view to deleting therefrom any articles which can be profitably manufactured or produced in India either as a whole or in substantial measure.

Question 17. It is extremely difficult to keep any scrutinizing department in India posted with reliable information of prices at which stores can be obtained in England. Prices vary in very short periods to an extent which would destroy the value of information previously obtained. Greater or lesser intensity of competition due to busy or slack times would largely affect prices and the only method of obtaining any really serviceable test would be the introduction of simultaneous tendering with the possible loss of the work to India owing to lower English prices. No other test would in my opinion be really effective.

Question 19. I am in favour of the formation of a central stores depôt in India by the Government with such subsidiary local depôts as may be necessary for distribution. It need not necessarily follow that the actual stock should be in the physical charge of this depôt as it must frequently be the case that the actual stock should be held at the place of manufacture or production although included in the central depôt stock; otherwise considerable expense would be incurred in useless carriage of stores.

The holding of stocks by private firms would result in the aggregate holding being much in excess of a central holding and the extent to which this might apply is the measure of the increased cost of supply on the whole.

Question 20. It is necessary to form central stock depôts for the physical holding of stores although it might be possible to maintain the record of stock at the main central depôt, say, Calcutta. Other places at which depôts might be formed are obviously the principal ports Bombay, Karachi, Madras and Rangoon. There might also be depôts at important productive centres, such for instance as the Tata Steel Works, for the storing of Indian supplies, but it is needless to point out that excepting for what may be termed seasonal goods the stocks of Indian supplies should be kept as low as possible consistent with the avoidance of delay in meeting indents, as these stocks can be replenished at very short notice.

Question 22. The prices paid for stores are governed by tenders obtained either (1) from approved firms or (2) by advertisement. No classified list is kept of the prices of the many articles purchased as these prices vary almost from day to day, but it is always easily possible to refer to previous cost in any case. The method of admitting firms to selected list is first to have their works inspected and reported upon and, if found suitably equipped, to then call for competitive tenders. The work done then goes through the usual routine of inspection and if the manufacture is satisfactory the firm is asked to tender for future requirements.

Question 23. It is extremely difficult to disseminate reliable information regarding prices because of the

very frequent variation in cost. In regard to fitness and capacity of firms the procedure is described above.

Question 25. I think it might be distinctly advantageous for Company-owned railways and other Government-owned or controlled bodies to pool their indents in order to avoid competition among purchasers and also to obtain the benefit generally accruing to purchases in large quantities. This cannot constitute any interference with private enterprise.

Question 27. Yes. It might be difficult at first to fix a percentage which would cover the actual cost without affording a profit but experience will soon show what would be a fair charge to make. It might be necessary to vary the charges to meet more or less cost of purchase and inspection, but a satisfactory scale could easily be devised after a short time.

Question 30. I do not think any useful purpose would be served by the interchange of personnel between home and Indian establishments. The methods of carrying out work differ more or less and I think it undesirable to have frequent changes in the purchasing officials, because it would mean the loss of local and specific knowledge which is most valuable.

Mr. F. PALMER, called and examined.

Witness explained the work which his firm did for the India Office and the various company-worked railways who also employed them as consulting engineers. From the indents received the Director General of Stores picked out the items which required anything in the nature of special designing (*e.g.*, locomotives, rolling stock, girder bridges, machinery, etc.) and also items which required more detailed inspection than the officials in the India Stores Department were competent to carry out. The Consulting Engineers then prepared designs (when necessary), drew up specifications and supplied all the information likely to be required by firms who might desire to tender for the work. The designs, specifications, etc., were then sent to the Director General of Stores with a recommendation either that tenders should be called for by advertisement or that certain specific firms only should be invited to tender. Personally he always preferred calling for tenders by advertisement so that there should be really public tendering. Tenders were then invited, received and opened by the Director General of Stores, but were always passed on to the Consulting Engineers for scrutiny and opinion. All tenders had to be examined in detail for "snags," omissions and mistakes. The tenders were then returned to the Director General of Stores with the Consulting Engineers' recommendation that for such and such reasons so and so's tender should be accepted. The lowest tender was usually recommended for acceptance especially when the tenders had been obtained by invitation. The final decision as to which tender should be accepted rested with the Director General of Stores but witness could not recollect any case in which an order had been placed otherwise than as originally recommended by the Consulting Engineers except for reasons about which the Consulting Engineers had been consulted. When the order was placed the Consulting Engineers received advice and arranged inspection of the job from its commencement right up to the final packing and despatch from the works. All jobs were inspected throughout. Nothing was left to the honesty of the firms. The name of a firm did not affect the rigidity of the inspection. When the article had been properly packed and correctly consigned to wherever specified a certificate was given to the Director General of Stores on which he paid the contractors.

The procedure was similar for company-worked railways except that the home Boards took the place of the Director General of Stores and the Consulting Engineers were responsible for the quality of all classes of articles purchased, except textile goods.

The inspection work of his firm was organised in specialised branches (*e.g.*, bridge work, rails and permanent way fittings, locomotives, rolling stock, oils and paints, etc.) each in charge of a head inspector located in the head office. Each head inspector was responsible for the preparation of designs, the drawing up of specifications and seeing that inspection was properly carried out. The preparation of specifications was now more or less cut and dried, as standard specifications based on many years' experience existed for practically all materials and operations. The head inspector had to select the right ones and fit them together, making only such slight alterations which any special requirements of the case might necessitate.

The actual inspection was done by a staff of between 70 and 80 inspectors distributed over the United Kingdom, resident at various centres of industry, and working under the instructions of their respective head inspectors. The head inspectors themselves visited important jobs periodically.

The majority of the inspectors were mechanical engineers and many held good degrees. The head inspectors were usually selected from the ranks of the inspectors. The present organisation had taken two or three generations to build up. The credit, for the very satisfactory establishment which now existed, was entirely due to Sir Alexander Rendel.

In the United Kingdom, the engineering manufacturing area was very small. There was practically nothing north of Glasgow or south of Birmingham, and it was easy to locate the inspectors at appropriate centres round which they would be fully employed without having to make long journeys. As he had pointed out in his written statement the circumstances would probably be very different in India for certain manufactures, and for the easier appreciation of the difference he produced a sketch map showing India and Great Britain on the same scale.

All the Inspectors were whole-time men and were employed only on the particular class of work for which they were qualified by training and experience. Prior to the war the pay of the head inspectors was about £600 a year and the lowest pay for ordinary inspectors three and a half guineas a week. Now the rates were about £1,000 and five guineas, respectively, taking into account war bonuses, etc.

A similar organisation would have to be built up in India, having a similar relation to the central agency as the Consulting Engineers in London had to the Director General of Stores and in his opinion no better model could be found. It would be preferable if a firm of consulting engineers of repute could be induced to take up the work in India so that continuity of policy and work could be secured. If officers in government service were selected to act as consulting engineers special terms of service would have to be introduced; otherwise there would be danger that the tendency would be to fill these posts with engineers nearing retirement and frequent changes would result. When once a man joined the consulting engineer's department he should be kept there until he died or retired. It was essential to secure continuity and this was the great advantage of employing a firm. Another was that a firm would command much wider and more varied experience than a department recruited from government engineers.

Whatever method was adopted, the consulting engineers must have a designing establishment, as designing and inspecting should be under one control. The staff should be in constant touch with the manufacturers. It was most important to know what manufacturers could produce, as well as what one would like them to produce. The manufacturers should always be consulted when any standard specification was being drawn up. Indenting officers were seldom capable of drawing

up proper specifications, and it was even undesirable that they should be allowed to attempt to do so. They should only state clearly, or give a complete description of, what they wanted and leave the drawing up of specification to the experts in the inspection branch so as to secure standardisation as far as practicable. It was deplorable that so many railways in India had adopted different specifications for the same class of article. In his opinion there was no substance in the objections—mainly geographical—which were usually raised when a common standard was suggested. He welcomed the advance which had been made towards the standardisation of rolling stock but a great deal more standardisation should be done by railways.

It was difficult to lay down any hard and fast rule regarding the inspection of "over-the-counter" stores. The necessity for inspection was dependent on the importance of the duty which an article had to perform. It was impracticable, however, to arrange for the efficient inspection of certain classes of articles. In such cases, when acting on behalf of company-worked railways, it was the custom of his firm to buy only through approved firms and to accept the supply on the firms' reputation, but these cases were infrequent. A list of approved firms was maintained, and when any new firm applied for inclusion in the list their works were visited and inspected. If the firm seemed capable of producing its wares satisfactorily, it was allowed to tender on an equal footing with other firms on the list. Steel sections guaranteed of British standard specification were accepted on the manufacturers' own certified tests.

With reference to question 15 of the questionnaire, witness adhered to the views expressed in his written statement. Even although the branches in India might not rely wholly on Government orders yet this would be a large factor in their business and the cost of the Indian branch must be reflected in the price. By dealing with the principals in England, those firms which maintained branches in India had to compete with those who did not incur similar expense and had therefore to keep their prices down if they wished to secure the order. In his opinion no advantage in price could be expected from encouraging firms to maintain stocks in India to meet government demands. He feared that the only result would be higher prices owing to larger stocks and slower turn over. He admitted that some branches in India had rendered valuable assistance to government officers as consultants. Ostensibly the work was done for nothing. Branches and agencies were, however, out solely to push their own wares and, so far as was compatible with honesty of purpose, did not care whether the article or plant was what was wanted or what was best for the purpose. Moreover the competition was limited. In many cases there might be only one firm represented in India. Provided a scheme had been prepared by an independent expert and tenders were invited to the one design he would give preference to any firm offering erection in India provided the terms were at all reasonable.

He had recommended the purchase in India of articles which had been only partly made in India in the hope that, by commencing with a small part of the work, the manufacturers in India would gradually undertake an increasing percentage of it and in time eventually the entire article might be made in India.

He could not see how the purchase of imported articles in India would lead to manufacture in India. He assured the Committee that firms in Great Britain had their eyes wide open to the possibility of manufacture in India and within the next few years great progress in this direction might be expected.

He attached very great importance to insisting that everything made in India should be of the very best quality, with due regard to the purpose to be served. It was best to aim at the higher quality always, as, even though one might not succeed at first in getting it, the result would certainly be better than if a second rate quality only had been aimed at. It was always cheapest in the long run to use only the very best in the way of stores. With paint for instance, the cost of application was the same, whether the paint was good or inferior and many times greater than the cost of the paint.

As Consulting Engineers to the India Office, the members of his firm were paid a fixed salary for their own individual services and the expenses of the firm including inspection, were divided proportionately between the India Office, the several company-worked railways and other regular clients. They were therefore free from the reproach, which he understood was frequently levelled at them from India, that the Consulting Engineers were against the placing of orders in India, as it meant the loss of commission. There was not a shred of truth in this. So far as he knew no consulting engineers to any important railway in India were paid on a commission basis. The allocation of his firm's expenses between the various works was audited and certified by a firm of Chartered accountants. This independent audit had been introduced at the firm's own request. There might be 20 or 30 different orders in hand in one inspection district. One works might have in hand orders for three or four different railway companies or orders for the Government of India and two or three railway companies. The same inspector might perhaps be able to inspect the work on three or four contracts in one day and his pay for that day was charged against perhaps four different companies. The cost of inspection was therefore reduced to a minimum and probably did not amount on the average to as much as one per cent. on the cost of the work.

It was his firm conviction that government departments could not hope to manufacture cheaper than private firms and that the nationalisation of manufactures would never pay. In competitive private companies there was always personal interest, continuity of control, continuity of supervision and continuity of policy, all of which were generally more or less absent in government manufacture and without which any thing approaching the best results was unobtainable. There were no doubt some lines of manufacture which Government might be justified in taking up, *e.g.*, armaments to meet intermittent wants.

The main difficulty in the way of simultaneous tendering by firms in India and Great Britain was the very frequent practice which firms had of slipping qualifying clauses into their tenders. The tender which appeared to be the lowest might not necessarily be so. All tenders had to be subjected to most rigorous examination and comparison and this ruled out the use of cables. The one that appeared to be a very favourable tender in response to say a call for a girder in which the steel was required to pass up to 30 tons might be found to contain an inconspicuous clause that the steel in the girder offered could only be guaranteed up to 25 tons. Provided the tenders were 'clean,' that is, free from all qualifications, he would accept the lowest, whether from India or from Great Britain. Even in normal times he had found the prices to vary considerably in very short periods.

He believed that vast economies would be achieved without inconvience to railways, if a large central stock depot were established on the lines suggested by him. Railways would then maintain an imprest stock only which they could recoup from the central stock depôt, and, so instead of each railway holding a year's supply in their own stock, one concern would hold about one tenth of the total quantity at a time.

The central stores agency in India must be represented in London and no better medium could be found than the India Stores Department in the India Office. He could see no advantage to India in placing the India Stores Department in London under the central agency in India. The function of the India Stores Department was merely to supply what was asked for and not to lay down what should, or should not, be supplied. If there was any dissatisfaction in India with the existing arrangements the matter should be represented in a straight forward manner and mutual endeavours made

to frame suitable rules. The existing stores rules required revision in the light of present day knowledge.

The employment of a central agency by government departments in India should not be optional as there would then be competitive buying in the same market. Anything short of full collective buying would result in an inflation of prices. The ultimate goal should be only one purchaser. He did not fear that supplies would be cornered as the central agency would always have the choice of the Indian or home markets. He thought that all purchases should be arranged from the headquarters of the central agency.

In selecting purchasing officers he would look for plain common sense; and men who did not pose as knowing everything about everything, but knew their limitations and when to seek expert advice.

He would locate the headquarters in a big centre like Bombay or Calcutta. Personally he favoured Calcutta because he knew it well.

If the central agency dealt only with periodical indents leaving the man on the spot to deal with so-called urgent requirements, he was afraid that the tendency would be for more and more demands to be classed as urgent and that the object of the central agency would be defeated. It would be very much better if no urgent purchases were permitted without the concurrence of the central agency.

In conclusion witness stated his opinion that the Committee should be able to do a great deal in the way of encouraging Indian manufacture. All possible means should be employed to secure the manufacture of all India's requirements in India. A great deal could be accomplished with a little assistance and where it was found that an article was being imported partly manufactured and being finished in India, that work should be encouraged with a view to getting more and more of the work done in India. He laid great stress upon quality. India must not be allowed to get the reputation of manufacturing shoddy articles.

At Nagpur, Wednesday 18th February 1920.

PRESENT:

Sir FRANCIS COUCHMAN, K.B.E., M.I.C.E. (*President*).

G. H. COLLIER, Esq., C.I.E.
Lieutenant-Colonel C. C. H. HOGG, C.M.G. R.E.
Brigadier-General H. A. K. JENNINGS, C.I.E.
LALJI NARANJI, Esq
Rai Bahadur LALA MILKI RAM.

And the following co-opted member.

A. L. HOYLE, Esq., I.C.S., Director of Industries, Central Provinces.

J. C. HIGHET, Esq. (*Secretary.*)

P. DAVIES, Esq., Under Secretary to the Chief Commissioner, Public Works Department, Central Provinces, Nagpur.

Written Statement.

Question 1. Yes, provided it is a simple organisation such as that outlined in my note.* It would tend towards economy in purchase, and would undoubtedly foster the development of industries in India.

Question 2. An essential feature of the system in its application to the Public Works Department is that indenting officers should obtain their requirements direct from supplying firms (*vide* my note) and should not be required to send their indents through the stores department. Whilst they could send an annual forecast of their probable requirements during the year, it is very necessary that they should not be tied down to the submission of indents at particular intervals, *e.g.*, quarterly as suggested in the papers attached to the questionnaire. At present indents are sent to the Director-General of Stores in London as necessity arises, and this system must continue in future, if the convenience of indenting officers is to be considered.

Question 3. Such things as bricks or tiles, in a province like this, could not be purchased through the central agency. These frequently have to be manufactured at the site of a work itself, and no change is possible in the present system in such cases.

Question 4. As to whether it would be advantageous or not would entirely depend on the system that is adopted. I imagine local bodies, etc., would be only too glad to make use of a scheme such as I have outlined in my note, which is so elastic that they could make use of it for some things and not for others as they wished. If such bodies make use of the scheme they should undoubtedly be expected to contribute to the cost of the organisation necessary; see also my reply to question 27.

Question 5. Yes, for all articles which could be arranged for by running contracts. Indenting officers of local Governments should, otherwise, obtain their requirements direct from supplying firms, though, as stated in my note,* the latter should be approved by the central organisation.

Question 6. I do not favour the creation of local agencies.

Question 7. I do not clearly follow what is meant by the question. I have no experience of the detailed working of the Stores Department of the India Office.

Question 8. No remarks.

Question 9. The policy of inspection should, in my view, be dictated mainly by the consuming department. It is the policy of *purchase* which should be dictated mainly by the department responsible for industrial development of the country. By this I mean that it would be reasonable to pay a little more for an article in the early years of its manufacture in this country in order to develop the industry, or even to accept an article somewhat inferior in quality to that obtainable in England, but if there is any doubt as to the quality of the article not being up to the requirements of the consuming department, the opinion of the latter department should be the deciding factor.

Question 10. Yes.

Question 11. No remarks.

Question 12. Yes, cement for example.

Question 13. I have described the system of inspection I would advocate in my note. It should be an imperial organisation for all classes of purchases, but it might be possible to make use of the local experts attached to Directors of Industries for this purpose, but I would certainly not create special local appointments for the purpose of inspection only.

Question 14. The stores rules of 1913 should be cancelled. They will not fit in at all with the proposed organisation.

Question 15. Such purchases should be allowed to the fullest extent, the only restriction being in the matter of price which should not be more than that which would have to be paid were the articles in question purchased through the Director-General of Stores, India Office. I have dealt with sub-paragraphs (*a*) and (*b*) in my note.*

Question 16. I am in favour of the abolition of Home indents provided the articles in question can be obtained in this country at a favourable price, and of a sufficiently good quality, whether the articles are manufactured in this country or not.

Question 17. I suggest the retention of an intelligence department at the India Office.

Question 18. All stores which are only obtainable from abroad should be purchased *otherwise* than through the Director-General of Stores, India Office, provided their price and quality are favourable.

This is especially necessary in the case of stores manufactured in countries other than England, *e.g.*, America.

Question 19. I am absolutely opposed to the formation of central stock depots by Government in India, *vide* my note.*

Question 20. No remarks.

Question 21. Detailed statement is given below:—

* Reproduced below.

Year.	Buildings and Roads Branch.				Irrigation Branch.			
	Stores purchased abroad.	Imported stores purchased in India.	Indian stores.	Total.	Stores purchased abroad.	Imported stores purchased in India.	Indian stores.	Total.
	2	3	4	5	6	7	8	9
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1910-11	5,280	3,98,358	23,330	4,27,027	...	9,668	29,134	38,802
1911-12	11,645	31,446	8,805	51,896	...	1,19,534	68,874	1,88,405
1912-13	48,675	64,869	10,574	1,24,118	1,04,930	54,303	37,110	1,96,343
1913-14	86,821	74,578	85,111	2,46,510	527,759	1,75,063	47,637	2,75,459
1914-15	98,439	1,72,520	2,40,504	5,11,463	41,290	1,98,805	82,595	3,22,690
1915-16	1,21,104	1,75,929	2,24,827	5,21,860	84,393	1,77,410	1,86,082	3,97,885
1916-17	1,06,041	1,47,482	3,62,196	6,15,719	...	13,998	63,407	77,405
1917-18	2,831	1,41,153	2,09,310	3,53,294	...	58,942	83,531	1,42,473
1918-19	1,894	1,07,408	2,31,380	3,40,682	...	45,867	1,80,641	2,26,508

Question 22. No special arrangements are in force, as that is largely a matter for the Director-General of Stores, India Office, under the present system.

Question 23. Yes.

Question 24. No remarks.

Question 25. So far as local and *quasi*-public bodies are concerned it must be left entirely to them to decide whether they will come into the scheme or not and if they choose to do so I cannot see that it would constitute any interference with the legitimate sphere of private enterprise.

Question 26. No remarks.

Question 27. Yes.

Question 28. A register of purchases is maintained in each division and is open at all times to the inspection of the Accountant-General and his staff.

Question 29. The existing system of audit is efficient enough for present purposes; it would have to be somewhat recast to suit a system of stores purchase such as that now proposed. There would be no difficulty in securing a thoroughly efficient system of audit.

Question 30. No remarks.

Note by Mr. P. Davies, on matters relating to the future system for the purchase of stores by Government of India.

I have been asked to represent the opinion of the local Public Works Department including the Irrigation and Roads and Buildings Branches, and in order to do so as fully as possible I have ascertained the views of all the Superintending Engineers and a number of selected Executive Engineers.

2. The main purpose of this enquiry, as I understand it, is to substitute for the present system of obtaining stores a system which will have as its prime object the development of industries in India, so that we may reach as rapidly as possible a state of affairs in which practically the whole requirements of government stores can be met in India.

3. I have examined the various schemes proposed in the papers attached to the questionnaire, and may say at once that, speaking generally, they appear to involve the setting up of an exceedingly cumbrous machinery, and an unnecessarily expensive organisation to secure the end in view. Most of the officers consulted have pointed out the inordinate delays that will certainly take place if any such organisation is adopted and I sketch below the main outlines of what appears to me to be a scheme which will fully meet the object we are aiming at and at the same time will be economical and efficient.

4. I must first of all state that all the officers consulted are in favour of the constitution of a central agency in India which would largely take the place of the present organisation at the India Office, though, as stated below it would be necessary to retain the latter in a modified form for some years to come.

5. For present purposes it is first necessary to consider the matter under two main heads:—

(i) Articles which can be obtained of local manufacture, or partial local manufacture.

(ii) Articles which can only be obtained from abroad.

Both these main heads require to be considered under two secondary heads:—

(*a*) Articles for the supply of which running contracts are possible;

(*b*) those for which running contracts are not possible.

6. *Articles which can be obtained of local manufacture.* The ideal to be aimed at is that, as far as this can possibly be done, all stores should be purchased under a system of running contracts which could be revised at fairly frequent intervals. These running contracts should be entered into by the Controller-General of Stores in India, and to enable him to do so he should be in close and constant touch with the provincial Directors of Industries, who assisted by their experts would advise the Controller-General of Stores as to the nature and quality of the articles available in their respective provinces, and the probable cost of manufacture. The Controller-General should draw up complete lists of the articles for which running contracts have been entered into; there should be separate lists for every province because there will be many articles that are manufactured in two or more provinces, and each province will naturally want to patronise its own local industries. Local Directors of Industries should advise as to the articles which can be purchased locally and the Controller-General should ordinarily accept his advice; should, however, cases arise in which owing perhaps to the excessive cost of the local article the Controller-General were of opinion that purchase elsewhere would be advisable, and if the local Director of Industries were unable to agree with him, the matter should be referred for decision to the local Government, whose orders should be final. These lists, which will require revision from time to time should be supplied to all indenting officers *and the latter should order their requirements direct from the supplying firms.* It is difficult to see what possible object will be served by the cumbrous procedure which has been suggested that in the case of articles not manufactured in the province the indent should pass through the hands of a number of officers before the order actually reaches the supplying firms; any such procedure cannot fail to result in inordinate delays, as well as the entertainment of large clerical establishments in the various offices through which the

indents will have to pass. So far as the stores ordinarily used in the Public Works Department of these provinces are concerned, the great bulk of them consist of articles which can easily be arranged for in running contracts, and the above-suggested procedure will involve a simple organisation that will secure the maximum of economy and efficiency. In the case of articles for which running contracts are not possible, the Controller-General's provincial lists should contain lists of such articles, the names of approved firms from which they are obtainable and an indication as to the probable price, and indenting officers should in this case also obtain their requirements from the firms concerned, and themselves settle the terms of contracts, as is done at present by all indenting officers in the case of purchases made in India. Some economy might perhaps be secured if the Controller-General were to arrange the terms of the contract, but I doubt if this would amount to much, as, so far as these provinces are concerned at any rate, the number of articles for which running contracts could not be arranged is very few, so that any possible economy would be likely to be swallowed up in extra establishment charges.

7. *Stores which can only be obtained from abroad.*—In the case of stores which have to be imported, English firms should be encouraged by every means to open local branches, and to maintain stocks for use in this country. If facilities exist for the manufacture of such articles in India it is the opening of these local branches by European firms that would be likely to lead to the establishment of factories in this country for the manufacture of the goods in question, if the demand is likely to be substantial. The rules for purchase should be the same as those for articles manufactured in India, that is to say, running contracts should be entered into by the Controller-General for all articles for which this is possible, and indenting officers should indent direct from the firms; again in the limited number of cases where running contracts are not possible the same procedure of direct purchase should be adopted.

8. It only remains to consider the case of articles not manufactured in India and for the supply of which European firms have not opened local branches. I have never been able to understand why such articles should not be obtained from local agents of English firms, provided the price and the quality compare favourably with similar articles purchased from the Director-General of Stores, India Office. I should like to quote a case from my own experience in which I obtained a large consignment of stores from a local agent of an English firm at a more favourable price than that quoted by the Director-General of Stores for the same articles. The articles in question were of excellent quality and as I required them urgently I obtained the sanction of the local Government to purchase under the rules, Government thereby scoring appreciably. I would allow the fullest freedom to purchase from the local agents of European firms, whether the articles are actually in the country or not, with of course strict conditions to safeguard the price and the quality. The latter can be secured by arranging for inspection in India, whilst safeguards as to the price of artices could be secured by retaining a small stores department at the India Office in London, which would mainly act as an intelligence department, and only in exceptional cases resort to direct purchase in England. Here again I would let indenting officers go direct to the supplying agents for all articles which could be obtained on a system of running contracts, but as considerable safeguards would be necessary in the case of articles for which running contracts are not possible. I would have indents for such sent to the Controller-General in India for him to order either from the local agents or through the India Office as circumstances might dictate. I think it is important, however, that indenting officers should be permitted to correspond direct with supplying firms on the subject of special orders although the actual order to supply might in such cases go through the Controller-General. As an illustration of what I mean I would mention the case of some sluices which I had to obtain for a canal headworks some years back. I settled the whole of the details of the design and specification with the firm direct and even the price, and then sent the indent to the Director-General of Stores with a copy of the correspondence, and when the sluices were supplied every detail was perfect. Had one been compelled to refer the order to the Director-General and leave it to him to arrange details the results would certainly have been very different.

9. *The system of inspection.*—The system I would suggest for inspection would involve an organisation of imperial inspectors under the control of the Controller-General. It would appear best that these inspectors should not be appointed purely for local areas but for the whole of India, and that the ideal should be to secure experts for particular classes of articles, rather than all round men who would be required to inspect all classes of stores in a particular area. I would divide the inspections into two categories, namely, general and special. By general inspection I mean that an inspector should examine stocks held by manufacturers and agents at a time convenient to himself, and it is important that all such general inspections should be of the nature of surprise visits, of which as little notice as possible should be given. These inspections would ensure that the stocks throughout the country were up to specification. By the term special inspections I mean inspections of particular consignments under despatch to indenting officers; it should be open to inspectors to make a thorough examination of any consignment under despatch without previous notice and this will ensure that the actual supplies to indenting officers are on a par with the stocks held. I understand that the present system of inspection in England is to inspect every consignment in detail; this appears to be unnecessary and requires a much larger establishment than would appear really to be required. I would, however, give the right to indenting officers to call for detailed inspections in the case of indents which in their opinion are sufficiently important to justify special detailed inspection.

10. *Stocks.*—We entirely disagree with the suggestion that has been put forward that the formation of central stock depots by Government is a necessary feature of the scheme. Not only would it involve a very great initial outlay in the construction of such depots, but it would also necessitate the continued employment of a large establishment and the sinking of capital to the extent of stocks held. Unquestionably as it appears to us, the proper method of securing a sufficiency of stocks in the country is to require the maintenance of these by the contracting firms themselves. All such supplying firms will in any case have to maintain certain stocks, both for supplying the government stock depots, and the general public, and it would appear to be far simpler to have an arrangement under which they would extend their warehouse accommodation, if necessary for the purpose.

11. It may not be out of place to make a few remarks as to the effect which the forthcoming constitutional reforms will have on any scheme which may now be devised. The Roads and Buildings Branch of the Public Works Department is to be a transferred subject under the control of a responsible Minister, and I think there can be no doubt that it would not be for the official Government to decide whether the Roads and Buildings Branch in any province should come into the scheme of stores purchase now proposed or not. Assuming that our future Ministers will wish to administer their departments with an eye to the greatest efficiency, they will no doubt make use of the system if they are satisfied that the scheme adopted is both economical and efficient and they will probably be guided in this matter by the advice given to them by their experts. It appears to me very doubtful if, in the circumstances, they would make use of the scheme, if it is to involve a complicated system of indenting such as has been suggested in the

papers attached to the questionnaire. Further the excessive establishment charges, which would be an essential feature of any such scheme, would unquestionably act as a deterrent.

Mr. P. DAVIES, called and examined.

Witness was an Executive Engineer of 14 years' service in the Public Works Department.

There was no regular system in force for the comparison of prices of imported stores purchased in India with the prices of similar articles received on indents through the Director General of Stores, India Office. The example which he had quoted in paragraph 8 of his note to demonstrate that imported stores could be purchased in India on favourable terms had occurred six or seven years ago and was the only case of the kind of which he had knowledge. The great advantage of buying locally was that the indenting officer would know exactly what he should receive and any defect or deficiency would be more readily settled with the suppliers than was the case at present when dealing through the Director General of Stores, India Office.

Witness explained that the special inspection which he had suggested would also be 'surprise' and claimed that the element of surprise in the inspection both of the general work of firms and of the supplies which they were actually making to Government would ensure a high standard of quality with the minimum of inspecting staff.

The Controller General of Stores in India should be the deciding authority on all matters connected with the purchase of government stores whether in India, in the United Kingdom or in foreign countries; and any agencies which might be maintained out of India should be directly under his control.

At Nagpur, Thursday 19th February 1920.

PRESENT:

Sir FRANCIS COUCHMAN, Esq., K.B.E., M.I.C.E. (*President*).

G. H. COLLIER, Esq., C.I.E.
Lieutenant-Colonel C. C. H. HOGG, C.M.G., R.E.
Brigadier-General H. A. K. JENNINGS, C.I.E.
LALJI NARANJI, Esq.
Rai Bahadur LALA MILKI RAM.

And the following co-opted member:

A. L. HOGLE, Esq., I.C.S., Director of Industries, Central Provinces.

J. C. HIGHET, Esq. (*Secretary.*)

H. FREDERICKSON, Esq., Manager, Bengal-Nagpur Cotton Mills.

Written Statement.

Undoubtedly, the time has come when some better and more extensive organization for the purchase of stores in India by Government is necessary.

The days of purchasing everything from Europe have gone for ever and the time is certainly approaching when almost everything required will be manufactured and obtainable of as good quality in this country. For this reason a special branch of the Industries Board for buying stores *should* be established in India, not however, at Delhi but in some centre of commercial industry such as Calcutta or Bombay. The rules given under Annexure II attached to the questionnaire seem to be very excellent but as has also been mentioned somewhere in these papers it would seem they have not been very strictly adhered to, firstly because the persons entrusted with the making of purchases were not expert and secondly because largely for the first reason they wished to save themselves much trouble.

If large purchases of stores are to be made it stands to reason that there must be experts to deal with the quality of stores to be obtained, and it is my opinion that these experts should be kept to the duties for which they are specially qualified and should not have anything to do with the actual buying arrangements. In fact I agree with what Mr. Macpherson says in his note appended to the questionnaire. The experts and the buyers should be separate though the buyers would of course purchase only such articles as might be recommended or passed by the experts.

Now as regards experts I do not consider that the pay put down in any scheme is sufficient to attract any *real* experts and it is my confirmed opinion that if Government are to obtain the services of experts it should be worth their while to get the best men. Such men cannot be obtained on one to two thousand rupees a month. They would require at least, say, five thousand rupees per mensem.

From what I have seen and heard of government experts during the war I have come to conclusion that many of them were not what could be called real experts, *i.e.*, men in the highest ranks of their profession, men who have had practical experience and do not rely entirely on mechanical tests. During the war I had direct experience as regards the supply of tent cloth and discovered that though the war was more than half over Government were still purchasing bleached tent cloth for dyeing khaki and for general use during the war. The result of this was, I believe, that at the front all tents had to be dirtied before being used. On being asked for bleached tent cloth I had pointed out that during the war bleached tents would naturally not be desirable and after some considerable time I was advised that unbleached cloth would be suitable. However, by the time I had got this reply I had already made other contracts for my looms and could not therefore supply any cloth.

I also had visited the Jubbulpore jail where I found that the Superintendent was having much trouble with the experts over mule wobbing. As far as I could see the webbing was quite strong and equal in quality to that which had been previously supplied. However, for some reason it was not passed and the matter was still under correspondence when I left Jubbulpore.

As regards the question of costs of purchasing stores through a central depot I notice that one estimate gives it as two per cent. This appears to me to be rather high and I think that it ought to be reduceable. Of course all depends on the amount of stores purchased and provided that the department works smoothly and delivers stores expeditiously. I fancy that purchases should amount to a higher figure than that estimated. I am not inclined to agree with Mr. Macpherson's idea of *attaching purchasing officers* belonging to an Imperial organization to the staff of the Director of Industry in each province. No man can serve two masters and I believe the result of such arrangement would be that there would be constant friction between the Director of Industries and his attached officers, who would, naturally be more anxious to please their permanent masters in the Imperial service than their temporary masters in the province.

I believe I have stated above that experts should belong to the imperial service and not to provinces. This is for the reason that the pay of *real* experts would be too high to be borne by each province and I do not believe in second-rate experts. Each province should have a staff of expert *buyers* as distinct from experts in the particular line for which stores have to be purchased.

I have not attempted to answer question by question since the questionnaire is obviously made up with a view to its being answered by government officials.

Generally speaking, the committee does not directly concern non-officials, and for this reason I understand, the Bengal Chamber of Commerce have offered no evidence whatsoever.

Mr. H. FREDERICKSON, called and examined.

Witness had been in India 23 years.

He had suggested Calcutta or Bombay as the headquarters of the central purchasing agency so as to be in close touch with the principal suppliers. Whichever of the two was chosen, it was likely that firms would establish branches there. If however contracts were placed as a rule six months or more in advance and urgency of supply was exceptional, there would not be the same necessity for having the headquarters in commercial centre as there was during the war.

The experts he referred to would be responsible for the preparation of specifications and for the inspection of supplies. The actual work of passing would be done by assistants on say, Rs. 1,000 to Rs. 1,500. The purchasing officers should be chosen for general business capacity.

Inspectors of textile goods should possess trade knowledge. He was doubtful whether Chambers of Commerce would undertake the inspection of textile supplies to Government but they might be usefully employed to settle any differences of opinion in regard to supplies made to trade standards.

With reference to his remarks regarding government purchase of bleached tent cloth during the war it was suggested to witness that the reason for this might be that bleaching was understood to weaken the cloth and that, if unbleached cloth were purchased, there would be uncertainty about its strength when it became bleached by the sun. Witness said that though chemical bleaching did affect the strength, sun-bleaching to which tents were exposed did not.

In purchasing stores for his mills he found it much cheaper to buy in the United Kingdom than through firms in India.

It was explained to witness that the Bengal Chamber of Commerce did not offer separate evidence solely because it considered its interests sufficiently represented by the members of the Chamber nominated by the Indian Engineering Association.

F. J. PLYMEN, Esq., I.A.S., Deputy Director of Agriculture, Western Circle, Central Provinces.

Written Statement.

Question 1. For the Department of Agriculture and scientific departments generally—no. Their requirements are not sufficiently definite in number or kind at present and they can do better by direct correspondence with sellers.

Question 3. I consider that the articles now required by the Department of Agriculture and other scientific departments can best be purchased direct. Such purchases are mainly agricultural implements or scientific apparatus and chemicals for teaching or research purposes. The agricultural implements required have in no way been finally determined upon and considerable correspondence is still necessary between the departmental staff and makers or agents.

I see no advantage in purchasing chemicals and apparatus through a central store. The number of firms supplying such articles is not large and the individual officer who uses these articles is more of a specialist in knowing how and where to meet his requirements than the officer of a store department would probably be.

Question 18. Yes; the stores enumerated in answer to question 3 above.

Question 19. Not for such articles as scientific departments are likely to require.

Question 22. The purchasing officer can always refer to previous bills and as he is constantly concerned with the actual use of articles purchased he knows when a firm's goods are satisfactory and reliable or not.

Question 28. On receipt of the purchases they are checked from the invoice by a responsible officer.

The sum of money at the disposal of any officer for the purchase of stores is limited to his budget provision.

Question 29. In my opinion, do.

Mr. F. J. PLYMEN, called and examined.

Agricultural implements were purchased by the Department of Agriculture for trial purposes. When the most suitable types had been ascertained, numbers were purchased for resale to agriculturists; but once any implement had been popularised the service of the Agricultural Department were not absolutely necessary and purchases were sometime made by the agriculturists direct from the makers in India.

Chemical and research apparatus had to be purchased but this was not usually of standard type and was best bought direct.

He found that he was able to obtain much more now in India than formerly. If the purchase in India of stores now imported were encouraged, he thought that manufacture in India would probably result.

There was no need for any special purchasing officer for the Agricultural Department.

At Calcutta, Monday 23rd February 1920.

PRESENT:

Brigadier-General H. A. K. JENNINGS, C.I.E., (*President*).

G. H. COLLIER, Esq., C.I.E.
A. W. DODS, Esq.
Lieutenant-Colonel C. C. H. HOGG, C.M.G., R.E.
LALJI NARANJI, Esq.
Rai Bahadur LALA MILKI RAM.

And the following Co-opted Member :—

Rai KANAK LAL BARUA Bahadur, B.L., Director of Industries.

J. C. HIGHET, Esq., (*Secretary*).

The Hon'ble Mr. O. H. DESENNE, Secretary and Chief Engineer, Public Works Department, Assam.

Written Statement.

Question 1. There should be a central agency in England and several central agencies in India. The reasons are that purchasing officers cannot be in touch with the market prices as a central agency would. Moreover, by calling for tenders for the supply of certain classes of articles for the whole year these central agencies must secure much more favourable prices than could be obtained by any local officer, with the possible exception of articles which are produced locally.

Question 2. I have no experience of other departments but as regards the Public Works Department, I do not consider that any special arrangements are required.

Question 3. In the case of stores which are produced locally the purchasing officer should have the option of local purchase, if he considers the local quotation to be favourable. The difficulty would be the interpretation of the word "local," but this might be overcome, if the Director of Industries in every Province published a monthly list of articles produced locally with prices and names of firms willing to supply at these prices. Any article outside the list would be non-local. The purchasing officer should make the purchases direct from the firm in the case of such local articles, but other articles produced in India but outside the province, should be purchased through one of the central agencies.

Question 4. (*a*) and (*c*). The reply is in the affirmative. As regards (*b*), this seems to me to be a matter for the company concerned to decide. A contribution in the form of a fixed percentage charge on the value of the stores purchased, which would be liable to revision every ten years, should, I think, be levied.

Question 5. Yes, but as regards Assam, the location of the agency should be outside the province at Calcutta. No decentralization is required except in the case of local produce.

Question 6. I am in favour of central agencies to be located at Rangoon, Madras, Calcutta, and Bombay. Local purchases, i.e., purchases of articles produced locally should be made direct by the purchasing officer, if he wishes to, after comparing price lists of the nearest central agency and of price list prepared by the Director of Industries.

Question 7. I have considerable experience of tenders called for supply of local materials, and the defect in the existing system is the lack of co-ordination which is in itself derived from the financial arrangements which govern all cash transactions. Materials which are annually required by different departments of Government and by local bodies, should be supplied at fixed rates which should be settled annually by the Director of Industries in the case of local stores, and by the Central Agencies in the case of other stores after calling for competitive tenders.

Question 8. I have but little experience of trade conditions in England, but until the rate of exchange becomes more stable, it seems to me that it will be difficult for English firms to tender for the whole year except in sterling.

Question 9. The policy of inspection should be dictated by the department responsible for the industrial development of the country, with due regard to the requirements or specifications of the consuming department. In cases of disagreement, the ruling of the government of the province concerned should be final.

Question 10. Yes.

Question 11. I do not know of any.

Question 12. I know of none such, but should there be, it seems to me that joint inspections of the indenting department and of the central stores agency would solve the difficulty.

Question 13. Local inspection agencies are unnecessary in this province.

Question 14. Yes, the Store Rules should be scrapped and only general principles laid down.

Question 15. European stores purchased in the United Kingdom should be purchased as at present. When purchased through established Indian Agencies, only a fixed percentage over the home prices should be allowed.

(*a*) The firm would probably hold larger stocks.
(*b*) The possibilities of the firm establishing manufactures in India should, I venture to think, be dictated by considerations of another order.

Question 16. No.

Question 17. No, not until the exchange has been stabilised and the system of simultaneous calls for tenders introduced.

Question 18. There is not generally speaking, but sometimes it happens that some patented product is urgently required and a certain amount of elasticity in the rules is required. Provided that large sums are not involved, the head of the Department concerned should have the option of ordering any patented machinery or product direct from the advertisers from any part of the world in cases of urgency

Question 19. Yes.

(*a*) This will be reduced.
(*b*) This will also be reduced.

Question 20. Rangoon, Madras, Calcutta, and Bombay. Yes, but in the case of Indian stores, sub-centres of distribution might be necessary in some cases.

Question 21. The reply of the Comptroller, Assam, from whom I have endeavoured to obtain the information, is as follows :—

"From the records available in my office, I find that the following payments were made for purchase

of European Stores by the Public Works Department of this Province during the years specified below:—

Year.	Amount.
	Rs.
1909-10	5,602
1911-12	3,038
1912-13	17,546
1913-14	19,122
1914-15	10,764
1915-16	10,194
1916-17	1,242
1917-18	6,493
1918-19	320
TOTAL	78,193

It is not possible to furnish you, from the records available in this office, the payments made for imported stores purchased in India or for Indian stores."

Question 22. The arrangements, like all other arrangements of cost keeping, are entirely defective and the opinion asked for at (*a*) can only be obtained after considerable trouble by reference to cash books and bills and original vouchers. The modern system of cost keeping which enables heads of commercial firms to compare and analyse costs, is at present a closed book to the Audit Department of the Government of India.

(*b*) No record of equipment of firms is kept nor has this been necessary up to date, as their capbilities are known to indenting officers. Serious cases of failure or breach of faith by firms result in their being black-listed and in no further orders being placed with them by this department. Such cases have only once within my recollection occurred with reference to important firms.

Question 23. I would leave the contracting firms to do the advertising as regards their capacity and performances, but am inclined to think that a yearly price list should be issued by the central agency or by the Director of Industries in the case of articles which are used every year. Whatever be the conclusions arrived at by the Stores Committee, the firms will, I think, still continue to advertise their wares with prices and it will, I think, suffice if, in the case of articles for which annual price lists are not issued, it is generally understood that the prices charged by the central stores will never be higher than the advertised market price for the same article. It is hardly necessary to point out that if the prices charged by the central agency ever rise above those of the ordinary market the "*raison d'être*" of the central agency would disappear.

Question 24. I have no experience of shipbuilding and regret my inability to advise.

Question 25. Yes, if compulsory, in the case of Company owned railways. No, as regards Government and local bodies.

Question 26. The head of the central stores department should, I think, be recruited in consultation with the heads of prominent English business firms and should be fully conversant with the modern card index system and cost keeping procedure besides having a wide commercial experience. He should not in any case be recruited from any of the Indian services and his salary would probably have to be from six to ten thousand rupees a month. He should have powers to appoint his own staff either from the Indian services or from any outside source and in the case of government servants, to replace their services at the disposal of the department from which they were obtained, or, in the case of other recruits, not to renew their agreements without giving any reasons.

Question 27. Yes.

Question 28. Stores are counted on receipt and compared with the bill received from the suppliers which is corrected, if necessary, and which constitutes a voucher on which payment is made and entered in a cash book. These and other vouchers constituting the accounts of the division are audited by the Comptroller's office. Any shortage in receipts resuts in lengthy correspondence with the suppliers whose practice is to throw the onus for the shortage on the carrying company. The carrying company generally plead non-liability owing to owner's risk, and if pressed, blame the foreign line as in many cases goods have to travel over two or three railway lines as well as a steamer line before reaching their destination. If, and when, the central stores agency is established these squabbles should in my opinion be taken up in every case by the Central Stores Agency to whom the indenting officer should report all shortages or damages in transit direct.

Question 29. Yes, provided that the audit officers of the Government of India are not allowed to frame the system of audit.

Question 30. I am not prepared to condemn or to accept the general principle involved and the selection of officers should be left entirely to the discretion of the Controller of the central stores.

A. P. MULLICK, Esq., Officiating Superintending Engineer, Assam, called and examined.

Mr. Mullick was examined on the written statement submitted by the Hon'ble Mr. O. H. Desenne who had proceeded on leave.

Witness's views differed from those of Mr. Desenne on cerain points.

Purchase. He would have a central agency for the purchase of such stores only as required specialised inspection or test; and have separate purchasing agencies in each province under the Director of Industries—who should possess engineering qualifications—for the purchase of all other classes of stores. Each Provincial agency would purchase only in its own province. Stores which had to be purchased in other provinces would be obtained through the provincial agency in the province from which the purchase was to be made. His object was to prevent the central agency from becoming too large and to broaden the basis of the provincial agencies so that in time the central agency might be abolished. The provincial agencies would also purchase for departments of the Government of India in their respective areas. He suggested that each provincial agency should circulate price lists monthly for guidance only, supplies being made according to actual price; but he agreed that for articles in general demand it would be better if running contracts were arranged by a central agency. The headquarters of the provincial agency in Assam would be located at Gauhati.

As the object in view was to purchase Indian products, simultaneous tendering should not be necessary. Anything not produced in India should be purchased in the cheapest market. He did not think it out of place to expect departments of the Government of India to subsidise industries in the provinces indirectly by buying in the Indian made articles at a higher price than similar imported articles.

Inspection. He agreed generally with Mr. Desenne. The Department responsible for the industrial development would of course, have to consult the consuming department before dictating the policy of inspection.

Home Indents. Though to save the middlemen's profit he would only purchase imported stores in India when time was the main consideration, yet he would withdraw all the present restrictions in the Stores rules. In his opinion increased purchasing of imported stores in India would not encourage the establishment of new industries.

India should have an absolutely free hand to purchase in the cheapest market with due regard to quality, preference being given as far as possible to goods produced within the Empire; but no absolute rule should be laid down. All

orders going out of India should be scrutinised by the Department of Industries.

Stocks. He was not in favour of central stock depôts. There had once been a Public Works Department Store in Assam but it had now been done away with.

General. The head of a central purchasing agency should be a business man and not necessarily a Government official but he did not agree with Mr. Desenne that the heads of prominent English firms should be consulted with regard to the selection.

At Calcutta, Tuesday 24th February 1920.

PRESENT:

Brigadier-General H. A. K. JENNINGS, C.I.E., (*President*).

G. H. COLLIER, Esq., C.I.E.
A. W. DODS, Esq.
Lieutenant-Colonel C. C. H. HOGG, C.M.G., R.E.
LALJI NARANJI, Esq.
Rai Bahadur LALA MILKI RAM.

And the following co-opted member :—

Rai KANAK LAL BARUA Bahadur, B.L., Director of Industries.

J. C. HIGHET, Esq., (*Secretary*).

MOTILALL FUMRA, Esq., and SAGAR MALJE HARLALJIKA, Esq., Nominated by the Marwari Chamber of Commerce.

Written Statement.

Question 1. Yes. I advocate the formation of a central agency on the following grounds. By the formation of agency the stores available in India will be purchased such from India in larger quantity than before and thereby the commerce of India will greatly increase and that there will be purchase and inspection by expert hands.

Question 2. For the present no special arrangements should be made for any particular department of Government of India as one ought to see the result of the working of the central agency.

Question 4. In my opinion it would not be advantageous for local, and *quasi*-public bodies to make their purchase through the central agency.

Questions 5 and 6. No, for the purchase of local Governments local agencies should be formed. The Government of India should purchase through local agencies in cases where the local goods will satisfy the requirements of the Government of India.

Question 8. Yes.

Question 9. Inspection should be dictated by the Department responsible for the industrial development of the country.

Question 10. Yes.

Question 12. For piece goods articles.

Question 13. No. Local inspection agencies should be created for local purposes.

Question 14. Yes.

Question 15. If the European stores are not in India at the time of purchase and if it is found convenient to purchase Indian branches then the purchases should be made through them. Here the word 'convenient' means if the quality and price are favourable.

(*b*) There will be possibilities of the firm establishing manufacture in India.

Question 16. Yes.

Question 19. No, as it will effect the holding of stocks by Government departments as well as by private firms.

Question 23. Yes.

Question 25. Yes.

Question 26. The recruitment of the staff should be from the expert class.

Question 29. Yes.

Question 30. Yes.

Mr. MOTILALL FUMRA and Mr. SAGAR MALJE HARLALJIKA, called and examined.

Witnesses explained that the Marwari Chamber of Commerce was interested mainly in piece goods. The immediate object of Government might be to increase industry in India rather than commerce; but in their opinion commerce and trade naturally preceded industrial development. The purchase of imported stores in India would lead firms to hold increased stocks and would tend to the establishment of new lines of industry in India.

It was essential to start slowly and to avoid undertaking too much. This was the reason for their suggestion that a start should be made with local agencies working independently, but towards eventual amalgamation under the control of one central agency.

As regards their written reply to question 4, local and *quasi* public bodies might find it to their own advantage to make purchases through a Government agency.

What the Chamber meant was that dealing with a large number of small bodies might hamper the work of the agency.

Inspectors were liable to influence and for textile goods the interests of Government would be better safeguarded by agreeing on a standard of quality with the suppliers beforehand and referring any disputes to an arbitration board appointed by some Chamber of Commerce.

Inspectors at the works might however serve a useful purpose in checking collusion between the suppliers and the receiving officials.

On reconsideration they desired to modify their written reply to question 9. The specification for supplies should be laid down by the consuming departments. The duty of the department responsible for the development of industries would be to give advice regarding the nature and sources of supplies obtainable in India.

At Calcutta, Thursday 26th February 1920.

PRESENT:

Brigadier-General H. A. K. JENNINGS, C.I.E., (*President*).

G. H. COLLIER, Esq., C.I.E.
A. W. DODS, Esq.
Lieutenant-Colonel C. C. H. HOGG, C.M.G., R.E.
LALJI NARANJI, Esq.
Rai Bahadur LALA MILKI RAM.

And the following Co-opted Member:—

Rai KANAK LAL BARUA Bahadur B.L. Director of Industries.

J. C. HIGHET, Esq., (*Secretary*).

The Hon'ble Mr. C. D. M. HINDLEY, Agent, East Indian Railway called and examined.

Witness was not asked to submit a written statement.

The principle underlying the purchase of railway stores was purchase in the cheapest market in which it was known that articles of suitable quality could be obtained. It was the duty of a railway to supply cheap transportation which was probably the governing factor in the development of India. If Indian made stores had to be purchased even though more expensive than imported stores, transportation would cost more than it should. Apart from this question of price, he had no prejudice one way or the other. He would give no definite opinion whether it would be advantageous for company-worked railways to make their Indian purchases through a central agency without first knowing the classes of materials and articles which the central agency would deal with. He thought that railways must use a very large number of articles not used by other departments. It was true that other railways required stores of the same class as those used by the East Indian Railway, but then the difficulty of different standards arose. The advantages of standardisation had been generally accepted, but a great deal was required to be done before anything approaching complete interchangeability was attained. There were, however, many stores in common use, *e.g.*, cement, pig iron, etc., which he thought company-worked railways would find it advantageous to purchase through a central agency.

The establishment of a central purchasing agency would not, in his opinion, materially affect the existing stores department maintained by railways. In the initial stages at any rate duplication of the machinery of purchase seemed unavoidable. Railways had built up large organisations of their own for dealing with the particular classes of stores they required, and it would be an irretrievable mistake to abolish or weaken these valuable organisations until the success of any new organisation had been proved in practice. The bulk of the purchasing work of the railway stores departments was in connexion with items of innumerable varieties required for particular reasons and for particular jobs, and to get these through a central agency would almost certainly involve indefinitely long circumlocution and correspondences.

The purchase of stock articles which lent themselves to a centralised purchase was a comparatively simple matter and the transfer of this work to a central agency would not reduce to any great extent the work which had to be done by the stores departments of railways. He recognised that any central organisation would have to expand its sphere of responsibility for supply very slowly and that it might be possible to absorb expert staff from the existing railway stores departments. Even then it would be necessary to retain many purchases in the hands of the railways' own stores departments.

Without knowledge of the form which a central agency would take it was impossible to visualise the effect on the consumer, *i.e.*, the individual district officer, for whom the stores would be wanted. It was essential to guard against increasing the difficulty of the consumer in getting his stores quickly. There was a real danger that, in place of the one simple well-known form which the consumer had to fill in when supply was to be arranged by his own Controller of Stores, who thoroughly understood what was wanted from the briefest description, a central agency would introduce a multitude of forms of all kinds and colours from which a selection would have to be made and filled in with meticulous accuracy every time a demand was sent forward. This work would fall on the district officers. It would be impracticable for every railway district officer to indent direct on a central agency. Therefore railways would have to retain their stores departments if only for distribution purposes and even for this work alone an establishment practically on the existing scale would be required.

He considered that the East Indian Railway or any public body should, without being accused of prejudice or selfishness be permitted to look at the matter from the point of view of what the advantage to themselves was going to be, and he was not convinced that except for certain articles of common stock for which standard specifications would have to have been previously accepted the employment of a central purchasing agency would bring about any advantage in either quality, price or quickness of delivery which was one of the most important considerations.

It was difficult to say whether the purchase of stores for company-worked railways by a central agency would constitute an interference with the legitimate sphere of private enterprise, as private enterprise invariably claimed the right to define its own sphere. Government was entitled to form its own opinion on this point.

The scrutiny of home indents before their despatch could not but lead to much additional work and delay. Such a scrutiny had been inforced by the Railway Board during the war and it was obvious when the indents were received back that the scrutinising officers had not always sufficient information at their disposal. Items were cut out to be bought from stocks in India which had already been sold out or to be bought from Indian manufacturers who had nothing avilable for sale. Unless the intelligence branch in the new organisation was very highly organised the same thing might happen again. All home indents were printed and many contained hundreds of items and any elimination under the blue pencil of a scrutinising officer necessitated loss of valuable time in re-arranging and reprinting. He suggested that it would be better to reverse the process and make it the duty of the central purchasing agency to keep indentors informed of what could be obtained in India, so that indentors might prepare their indents with a full knowledge of local possibilities before them. For this purpose copies of all home indents would be furnished to the central agency at the time of despatch.

He was absolutely in agreement with the proposal to establish an expert inspection service in India and he thought that railways and all purchasers would be glad to take full advantage of any inspection agency which might be set up. He was glad to learn that it was intended to employ experts under the provincial directors of industries to assist local manufacturers with expert advice. At present many local products were unsuitable because the process of manufacture was faulty.

Even though Government formed a consulting engineers' department, or firms of consulting engineers sprang up in India, he thought that the best consultant advice would always be obtained from Consulting Engineers in London, who would possess more up-to-date knowledge of developments of all parts of the world.

It was impossible for him to offer any definite opinion in regard to the class of staff for a central agency without knowing what the scope of the organisation was likely to be. The head of the Agency should, he thought, be a man with engineering or technical knowledge of some kind and with experience of the administration of some large firm or government department.

To his mind there was no practical utility in building up a trade in imports through Indian branches or agencies of British manufacturing firms. Higher prices would surely have to be paid to cover the cost of the branch in India and a barrier would be interposed between the user in India and the actual manufacturer. He was not convinced that there was any advantage in buying imported stores through local agents. The development of industries in India was more likely to come about from the consumers than from the sellers.

So far as railways were concerned, it would be impracticable to amalgamate stocks, even of groups of railways apparently so conveniently situated geographically as to Eastern Bengal, the Bengal-Nagpur and the East Indian Railways. It was problematical whether any reduction in the aggregate stock would result from the amalgamation until standardisation had advanced further, as each railway endeavoured not to stock more than what was necessary. Some progress had been made towards the standardisation of locomotives and locomotive parts but the effect up-to-date had merely been to introduce new types as the non-standard engines had still many years of useful life. Moreover some railways might always require locomotives of special design to meet peculiar local conditions. On the whole, he could see no advantages in amalgamating railway stocks.

He had given his own personal opinions and nothing he had said could be considered as binding on the East Indian Railway Company. Any hesitation he might have shown in replying to questions was due to his not knowing exactly what form of organisation it was proposed to set up and not to any a doubt about the possibility of a central agency being a success provided it was commenced on a small scale and built up gradually and not allowed to become too cumbersome.

Messrs. ALFRED HERBERT (India) Ltd.

Written Statement (received through the Bengal Chamber of Commerce.)

As a direct branch of Messrs. Alfred Herbert, Ltd., Coventry, the largest makers and dealers in machine tools and accessories in the world, we are very interested in the proposal of the Government of India, Indian Munitions Board, to establish a central agency for the purchase of stores for the various Government departments, and would reply to the various items of the questionnaire as follows:—

Question 1. We advocate the formation of a central agency on the ground that stocks of machines and machine-shop accessories made by us at Coventry, or factored by us, can be purchased from us in India at exact home rates *plus* the necessary freight and charges, and in some cases during the war we can prove that machines were actually purchased from us at a lower price than they could have been obtained direct from our home works, the reason for this being that we had machines in stock, shipped us at a certain figure, which we supplied at that figure, in spite of the fact that since the date of the supply prices at Coventry had been increased and further machines of the type mentioned could only be obtained at an increased figure. Our second reason for advocating the formation of a central agency is that in the case of Engineering workshops such as the Ordnance factories, railways, etc., it is impossible for the workshop managers to foresee their wants ahead, this depending very largely upon the nature of the work in hand and it is therefore impossible for them to indent for the whole of their year's requirements.

We as a firm have been always prepared to put special tools of any description in stock on behalf of the Government, which stock can only be drawn upon by the particular department itself, thus obviating the necessity of a large stock being carried by the particular department concerned, and ensuring immediate delivery.

Question 2. We do not think any special arrangements would be required for any particular department of the Government of India, but should advise that separate engineering stores agency controlled by a first class engineer, should be established and if necessary special departments under different headings to deal with the different material purchased.

Question 3. We see no reason why all stores should not be purchased by a central agency, provided, as stated above, engineering stores were purchased by one department and other commodities by their respective departments.

Question 4. We certainly consider that should other bodies purchase stores in India through a central stores agency that they should be expected to contribute towards its maintenance.

Questions 5 and 6. Regarding items 5 and 6 we take it that the central stores depôt would have branches in Bombay and Calcutta, which would, we consider, be all that is necessary.

Question 7. Regarding item 7, our experience of the existing system is that sufficient care is not exercised by the Government against leakage, *i.e.*, in the first place information has in the past been obtained by various concerns of the indents coming through from Government the result being that certain concerns have been able to practically corner the market, afterwards demanding their own prices from Government for the stores they held in stock.

We also consider that the receipt of tenders should be acknowledged, and all tenders dropped into a locked box precautions taken against the box being tampered with, and opened on the day and hour appointed by a responsible official, who would go through the tenders in question and place his order accordingly.

We believe that any number of firms have been able to obtain the prices at which a competitor has quoted his stores before the opening of the tenders, thus enabling him to undercut.

We also suggest that the Government of India should include on their circularising list those firms only which they know to be either the actual makers or importers of the material required, *i.e.*, special care should be taken that in the case of engineering stores those firms making or stocking the stores in question should be communicated with only, and not the number of firms existing in India at the present time who purchase from a firm's stock and sell to the Government,* this would, we believe, tend to reduce prices considerably.

Question 8. Speaking on behalf of Alfred Herbert Ltd. we would state that it would be possible for us with the establishment of a central stores depôt, to quote for machines and tools simultaneously in India and England

* Acting purely as middlemen.

as the only difference in our figures would be those for freight and insurance.

Question 9. We should recommend a policy of inspection as is or was, as the writer remembers it, in force at home in 1912 with the India Office, *i. e.*, Inspectors should be appointed by the Indian Government, whose sole duty is to inspect work or material and pass same as suitable. This inspector would stand between the head of the department who is responsible for the purchase of stores, and the consumer, and it should be understood that the consumer can refuse to accept goods purchased by the department if, in his opinion, the inspection has not been carried out properly. The inspector should have nothing to do with the placing of orders, he should act equally on behalf of the consumer in ensuring the standard of material, and the head of the department who would be responsible for the placing of the order.

Question 10. As far as we can see local inspectors would be necessary.

Question 11. The purchase of machine tools and machineshop accessories, such as gauges, etc, would certainly require special inspectors who would be trained Engineers.

Question 12. See reply to question 11. Our experience in a number of cases is that machines and tools have been bought by Government officials who had no intimate knowledge of the machines or tools they were purchasing.

Question 13. See reply to question 10.

Question 14. Believe certain modifications will be necessary in the Stores Rules of 1913 to meet local conditions.

Question 15. We consider that engineering stores should be purchased through established Indian branches of British manufacturing firms, provided it can be proved that the Indian branch of the firm is not attempting to profiteer as we consider that these British firms that have been enterprising enough to open business in India should be at any rate on equal footing as regards the purchase of stores through London, *i.e.*, they should be allowed a fair chance at the indents in question before despatch to London, the granting of this concession would effect us as follows:—

(*a*) We should be prepared to stock any special tools or machines required by the government departments allowing Government to draw upon our stocks, which would mean that their own stocks could be cut down to a minimum, thus saving the interest on the money now expended by each department in maintaining a large stock of the tools they use.

(*b*) We believe it is now generally known that Alfred Herbert, Limited, proposed erecting very large works in the neighbourhood of Calcutta for the manufacture of machine tools of a class which would have been equal to those made at our Coventry Works. One of the reasons that this proposition is now held in abeyance is that the Government of India could not see their way to allow us to quote for machines intended for government departments, railways, etc., in this country, insisting upon all tenders going through London. However, if we were allowed a fair chance at these indents we should probably re-open immediately the question of the erection of works and the manufacture of machine tools in India.

Question 16. We strongly recommend the scrutiny by a central department in India of all home indents before their transmission to the Director General of Stores, as it is only by this means that branches of British manufacturing firms could be assured that they would receive copies of the indents before despatch to London.

Question 17. It would be an easy matter to keep the scrutiny department posted with up-to-date information of the prices of articles obtainable both in India and the United Kingdom, if a certain number of British manufacturers were instructed to send weekly copies of their up-to-date price lists to the scrutiny department. A special filing department would be all that is necessary to thus determine exactly at what figure stores could be obtained in England, whilst the prices of articles obtainable in India would always be easily acquired.

Question 19. We should advocate the formation of a central stores depôt by Government on the grounds that as far as engineering tools are concerned the majority of government engineering workshops would be consuming the same articles and a central stores depôt would be able to supply all these Ordnance factories, engineering workshops, railway workshops, etc., in Calcutta, whilst a similar depôt could be established in Bombay or other centres. On the other hand, it would be equally suitable if Government had on their list a certain number of firms who would, as we are, be willing to stock special tools for Government, thus obviating the necessity of huge stocks being held by Government, and the consequent interest on capital involved.

Question 20. We can only speak on these questions from an engineering point of view, and in this case we should advocate the formation of central stores depôts in Calcutta, Bombay, Lahore and Madras.

C. WARREN BOULTON, Esq., Managing Director, Messrs. ALFRED HERBERT (India) Ltd., called and examined.

Witness's experience of machine shops in India dated from 1912.

Messrs. Alfred Herbert, Limited, besides making a large variety of machine tools themselves, factored machine tools made by other firms. Whether they took over the whole of another firm's output, or not, the arrangement always provided for sufficient discount to enable Messrs. Alfred Herbert, Limited, to sell to the public at what would have been the actual manufacturer's selling price, except in special cases where they had purchased machines from stock at a maker's works, or through a dealer, in order to obtain immediate delivery of special plant required to meet abnormal demands.

The manufacturers whose whole output was taken benefited by being relieved of all selling expenses. The expenses of the branch in India were covered by the larger turn over which its existence secured. His firm worked on the principle of small profits and quick turn over.

As a branch in India of a British manufacturing firm, all that was asked for was a chance to quote in India for the requirements of Government before indents were sent home. Had this moderate request been acceded to about two years ago, Messrs. Alfred Herbert, Limited, in all probability, would have erected a machine tool factory in India. At present he was unable to say whether the scheme would be proceeded with, even if Government were prepared to give the assurance desired, as the rise in exchange value of the rupee, and other developments had materially altered the position.

*He did not mean to imply that his firm was not given a chance of quoting for Indian requirements to the Director General of Stores, India Office. His contention was that the large orders which Messrs. Alfred Herbert, Limited, received from the Director General of Stores, India Office, could equally well be placed with the branch in India. The price to the indentor would be the same and delivery would probably be quicker. Machinery obtained on indent through the Director General of Stores, India Office, might not be liable to import duty, but this did not affect the question as this duty paid by Alfred Herbert (India), Limited, on machinery imported went back to the Government of India.

Though Messrs. Alfred Herbert (India), Limited, were only a selling and not yet a manufacturing branch, they could not be looked upon as merely middlemen who only sold machines and not experience. Messrs. Alfred Herbert (India), Limited, were qualified to give the best advice as to what plant would best suit any particular

purpose. They could set up the plant in working orders and guarantee its working and could send out fully experienced mechanics to train *mistris* in the proper use of the plant, and in short, act as consulting engineers to their clients.

He was doubtful whether purchasing through middlemen would tend to the establishment of any new industries in India. It might be of advantage by bringing more prominently to the notice of likely manufacturers what government requirements actually were; but he thought that this end would be better achieved by leaving it to Directors of Industries to bring possibilities of manufacture to notice, or by publishing all government requirements and exhibiting samples. The middlemen's price must always be higher. The selling expenses of Messrs. Alfred Herbert, Limited, were roughly about 10 per cent.; but middlemen who sold their machines were allowed only five per cent. discount.

He had found the Indian a really good workman provided he was properly supervised. It was no use describing a machine and its method of working to them. The only way of initiating the Indian in machine tool work was to turn out the articles required before him on the machine and then to watch him make them himself. At present first-class supervision in machine-shops in India was practically all European, but he saw no reason why Indians should not eventually become capable of supervising.

The headquarters of the central purchasing agency should be located in Calcutta. His firm had an office in Bombay, and agencies in other towns in India, but quite 70 per cent. of their sales were made in Calcutta. In his opinion most of the new manufactures in India would be established in or close to Bengal.

Dr. W. A. K. CHRISTIE, B.Sc., Ph. D., Chemist, Geological Survey of India, and Officiating Deputy Assay Master, Calcutta, called and examined.

Witness was not asked to submit a written statement but submitted the note below after discussion with the Committee.

The main point on which the Committee wish my opinion is whether the organisation necessary for the inspection of government stores purchased in India will in any way overlap the work of the existing organisations with which I am connected—the Geological Survey and the Assay Department.

I do not think that the work of the new purchasing body will overlap that done by the Geological Survey, whose chemical work, with a few notable exceptions, has not hitherto been concerned with government purchases; in this opinion the Director, Geological Survey of India, concurs.

The work of the new body will undoubtedly encroach on that of the Assay Department if it undertakes to test the bullion bought in India on government account. The Assay offices in Calcutta and Bombay are equipped almost solely for assays of silver and gold alloys and it would seem to me advisable that all such works should be done there. The routine assays for a mint must be done on the spot and the expert personnel there could do bullion analysis at least as accurately as, and certainly more quickly and economically than it could be done in any laboratory equipped for general analytical work. The assay offices are also equipped to do mineral and general metallurgical work analyses. In consequence, however, of persistent heavy coinage demands, the assay offices have normally had to refuse for the last two years to undertake any work other than bullion assays, and the permanent transference of miscellaneous mineral and metallurgical work to a new organisation would not prejudice the Assay Department.

The Committee also invited my opinion on the general question on the organisation of testing laboratories. I had hoped to be able to quote information with regard to such organisation in the United States, where distances are more comparable with Indian ones than are those in Great Britain or Continental countries, but I have been unable to find concrete information on anything but United States Government coal purchases. I think the fewer laboratories there are the better, as there will be less dissipation of effort. It may be expedient, where specialised materials are produced mainly in one locality, to have a local laboratory staffed with experts in that particular branch to do tests for government purchases but if the general work is to be of the miscellaneous nature that I imagine, central laboratories, though they would involve extra expenditure of time on transit of samples and reports, would lean to economy of equipment and personnel and by their concentration of expert knowledge and library facilities, conduce to greater accuracy. I would suggest that the Committee communicate the extent and nature of the chemical work their proposed organisation would require to the Chemical Services Committee and ask that Committee to consider the question when framing their proposals.

At Calcutta, Friday 27th February 1920.

PRESENT:

Brigadier-General H. A. K. JENNINGS, C.I.E., (*President*).

G. H. COLLIER, Esq., C.I.E.
A. W. DODS, Esq.
Lieutenant-Colonel C. C. H. HOGG, C.M.G., R.E.
LALJI NARANJI, Esq.
Rai Bahadur LALA MILKI RAM.

J. C. HIGHET, Esq., (*Secretary*).

M. J. COGSWELL, Esq., C I E., Controller of Printing, Stationery and Stamps, called and examined.

Witness submitted the note below after discussion with the Committee.

At the request of the Stores Purchase Committee I submit the following note, which summarises briefly the views I expressed in reply to questions addressed to me in regard to the purchase, inspection and distribution of paper and stationery articles.

I need not perhaps detail much of the earlier portion of the examination which I underwent at the Committee's hands, as this was largely in the nature of general

explanation of the present system of dealing with stationery articles. A more detailed description of the system is given in Mr. Dalfry's note of 1st December 1919 and in his replies to the Committee's questionnaire. The answers which I gave were, I think, aptly summarised by Mr. Lalji Naranji when he said that the Stationery Department in its present shape appeared to be a self-contained central purchasing agency, on lines the applicability of which to other classes of goods it was the business of the Committee to report upon.

In my opinion there are advantages to be gained by the extension of the present operations of the Stationery Office so as to make it definitely a central purchasing agency for government paper and stationery throughout India. The general nature of these advantages is well expressed in the Report of Mr. Heseltine's Committee of April 1916, wherein it is pointed out that "the Controller of Stationery possesses expert knowledge, has at his disposal a trained staff and the necessary testing apparatus, is in touch with the paper market and in constant communication with the agents and managers of the paper mills." (As the Stores Committee are aware, the principal paper mills have their offices in Calcutta, and their factories within easy reach of that city.)

I do not think that there will be any commensurate advantages in installing an inspecting and examining staff controlled by an authority other than the purchasing officer. If complaints are to be found with goods purchased by the purchasing officer (who for convenience' sake I will continue to call Controller in this note) these complaints might, I suggest, be addressed to the Board of Industries under whom the Controller has now been placed.

I do not think that it will be practicable entirely to divorce the Controller from the duty of distribution in the matter of paper and stationery. As already pointed out the principal paper mills are located in the neighbourhood of Calcutta, and it would be, I submit, waste both of time and materials, and an unnecessary duplication of offices to maintain a separate imperial stationery distributing agency in Calcutta. The Government of India presses, the contractors for printing, the Government of India secretariats and departments, the political offices and the Army throughout India would have to get detailed supplies from some source and it would introduce innumerable complications, both practical and financial, to make that source a provincial one. Calcutta remains in my opinion the only reasonable headquarters for a Controller of Stationery, since it produces not only the bulk of the paper made in India, but also a very large number of the miscellaneous stationery articles which come within the operations of the Stationery Office, and if present indications may be relied upon, is likely in the future to produce a still larger number and a greater variety of these. And so far as imported goods are concerned, Calcutta is the port best serving many parts of the country. Whether given an imperial distributing depôt in Calcutta it would be reasonable to establish a separate provincial distributing depôt for Bengal would, in my view, require proof.

The presence of a distributing branch of the Stationery Department in Calcutta need not, however, prevent the maintenance of stationery depôts in other centres. Whether these depôts in other provincial centres should be definitely provincial institutions, so far as storage and distribution are concerned, only receiving their stocks both of country-made and imported goods by the agency of the Controller, is a matter for the consideration of the Committee and others. In any case, as it seems to me, the Controller must at all times have right of access to such depôts in order to see that the goods with which they are stocked are in fact those which he has purchased and of the quality for which he contracted.

My own personal view already expressed unofficially some considerable time ago to the Government of India, and demi-officially to the Madras Government, is that the present Stationery Offices in Madras and Bombay, together with any other issuing offices that may conveniently be established in other centres, should be branches of the one central stationery department. This is the English system. The home Stationery Office has branches at Manchester, Edinburgh and Dublin, but these are not separate and distinct institutions, but are controlled and inspected by the central stationery office in London. I do not suggest that in view of the trend towards "provincial autonomy" in India the analogy is complete but it may perhaps be surmised that even provincial autonomy is not desired solely for the purpose of creating new and redundant establishments.

In this connection it is perhaps permissible to mention that the Madras Government, having obtained sanction to amalgamate the posts of Superintendent of Stationery and Superintendent of Printing, is now faced with considerable difficulty in bringing the scheme into being; and I have been asked to go to Madras to advise further. The Burma Government also, having been impressed by the amount of money expended by local officers in purchasing locally articles which it was stated could not be got in time from the Calcutta Stationery Office, proposed that the Controller should stock a small subsidiary depôt at the Rangoon press. This scheme was approved a year ago but I have now learned that it is held up pending the decision on the matter of the purchase of stores generally.

Calcutta in my vision would be at once the headquarters of the purchasing and inspecting staff, a central clearing house for goods purchased, a distributing agency in bulk (by written instructions to the buyer in England in some cases, and by actual handling in others) and a distributing agency in detail for such territories and offices as were not served by other existing depôts, or any hereafter to be established.

To me the idea of creating separate *purchasing* officers in every province is unthinkable. I can see many disadvantages in such a course and not one single advantage, beyond perhaps that it might give a sop to the *amour propre* of some individuals.

Supposing, however, that it were decided that each major province should have a *distributing* stationery office of its own and under its own control, I do not think there will be any insuperable difficulty in fitting these in with a central purchasing agency, by the adoption, with modifications of the system at present obtaining in relation to the purchase of stationery by the state railways. The contracts for paper required by the railways are made by the Controller. The railways are informed of the prices and of the sources of supply. Thereafter they now place their own orders with the mills in the quantities required; and they ordinarily send samples of the supplies received to the stationery office for examination. When supplies received are obviously in general conformity with the originally approved samples, this course is sometimes omitted, but the stationery office is not left long without knowledge when the mills send goods that are not considered to be up to sample. This part of the business would probably require modification and some tightening up. Indents for imported stationery goods and articles of local manufacture are submitted to the stationery office by the railways, and goods are supplied in bulk to the railway stores.

This question of having independent provincial distributing depôts is a matter for discussion. My own experience inclines me to the opinion that the maintenance of branches of one central stationery office would be probably the more satisfactory and certainly the more economical course. There is something to be said on both sides. The Controller under such a system would stand to be shot at by every dissatisfied and aggrieved client of the provincial depôt of an imperial department: whereas if the head of the provincial depôt were an officer of the local Government these complaints would be disposed of locally. On the other hand, one great advantage which suggests itself to me in having the distributing depôts all as definite branches of one imperial department is that it would make it much simpler to consolidate and place orders for particular descriptions and sizes of paper, and to meet possible depletion of stock in one depôt by transfer, if need arose, from another. And being in direct touch with the operations of the depôts the Con-

troller would be able to obviate delays to work in the presses which might be caused by temporary shortages of paper in a provincial depôt by substituting other paper either from stock in Calcutta or from orders already with the mills.

Though perhaps the matter does not fall entirely within the four corners of the Stores Purchase Committee's enquiry, it is necessary to point out that the present Controller of Stationery is also Controller of Printing and Stamps. As Controller of Stamps he works under the Finance Department. So far as stamps are concerned, there are five central depôts, namely, at Calcutta, Madras, Bombay, Karachi, and Rangoon. The Calcutta Stamp Office consolidates the indents for postage stamps for all India (in co-ordination with the Director-General of Posts and Telegraphs) and also consolidates the indents for the distribution of all other classes of stamps on the lines prescribed by the Finance Department. The Calcutta Stamp Store, being the largest, is the "mother ship" for all the other depôts. It also makes detailed supplies of stamps to treasury officers and others within the radius appointed for its operations, namely, Bengal, Bihar and Orissa, Assam, the United Provinces and partially the Central Provinces. Whether it would be possible as a permanency to retain the union of stamps and stationery if the functions of the Controller were extended on either of the lines under discussion, might perhaps be left for decision until some experience had been gained. Personally I do not think that the two offices would be an intolerable burden to one man.

But I do not think that with an enlarged stationery office, whether or not with stamps attached, it would be possible for one man efficiently to undertake also the duties of a Controller of Printing, specially on its administrative side as regards the Government of India presses. Whether the duties of that office should be discharged by a separate technical officer, or whether the Superintendent of Government Printing, India, should be brought into direct communication with the Board of Industries, the duties of inspecting and advising all presses being again committed to the Examiner of Press Accounts, with a strengthened staff including trained technical assistants, is probably a distinct matter for discussion in the proper quarter.

B. Heaton, Esq., Principal, Civil Engineering College, Sibpur, called and examined.

Witness was not asked to submit a written statement.

Witness considered that if the want of expert consultants in India was felt by Government officials in any direction, it would be better to induce private firms to take up practice in India than to form a department recruited from officers already in Government employ. Officers in Government service had not much chance of keeping up-to-date in theory and modern practice; moreover, they were inclined to become rather hidebound by having to handle only problems peculiar to India.

Some years ago, witness had attempted to develop the testing side of the engineering work at the Sibpur College, so as to give the students a chance of appreciating some of the practical problems which arose in industries; but his proposals had not been accepted and a test house independent of the college had been established at Alipore. The importance of such practical work in engineering colleges had not been properly realised in India, but he was hopeful of improvement in this respect if the control of such engineering and industrial education was transferred to the Department of Industries. He was anxious to organise training courses in chemical and mechanical testing and was of opinion that the test house and laboratory in Calcutta should be transferred to the Sibpur College. Students would not be employed in making the tests entrusted to the testhouse but would absorb valuable knowledge by working with the analysts and testing staff on practical testing. There were no grounds to fear that tests would be held up to suit the convenience of the college course of instruction.

Students can afford little time for organised testing. Provision has to be made for so many other subjects in the college time table that when a student becomes so proficient in any single subject as to justify his being entrusted with regular practical work on that subject he has to be taken off it, to take up a new subject.

J. L. Reid, Esq., Nominated by the Indian Engineering Association.

Written Statement.

Question 9. The policy of inspection should be dictated by the consuming department.

Question 10. Inspection should be carried out in the district where stores are purchased; such inspection to be carried out under the same control as the agency for the purchase of stores.

Question 11. Yes.

Question 12. Yes. Shipbuilding.

Question 13. It would be necessary to create local inspection agencies.

Question 24. No.

Mr. J. L. Reid, called and examined.

Witness had been 32 years in India and was now Superintendent and Manager of the Hooghly Docking and Engineering Company, Limited (Messrs. Martin and Company).

He insisted that it was only fair to firms that supplies should be inspected before despatch as latent defects, which no inspector might be able to detect, might develop in transit either to an inspecting depôt or to the place of delivery. All firms preferred a clear receipt at their gates and, moreover, it was less expense to carry the inspector to the goods than the goods to the inspector.

For engineering work, highly expert inspection was necessary only in very rare cases. All actual inspection work could usually be carried out quite efficiently by ordinary inexpensive inspectors not necessarily possessing any high mechanical attainments.

For the inspection of ship and engine work generally men of the same qualifications as the present Surveyors to the Government of India, Marine Department, were quite suitable. For stand-by inspectors, ordinary shipwrights, or highly trained artisans, could, he thought from his own experience, be obtained for from Rs. 400 to 500 rising to Rs. 700. These stand-by inspectors would have no power of final rejection. Their duty would be to watch the work throughout and to bring defects to the notice of their superior officers.

The existing rules governing the building of vessels for Government might have been reasonable when there were no consulting naval architects in India. Now several firms in India had naval architects on their staff who were just as capable of designing vessels as consulting naval architects in England. All naval architects worked to Lloyds or British Corporation rules in determining scantlings. The naval architects of firms in India were as up-to-date as those in England as regards advancement in methods of propulsion. The development of shipbuilding in India had not yet proceeded far enough to attract private consulting naval architects to take up practice in

India; but this should not be made an excuse for not giving shipbuilding firms in India a chance to tender for any vessels required by Government irrespective of size. Firms in India would quote to specifications and designs prepared by the Government technical staff in India or at home. It should not rest with the Director, Royal Indian Marine, to decide where new Government vessels should be built.

Witness could not believe that vessels could be built more cheaply in Royal Indian Marine Dockyards than by private firms. He thought that all work which the dockyards were doing to-day would be done cheaper and quite as well by private firms.

To his knowledge, his firm had once been asked to quote for vessels in competition with the Royal Indian Marine Dockyards and received an order for one or two of the number required. He understood that the remainder were built in the dockyard to the same design.

Witness urged that Government should call for tenders in India for all shipwork required either repairs or new.

At Calcutta, Monday 1st March 1920.

Present:

G. H. COLLIER, Esq., C.I.E. (*President*).

A. W. Dods, Esq.
Lieutenant-Colonel C. C. H. Hogg, C.M.G., R.E.
Lalji Naranji, Esq.
Rai Bahadur Lala Milki Ram.

J. C. Highet, Esq., (*Secretary*).

A. C. Wright, Esq., Manager, Shalimar Paint Colour and Varnish Company, Ltd., called and examined.

Witness was not asked to submit a written statement.

Witness was Manager, Shalimar Paint, Colour and Varnish Company, Limited, whose Managing Agents were Messrs. Turner, Morrison and Company, Limited, Calcutta.

His firm supplied paints either dry, ground in oil, or mixed ready for use. It was a fundamental mistake to buy dry colour for mixing with oil without proper apparatus which very few possessed. Paints of all kinds could be made in India, but it was necessary to import a small proportion of the ingredients. A process had now been discovered for preparing red lead which would keep for a considerable period when mixed with oil. Red lead of good quality was now being produced in India, but the manufacture of white lead was only in the experimental stage. It had been proved to the satisfaction of experts in America that a better paint was produced by reducing the white lead with a considerable proportion of barytes, which was obtainable in India. Indian made linseed oil had no advantage in price over imported oil mainly because there was no market as yet for linseed cake in India. The Indian oil was however in his opinion of better quality than the average oil used by paint manufacturers in England, and should therefore give a better paint.

His firm sold much more to private concerns than to Government. Private firms very rarely specified what the composition of the paint should be. They almost invariably accepted the firm's regular brands. He had received specifications from some Government officers, with which it was impossible to comply. During the last few years his firm had been supplying paints to Government through the Indian Munitions Board to specifications drawn up by the Superintendent of Local Manufactures, Calcutta. The mixing of these specifications had not given rise to any difficulties; specifications had yet to be prepared for ivory black, burnt umber and some other paints supplied to Government.

No examination was made, nor was it necessary, during manufacture, but samples were taken from the bulk during manufacture and sent to the Test-House, Alipore.

The purchaser of oils and paints did not require to possess any special technical qualifications, provided he had a trustworthy chemical adviser, who, however, must be informed of the prices quoted for the various samples if asked to give a definite opinion on the comparative values. A commercial chemist with a knowledge of business of India and of chemistry would be able both to purchase and to supervise the testing, and probably would be the best type of man to employ.

His firm also made ordinary copal varnishes for indoor work, but not yet made varnish for carriage work. His company was contemplating a considerable extension of varnish-making plant, and at the same time varnishes of higher quality, in addition to the ordinary copal varnishes, would probably be manufactured.

The Shalimar Tar Distillery and Waterproof Manufacturing Company, Limited (separate from the Shalimar Paint, Colour and Varnish Company, Limited, but managed by the same agents) had been working for nearly a year, and was producing pitch, creosote, disinfectants and naphthalene.

He could see very serious practical difficulties in the way of simultaneous tendering. If Government desired that manufacturers in India should compete on equal terms with manufacturers in England, he thought that all samples would have to be examined in India. He did not think there was necessity to invite tenders in England when there was an efficient Indian manufacturer. The business of his company could not have attained its present scope unless his company were able to compete in price and quality with imported paints. His company's experience of the Indian climate and labour entitled their recommendation of the suitability of quality to great weight.

Paints which might well be purchased in India were now sometimes bought through the India Office owing to reluctance on the part of indenting officers to accept responsibility of purchasing in India. If the order was placed through the India Office, indenting officers avoided the responsibility of deciding on the quality to be purchased.

When the Lower Ganges Bridge was commenced his company placed trial plates on the site; these were in splendid condition when the time came some three years later to place the order for the paint. The paint was, however, ordered from England, and was so unsuitable that he believed it was necessary to re-paint the bridge almost immediately. The oil with which the paint was mixed had been supplied by the Gourepore Company and, being of Indian origin, was therefore suspect: nothing obtained through the India Office could be blamed. He believed that the Gourepore Company had considerable difficulty in proving that they had not supplied inferior oil.

When material of bad quality was supplied by an Indian manufacturer, a complaint could be made and the loss recouped. On the other hand when material of bad

quality was supplied by the India Office, there was no possibility of redress.

In the case of simultaneous tendering in England and in India for paints, there would probably be no difficulty in applying the system to the case of paints which could be purchased entirely on specification, but in the case of paints which depended on matching standard shades or on examination of samples, the tendency would always be for the purchasing officer to favour the tenderer whose sample had been examined or whose deliveries would be checked by his own expert. As regards the examination of samples of paint, it was difficult to give numerical expression to standards of fineness of grinding, glossiness of surface, etc., which were often of importance. Such difficulties did not arise in the case of dry colours.

In inviting tenders simultaneously in England and India, it would be necessary to have the details of the tender exactly the same, both as to quality, place of delivery, etc., so that the price tendered by the English manufacturer would include freight, allowance for loss in transit, import duty and all other charges for delivery in India at the same place to which the Indian manufacturer had to deliver. This would to some extent be a handicap against the English manufacturer, and would be a set-off against the handicap of the Indian manufacturer due to his long distance from the markets for chemicals, etc., which had equally to be purchased by manufacturers in England and India.

W. HODGKINSON, Esq., Nominated by the Institute of Engineers (India).

Written Statement.

Replying to the questions asked by the Committee, I have endeavoured to keep in view the point of view of the staff of engineers concerned, in the utilisation of and purchase of stores including machinery and plant which come within the purview of the Committee, leaving the questions regarding immediate administrative details to witnesses who have been in touch with the development in India during the last three or four years during which time I have been on active service. My experience has been obtained in dealing with engineers all over India from 1899 to 1916 during which time I was with Messrs. Balmer Lawrie and Company, Calcutta.

Question 1. I advocate the formation of a central agency, as it would provide a channel through which the indenting officer could be put into touch with the suppliers who would be in the best position to supply exactly the requirements of the indenting officer and would facilitate the preparation of such schemes as have to be drawn up in consultation with expert manufacturing practice. Such an agency would also be in the best position to collect and distribute large quantities of constructional materials, such as, iron, steel, cement, etc., used in the ordinary work of the Public Works Department, Railways, and other similar departments.

In advocating the formation of a central agency, its function should, in my opinion, be kept purely commercial, and it should not be concerned with the technical specifications or other requirements of the indenting officer, who is, when aided by the expert advice at his own disposal, in the best position to say exactly what description of plant or material is best suited for the work he has in view. Further, this officer is responsible to his department for the success or failure of work he has in hand and under the conditions of the services in India, is not likely to allow other considerations to interfere with the success of his work and consequently his professional prospects.

The conditions of service in any small body, such as a central agency must be, render the service a blind alley, as I do not think that the prospects in such a service are sufficient to retain the most expert engineers who would have infinitely better prospects in commercial engineering.

Referring to the scheme for Stores organisation prepared by Mr. A. C. Coubrough, this provides for 13 Deputy Controllers on Rs. 1,500 per month with prospects or promotion to 3 Controller-ships, 1 Deputy Controller-Generalship and 1 Controller-Generalship. In staffing such an organization it is naturally supposed that the prospects for promotion owing to vacancies in superior grades would be extremely limited, and I do not think that the class of engineers contemplated in any such organization would be content to remain in any of the presidency towns on the terms contemplated. Other openings provide much better opportunities. In this case it is reasonable to suppose that the holders of the appointments would not be men of the calibre required to fill such responsible positions; and to enable such a central agency to deal fully with technical matters, the personnel of the service would have to be largely augmented and the number of higher paid posts increased.

Referring to the Industrial Commission's proposals paragraph 351, the cost of the purchasing agency is estimated at less than two per cent. of the cost of the stores purchased. Large importing houses consider the cost of purchase alone to be in excess of this amount, and where expert advice and inspection have to be taken into consideration, a further five per cent. has usually to be paid. In large organization, such as is contemplated, there would naturally be some economy. But I think that if the incidence were less than four per cent. the department would be either understaffed or underpaid and the possibility of corruption would result in a much larger proportional cost to Government.

Question 2. Assuming the formation of a central agency on the lines I have outlined, this should be able to effect all purchases for any department of the Government of India.

Question 3. The reply to question 2 covers this point.

Question 4. The same reply covers this point. A contribution should be made in the form of a buying commission.

Question 5. I think the central stores department would be a suitable agency for the purchases of local Governments. Each local Government should have only separate accounting departments under the central control.

Question 6, 7 & 8. I have no suggestions to offer.

Question 9. The policy of inspection should be dictated by the consuming department as, for reasons given above, they are responsible for the quality of the finished work. It would be the duty of the central agency to keep the consuming officers in touch with the results of the efforts of the Industrial Department.

Question 10. The inspection of consumable stores, such as cement, iron, etc., should be under the control of experts attached to the central agency. But the acceptance or rejection of plant, machinery and other manufactured materials should lie with the consuming department.

Question 11. Departments such as the Army, Railways, Posts and Telegraphs and the Royal Indian Marine, already have officers who are competent to inspect the material supplied, and, if necessary, the personnel in these departments should be strengthened. The personnel of the Public Works Department should be strengthened by the addition of engineers competent to advise on mechanical and electrical plant, as such plants will be required in increasing quantities.

Question 12. Specialized inspection is advisable in case of dynamo electrical machinery and it has been my experience that such inspection is best carried out on site after erection. Experienced manufacturers' representatives are willing to quote for plant, delivered and erected, under a guarantee.

Question 15. The purchase of European stores through established Indian branches of British manufacturing firms or those accredited agents who have technical staff should be allowed; the only stipulation being that the acceptance or rejection of the article or plant will depend on the consuming department.

(*a*) In this case, the Indian representatives would in my opinion, be ready to hold stocks of

proved articles and it would encourage local manufacturers to produce articles of similar nature, if such could be manufactured in this country at lower rates.

(*b*) There is a growing disposition on the part of British manufacturing firms to commence manufacture in this country, and if they could build up a business in a particular line through imported articles, they would be able to gauge the market and eventually to manufacture in India if circumstances warranted it.

Question 26. As far as possible, any officers in the central of local stores departments should be recruited from the existing departments and should retain their seniority and advance *pari passu* with officers in their own department, being seconded for a fixed period say five years.

MR. W. HODGKINSON called and examined.

Witness had been 18 years with Messrs. Balmer, Lawrie and Company and three years with Royal Engineers and was now retired.

The Institute of Engineers (India) by whom he had been nominated was in process of formation. The views expressed in his written replies were his own and referred to plant and machinery and not to general stores.

Witness laid great stress on the desirability of direct touch between indenting officers and suppliers of plant and machinery. There would be no objection to the actual contract being made by a central agency so long as the contract provided for supply to the satisfaction of the indenting officer who would pass the plant or machinery after erection. Inspection during manufacture was unnecessary. Only selected firms should be dealt with and these would be kept up to the mark by the fear of being blacklisted. The alternative that schemes should be drawn up by a central agency in consultation with the indenting officers did not commend itself to him as it presupposed the employment of high technical experts in the central agency. A really first class expert in electrical plant would not be obtained now for less than Rs. 3,000 a month and the same class of man would probably command Rs. 4,000 in few years' time. It was preferable in any case that the indenting officer should see all tenders.

Witness considered that it would be a great mistake to attempt to build up a government consulting engineers' branch as part of a central agency. To be a success a highly paid expert would be required for each branch of engineering and even then he thought that it would be found necessary to go to London for the best advice.

A useful function of the central agency would be to spread standardisation amongst the various government departments.

At Cawnpore, Thursday 4th March 1920.

PRESENT:

Brigadier-General H. A. K. JENNINGS, C.I.E., (*President*).

G. H. COLLIER, Esq., C.I.E.
Lieutenant-Colonel C. C. H. HOGG, C.M.G., R.E.
LALJI NARANJI, Esq.
Rai Bahadur LALA MILKI RAM.

And the following Co-opted Member:—

P. H. CUTTERBUCK, Esq., B.L., C.I.E., Chief Conservator of Forests, United Provinces.

J. C. HIGHET, Esq., (*Secretary*).

C. R. O' MALLEY, Esq., Director of Industries, United Provinces.

Written Statement.

Question 1. I advocate the formation of a central agency for purchases on account of departments of the Government of India, for several reasons. One reason is that with such an agency, many indents will be placed with manufacturers in India, which would otherwise be dealt with by the Director General of Stores, this encouraging as it will Indian industries, ought to result in productions of a superior standard to the present one, and the manufacture of stores which hitherto have not been produced in this country. Another reason for having purchases made by a central agency is that it will do away with that competition which takes place when several departments of Government are making purchases of similar articles, at the same time. It will also reduce the opportunities the middle-man has for playing off one department against another, where the services of a middle-man are necessary, in such cases as the purchase of hand made blankets, and similar articles which are made by a section of artisans amongst whom organization is absent. With a central agency, there will also be the advantage to Government, of having a body of experts to whom the best sources of supply are known.

Questions 2. I do not see why any special arrangements should be necessary.

Question 3. My knowledge of the different classes of stores is not sufficiently extensive to justify me in offering a decided opinion, but I do not favour the creation of more than one agency.

Question 4. (*a*), (*b*) and (*c*) Yes. I am opposed to the idea of making local and quasi-public bodies contribute towards the maintenance of the central organization.

Question 5 and 6. I do not consider the creation of local agencies for the purchases of Local Governments, desirable.

Question 7. My experience is limited. I consider it a mistake, however, for Government to call for tenders on a fixed date every year. Government should not work to any date in calling for tenders. It should be guided by the state of the market in fixing a date for receiving tenders; moreover, it should be allowed to renew or extend a contract at any time should it consider the time opportune.

Question 8. Nil.

Question 9. I consider the department responsible for the industrial development of the country should dictate the policy of inspection.

Question 10. Yes.

Questions 11 and *12.* I do not consider any departments require special inspection organisations of their own. The various Government laboratories could give assistance, when necessary.

Question 13. Assuming the creation of local agencies for the purchases of Local Governments—the desirability of which I question—I consider that inspections should be carried out by a central inspecting agency. It would be more efficiently and economically done by the central agency, and this agency would thus have a more practical knowledge of the actual state of industries in the various provinces, than if tied one province. They would be in a position to indicate the course to be taken by a backward industry in any one province, by their experience of other provinces.

Question 14. Yes.

Question 15. Purchases of European stores are usually made by industrial concerns in India, through established branches of British manufacturing firms, on a buying commission of 2½ per cent., *plus* cost of packing, rail and sea freight, insurance, clearing and forwarding. I have no information to go upon, to enable me to say how much this buying commission is in excess of what the cost of purchasing through the Director General is, but be it less or more, I consider that where such branch of a British manufacturing firm is dealing in some highly specialised commodity, and, as they very often do, they have experts on their staff who can advise on its use, there is every advantage in making purchases through such branches. I refer particularly to indents for goods which will have to be shipped. For the purchase of ready stocks from such branches, it has to be remembered that from 10 to 15 per cent., has to be added to cover the expense of the branch office, and purchases of this kind would only be justified where quick delivery was essential in order to prevent profit earning machinery—for example, a Government Turpentine Factory—remaining idle. At the same time it would be advisable that the Director General should be furnished with a list every month, of all such purchases, together with the prices paid.

(*a*) Speaking from experience, I do not think that making purchases in this manner will affect the holding of stocks.

(*b*) Or endanger the possibilities of the firm establishing manufacture in India.

Question 16. Yes.

Question 17. The India Office could keep the Central Agency informed by fortnightly statements of the prices of all necessary and recurring stores. It would also be quite feasible to introduce a code for dealing with urgent cases by cablegrams, as is done at present with American and Liverpool cotton prices, and Manchester yarn and piece goods prices.

Question 18. It would be preferable, I think, if indents for all classes of stores went through the Director General, except such as are mentioned in item No. 15 above. If organizations of this kind are split up, valuable trade information is not so readily obtainable, or it may be lost sight of entirely, either for trade reasons, or through the Director General not having complete information at his command.

Question 19. No. Such a procedure would increase the cost of the stores. The only stores allowed should be those in connection with the inspection department and the consuming departments. With Central Stock depots there would be the danger of:—

(*a*) Holding stocks far in excess of the actual requirements of the indenting Government departments.

(*b*) Discouraging private firms from holding stocks.

The result would be unsatisfactory in either case. At the same time, I would recommend that once every three months, every department furnished the Central Agency with a list of stocks, and the period they are expected to last, based on an average consumption taken over a period of three years. In this way, the tendency to accumulate stocks would be checked, and, when stocks had accumulated, arrangements could be made to transfer the excess to other departments, or provinces.

Question 20. See reply to No. 19.

Question 21. Information is being collected. It will be comparatively small.

Question 22. None.

Question 23. Yes.

Question 24. I have no opinion to offer.

Question 25. In my opinion, no.

Question 26. No.

Question 27. No.

Question 28. I have never gone into this question.

Question 29. To exercise a more efficient audit, and secure fuller compliance with the rules in force, men specially trained for the work would have to be recruited. An efficient audit is necessary, and, given a competent staff, this can be secured.

Question 30. An interchange of personnel between the Home and Indian Stores Departments is desirable, provided it is confined to specialists.

Mr. C. R. O' Malley, called and examined.

Witness had been Director of Industries, United Provinces, since 1917. Previous to that, he had been Manager of the Cawnpore Cotton Mills Company, Limited.

At present few cottage industries could afford to establish co-operative societies and the business was conducted through middlemen who posed as provincial manufacturers but who really only made advances to the workers and collected their production. A Government buying officer could replace these middlemen only if funds were placed at his disposal from which he could make advances as required without having to obtain departmental sanction on every occasion. This work could very well be undertaken by the Director of Industries if the necessary staff were added to his establishment.

His reason for recommending that no charge should be made to local or quasi-public bodies, etc., for the use of the Central Purchasing Agency was that their purchases would probably not involve any increase in the establishment or expenses of the agency over what would be required for Government purchases alone: whereas their purchases if made independently in competition with the Central Agency might affect the prices appreciably. Moreover the exact calculation of the charge proper to each order would be very complicated and would require a costly establishment.

By saying the policy of inspection should be indicated by the Department responsible for the industrial development of the country he did not contemplate that Department would attempt to induce the consuming departments to accept an inferior standard. The consuming departments should, however, be amenable to advise and be prepared to consider and give a practical trial to all suggestions put forward by the Department developing industries.

He could see no objection to the employment of the experts on the staff of the Directors of Industries for the inspection of purchases arranged by the Central Agency.

Provincial Governments should have first claim on the products of their own province. If Local Governments displayed preference by desiring local products to be purchased at prices above those prevailing elsewhere, there was a danger that local manufacturers would exploit this concession to keep up their prices.

He had not considered the present stores rules very deeply but he thought that the financial limitations at present prescribed should be abolished.

In his experience the middleman or distributor was out solely for profit as a seller and had no desire to take the risk involved in starting manufactures in India. The middleman was therefore of no use in the development of industries and nothing should be done to encourage him.

He would only buy imported stores in India in case of emergency as direct purchase from the United Kingdom must on the whole be cheaper.

He had not reckoned on the enormous number of items in some departmental stocks and agreed that this might render impracticable his suggestion that every department should furnish the Central Agency quarterly with a list of stock.

To secure the simplest form of audit compatible with efficiency he would seek the advice of some firm of chartered accountants.

T. Howard Vick, Esq., M.I. Mech. E., F.R.S.A., Agricultural Engineer to Government, United Provinces.

Written Statement.

Question 1. No. Reasons are as follows:—

(*a*) The formation of a central purchasing agency would be a retrograde step and not in the best interests of trade development in the provinces. There has been too great a tendency in the past in India for all classes of manufacturers and agents to mass themselves in two great trade centres, Calcutta and Bombay, and until such firms begin to branch out in provincial towns up-country no great development of industries in India generally will result. I am very hopeful that under the new scheme of reforms in India, the provinces being in a great measure self-governing, the tendency will be for firms of engineers, machinery, hardware and ironware agents, and manufacturers generally to enter such provinces in order to secure the trade. A central purchasing agency for all government departments and for local and *quasi*-public bodies would be, at any rate for some time to come, buying a big proportion of a province's requirements and would rather encourage the firms to stay on in Bombay and Calcutta, in fact encourage centralisation rather than decentralisation.

(*b*) Such an agency seems an expensive and unnecessary extravagance and in no wise calculated to pay India for such agency's upkeep. All the big government departments have, or contemplate getting, their own expert officers who are quite capable, without the intervention of a central purchasing agency, of buying their own department's requirements. Thus the Public Works Department have expert electrical and mechanical engineers, the Forest Department are forming their own engineering service, the Agricultural Departments have their own engineers, and each such officer is better able to satisfy its own department's requirements

than would be a central purchasing agency for all India.

(*c*) A central purchasing agency is too prone to give an indenting officer what it (the agency) *thinks* such an officer should have, rather than the exact thing such an officer *knows* he wants. I have actual experience of this, having been for many years Deputy Superintendent and Superintendent of a large government workshop where big quantities of stores were purchased both through the India Office and through local firms in India. Also as Agricultural Engineer to Government of the United Provinces during the past six years I have such experience and can produce evidence to show exactly what I mean.

Question 2. It is probable that such special departments as the Posts and Telegraphs, Royal Indian Marine and the Army Department cannot obtain a lot of their requirements from Indian firms and agents but they have the India Office to purchase such special requirements for them, and their own specialist officers to make out such indents, and I cannot see that they would gain anything from a central purchasing agency in India. I have no experience of such special departments though, and am not qualified to speak definitely for them. I merely offer the above suggestion.

Railways have their own specialist officers for purchasing, and their own stores, and are probably better off under their present system than they would be in the hands of a central purchasing agency.

Question 6. Assuming that a purchasing agency had to be formed I should prefer the local agency to the central. The local trade and industries of a province are more likely to be encouraged and fostered by the former than the latter. The great need of India is decentralisation, the encouragement of independence and responsibility in trade and industries in the provinces, and for this reason I consider the formation of a central purchasing agency (as I previously pointed out in my No. 1(*a*) above) a retrograde step.

I further think that even the local purchasing agency is unnecessary, for the same reasons as given in my No. 1(*b*) above on the question of a central agency.

Question 7. Yes. Government usually calls for tenders for supply of important machinery or stores by advertisement in the leading technical journals such as *The Indian and Eastern Engineer* and *Indian Industries and Power* and the important daily papers such as *The Statesman*, *The Pioneer* and *The Times of India*. This is the method adopted in all up-to-date and progressive countries and no better method exists.

There is another method adopted with less important contracts of writing to a certain number of firms who are known to stock the article required and asking them to quote for such. This is very similar to the advertisement system and is equally effective.

I have no suggestions to make for the betterment of such methods.

Question 8. No, I think not. Fluctuations in market rates from day to day would render it impossible in the case of ordinary machinery and stores which are stocked by firms in India.

In the case of large and important pieces of machinery not stocked in India it is often advantageous to purchase through the accredited agent in India of the English manufacturing firm, rather than direct from the manufacturing firm itself through Government agency such as the India Office, as such agents in India will often be responsible for erection and installation of the machinery.

There is a tendency for important English manufacturing firms to establish actual branches of their English works in India and this, I think, should be in every way encouraged by calling for tenders from such branches and placing orders where possible. The establishment of such branches is the first step towards the actual manufacture of the goods in India and doubtless in time will lead to it, a very important end for India to attain. As examples of such firms I would mention:—

Messrs. Marshall, Sons & Co., Ltd.
Messrs. Stewarts and Lloyds, Ltd.
Messrs. Alfred Herbert & Co., Ltd.
Messrs. The Westinghouse Electric Co.
Messrs. Thornycrofts, Ltd.
Messrs. George Cradock & Co., Ltd.
Messrs. The General Electric Co., Ltd.
Messrs. Saxby & Farmer, Ltd.
Messrs. The British Thomson-Houston Co., Ltd.
Messrs. Campbells Gas Engine Co., Ltd.
Messrs. Mather and Platt, Ltd.

Question 9. I do not catch the exact meaning of the enquiry as to whether "the policy of inspection should be dictated by the consuming department or by the department responsible for the industrial development of the country." If the meaning however is that such dictation placed in the hands of the latter department would enable it to arbitrarily force upon the consumer not the exact article which he had indented for but one which the industrial department considered "just as good and suitable," I am all against such dictation as being not in the best interests of either the consumer, the manufacturer or supplying agency, or the industries of the country in general. This in the past has been the one great fault of the India Office Stores Department, too much dictation, and not enough attention to the exact requirements of the indenting officer who is generally a specialist officer and is well acquainted with his own needs. The "department responsible for the industrial development of the country" should never set itself up as a dictator, it is an attitude the consumer would generally very rightly resent. Such department, if established, should, in its relations with the consumer seek to persuade but never to dictate.

Questions 11 and 12. I cannot imagine any central or local agency for the purchase and inspection of stores, etc., being of much use to the agricultural department. Our requirements are in a great measure special and purchase would be far better left in the hands of our specialist officers. Take, for instance, ploughs of which many dozen of patterns and weights exist. I would not expect any officer of a stores purchasing agency to have the necessary knowledge and experience to enable him to buy the right thing for the Agricultural Department in this line. Certainly if he had such knowledge and experience his proper position would be in the Agricultural Department rather than in a Stores Department.

The Agricultural Department generally would on the one hand, greatly welcome co-operation with, and assistance from, an Industries Department in enabling it as far as possible to get its requirements manufactured in India, but it certainly would not, on the other hand, welcome dictation as to its purchases from either a Stores or an Industries department. The Agricultural Department, perhaps more than any other Department in India, consists of specialist officers, and will continue to consist of such.

Question 13. Assuming the creation of local agencies for the purchases of local Governments, inspection should be carried out by such local agency rather than by a central inspection agency. A dual control system, partly by local and partly by central agency would mean the shirking of responsibility by both, the consumer not being able to attach blame for the supply of unsuitable or inferior articles to his local purchasing agency owing to the latter sheltering itself behind the assertion that it was under the control of the central agency, whilst the central purchasing agency would consider itself "Imperial" and being criticised by "local and provincial" consumers. As I said before, India is in need of decentralisation and any policy towards centralisation I should consider as a retrograde one. I would carry this policy of decentralisation as far as to eliminate both the central and the local purchasing agency and allow the purchasing departments to obtain and inspect their own supplies through the agency of their own expert officers.

Question 15. Departments of local governments should be allowed to freely purchase by the agency of their own

expert officers from Indian branches of British manufacturing firms, all the European stores required, whether such stores are in India or not at the time of purchase.

The granting of this concession would :—

(*a*) greatly encourage the holding of stocks in India by the firm.

(*b*) greatly enhance the possibilities of the firm later on establishing manufacture in India.

Question 16. No. Such a scrutiny seems entirely unnecessary and only calculated to cause friction and delay.

If indents are to be transmitted to the Director General of Stores, India Office, they should be sent direct from the head officer of the indenting department of the local Government to the Director General, London, and not through the Government of India at all. The intervention of the Government of India in the matter is useless and unnecessary and enables officers to evade responsibility. The indenting officer should be responsible for a correct indent specification and the India Office Stores for a correct supply of goods to that specification. There should be no intervening authority.

I would however, as far as possible (as expressed in my No. 15) require indenting officers to purchase their goods in India from Indian branches of British manufacturing firms and from Indian agents. This is preferable, for the reasons stated previously to purchase through the India Office Stores, London.

Question 19. No. The formation of central stock depots would:—

(*a*) prevent the holding of stocks by Government departments which, speaking generally, would not be a bad thing;

(*b*) discourage the holding of stocks by private firms which would be an extremely bad thing for Indian trade progress.

The policy should be for neither central stock depôts nor Government departments to hold stocks, as far as possible, but to encourage Indian firms and merchants to hold the stocks and the departments to purchase from them when actually required.

One of the great drawbacks of Indian departmental methods is the lapsing of money at the end of the current financial year. This encourages the officer, rather than have his funds lapse, to purchase a lot of unnecessary stores. In this way I have known, say, lakhs and lakhs of bricks to be purchased in a year to prevent lapse of funds and such bricks after being kept for years without use, to be finally sold off in a deteriorated condition.

Question 21. The Agricultural Department is a very young one and by no means fully formed yet, whilst in 1910 it was scarcely formed at all. I will therefore confine myself to the present figures:—

(*a*) about Rs. 70,000.

(*b*) about Rs. 2,00,000.

(*c*) about Rs. 1,00,000.

The department is showing a big tendency towards progression and in a recent report to Government I mentioned that in a very few years I calculated I should be purchasing Rs. 10,00,000 worth of goods in a year. This would be mostly of category (*b*) "Imported stores purchased in India" until such times as the required goods, mostly machinery, are manufactured in India.

I would mention in this connection that I am taking steps to encourage the manufacture in India of the goods required by the department and I hope for, and attach great importance to, this expansion of manufactures. I am shortly meeting the Indian Sugar Committee in Bengal and going over works there with them, purposely to see how far such works are equipped for these manufactures.

Question 23. No. In my opinion it is far preferable for the purchasing officer to be himself in touch with the contracting firms and to be *himself* cognisant of the prices, capacity, and performance of such firms. As I stated previously, any intervention of a central agency would tend to evasion of responsibility on the part of the purchasing officer.

Question 29. No. I consider the expert purchasing officers of the departments of local Governments quite at capable of auditing their purchases and of compliance with the rules in force as any officers of a central or local stores department would be. Here again evasion of responsibility would come in as regards the purchasing officer and I can imagine no method so calculated to reduce the efficiency of a department and its officers as the encouragement of evasion of responsibility.

Mr. F. Howard Vick, called and examined.

Witness had been Agricultural Engineer to the United Provinces Government for six years. Previous to that, he had been in charge of the Canal Foundry and Workshop at Roorkee for 15 years.

He agreed that some economy might reasonably be expected to result from centralised purchase of stores in general use; but in his experience competition in normal times had always been between sellers, and so to the advantage of the purchasers, and he doubted whether the saving all-round would cover the cost of a central purchasing agency.

To assist in the establishment of new industries in India, he was quite prepared to pay a little more for Indian made articles and to accept a lower finish provided there was no question of the strength and durability.

Lieutenant-Colonel W. B. Spalding, R. A., Chief Inspector, General Stores, Harness Factory, Cawnpore.

Written Statement.

Question 1. Yes. I am in favour of a central agency for purchases on account of departments of the Government.

My reasons are that such an agency could be placed in a position to exploit the resources of India in a way that is not possible with local and departmental purchase.

A central agency would be able to do this because it could afford to establish an intelligence service which would give it full particulars of prices and resources both of raw material and manufacture throughout India. It would also by standardisation of patterns reduce cost in manufacture, and would eliminate competition between local and departmental purchases for similar articles of a limited supply. A central agency would cost less than a number of local purchasing establishments and would tend to become more expert at its work and to take wider views than a number of local purchasing agencies.

Question 2. Yes. Special arrangements are required for particular departments. Each department mentioned should be represented at the central agency by an officer technically qualified to decide how the purchase of stores should be made and to act as arbiter in the case of dispute between inspector and supplier.

Question 3. I know of no stores that could not be purchased by a central agency provided the agency has a staff of inspectors sufficiently technically qualified and with a proper equipment to carry out necessary tests.

Question 4. Yes, for the reasons given in answer 1. Any body or Government making use of the central agency should contribute towards the central agency.

Question 5. Yes. I consider that a central stores agency would be a suitable agency for the purchases of local Governments. Decentralization would be arranged for by subordinate branches of the central agency.

Question 6. I am not in favour of local agencies independent of a central agency for the reasons given in answer 1. If such local agencies are formed, departments of the Government of India should obtain their requirements

through these agencies if the agencies are capable of meeting the requirements.

Question 7. I have experience of the calling for tenders by the Ordnance Department. The tendency prior to the late war was to pool local demands and to centralize the placing of orders. This was a beneficial tendency as eliminating competition and reducing expenses in manufacture, but was vitiated by the fact that orders were distributed over several centres and the inspection was carried out at these centres with the result that the standard of acceptance varied owing to the personal equation of the purchasing officers who were not whole time inspectors and owing to the want of complete and universal particulars for their guidance. The capability of tenderers was also apparently not well known to the central authority. The remedy would have been to provide a fully trained inspection staff, a better intelligence of the capabilities of tenderers and fuller particulars for the guidance of tenderers and inspectors.

I have also had experience of the placing of orders by the Indian Munitions Board during the war. The greatest defect noticeable was the ignorance of the capabilities of the manufacturers and suppliers and the failure to provide that supplies should be of the standard required by the Army.

Question 9. The policy of inspection should be dictated by the consuming department and not by the purchasing department. The payer of the piper is entitled to call the tune. The department responsible for the industrial development of the country would be tempted to place orders in India before the manufacturers had proved their capabilities of producing to the standard required by the consuming department and would be tempted to order the acceptance of inferior supplies rather than acknowledge incapability to supply in India.

My experience of the Indian Munitions Board during the war leads me to believe that the responsibility of the purchasing body towards the consumers was little understood, or if understood was disregarded. It also did not appear to be understood that the inspector should be the agent of the consumer and not of the purchaser. It is to be acknowledged that during the war the alternative of purchasing supplies in England hardly existed and time was a very important factor, but on the whole I gathered that purchasing officers (Controllers, Indian Munitions Board, etc.) were far from recognising how entirely incapable of working to a proper standard many of the firms were to whom orders were given. I could give several instances of orders being placed with self-styled manufacturers who had no factories at all or very small ones. The system of sub-contracting was allowed to any degree. A custom of accepting samples from contractors without reference to the inspector who held the standard particulars was very detrimental to the production of good work. The purchasing officers appeared to be unprovided with any good intelligence regarding the capabilities of suppliers. By these practices the inspectors' hands were forced and they were obliged to abide by contracts entered into by purchasing officers without reference to them, which was tantamount to making the policy of inspection subservient to that of purchase.

The function of inspection may be likened to that of a filtering material. If for any reason the supplier of unfiltered water is allowed to tamper with the filtering material the purity of the filtered water will be endangered. If however the purity of the water becomes of less importance than the volume of water supplied, the consumer of the water is at liberty to reduce the severity of the filtering to suit his needs. That is to say, that the policy of inspection should be controlled by the consumer and not by the supplier, the supplier being the purchasing officer.

Question 10. I am of opinion that there should be one central inspection agency, the head of which should be responsible through the head of the purchasing agency to the consuming departments, from whom he should obtain full particulars of the class of article required. It should be the duty of this inspection agency to prepare patterns, samples, specifications and drawings from the particulars given by consuming departments for distribution as required to all tenderers. I am not in favour of the inspection agency being responsible for the gathering of intelligence of the capabilities of manufacturers and suppliers of raw materials as in my opinion the less the inspector has to do with the supplier the more independent will be his action; nor should it be the duty of the inspection agency to educate the supplier except by the hand school of rejection. On the other hand the inspection agency should be in close touch with purchasing agency and should provide the latter with information regarding the capabilities of suppliers as judged from their performances on former contracts, the inspection agency should also be consulted by the purchasing agents before placing orders. This system is adopted by the War Office in England with good results. It gives opportunities of detecting errors before Government is bound by contract and acts as an incentive to suppliers to earn the good opinions of the inspection agency by promptitude and good work.

Although I would insist on the independence of the inspection agency in relation to the actual purchasing officer, I recognise that the head of the inspection agency must be subordinate to the head of the central purchasing agency. In my answer to question 2, I have suggested that the head of the purchasing agency should be assisted by representatives from the consuming departments and I would give to these representatives the right to dictate to the head of the inspection agency the policy to be adopted where they are alone concerned. Where more than one department is concerned the head of the central agency would determine the policy after consultation with representatives of the departments involved. In matters of organisation the head of the inspection agency would be subordinate to the head of the purchasing agency.

Revised reply to Question 10. Since submitting my written evidence, I have had time to reconsider my reply to question 10 of the questionnaire. I am now doubtful whether at least at the outset, and as far as the Army is concerned, it should be the duty of the civil inspection agency to prepare particulars to guide manufacture and inspection. This is not strictly inspection work and it seems preferable that where they are in a position to do so consuming departments should prepare their own particulars and special instructions for the points to be looked into in inspection, these latter being based on the experience that the consuming departments will alone possess. There is an advantage in the particulars being prepared by the consuming department in that it would be in closer touch with the users of the stores to be purchased and better able to judge of the consumers' wants. A pattern is often not sufficient a guide to the drawing up of specifications.

I also consider that the consuming department should be allowed some check on inspection and I suggest that while the new inspection agency is learning its work, the approval of samples from tenderers should ultimately rest with an agency of the consumer that should be entrusted with the duty of providing full particulars. This system would no doubt appear irksome but I would like to call attention to the difficulties that will arise in recruiting the staff of an inspection agency and to the necessity of proceeding with caution.

I think that I am right in saying that except for the Ordnance inspection section and for one or two inspectors employed by the Army Clothing Department (now Indian Munitions Board) there is little or no organised whole-time inspection on scientific lines. My experience of private firms is that their shop inspection, even where it exists, is very perfunctory. Therefore if the staff of the new inspection agency is recruited in India it will be almost entirely untrained in scientific inspection and it would be unsafe to place the inspection of military stores in its hands without a check.

It may be however the intention to recruit the staff in England. There must be a considerable number of men who have been employed during the war as inspectors of munitions who would be procurable if sufficient inducement were offered, but although the experience gained by these men would be very valuable, I am of opinion that it would take some time for such men to get accustomed to

the conditions prevailing in India, *viz.*, the unreliability of the workmanship, and the ignorance of the contractor of the real meaning of a contract. Men trained to English conditions are likely either to reject wholesale in disgust or to rely too much on a level standard of workmanship, which is generally absent. I contend that even if the staff of the inspection agency is recruited from trained inspectors from England, this staff will require guidance for some time and the results of their inspection will require checking before any large quantities of stores are passed.

Question 11. The principles of inspection are the same for all classes of stores. I see no reasons for any special organisations provided that the central inspection agency is equipped with the proper staff and appliances to carry out efficiently every class of inspection required, but until confidence exists in the efficiency of such inspection, the inspection of purely military stores by military officers is advisable. A knowledge of the use of the stores to be inspected is most essential in all inspections.

Question 12. There are a very large number of classes of articles which require specialised inspection but apart from special organisations this can be provided within one central organisation by the recruitment and instruction of technically trained inspection staffs and by the provision of the necessary special apparatus for carrying out efficient inspection. It would be impossible to provide inspectors only trained to inspect one class of article for every class, but technically trained examiners are required for each special class, *e.g.*, saddlers to inspect leather articles. It would be desirable that inspectors should have practical experience of the use, or the manufacture, or supply of articles of a nature allied to those with which they will be called upon to deal, but except for very special work the higher inspection staff can be given sufficient technical knowledge after recruitment. There are certain general principles of inspection but that must be learnt even by those who are technically expert in the supply of articles which they are called upon to inspect. Great insistence should be placed upon honesty, obedience, and general intelligence. Facilities should be provided by deputation to England and by interchange of views and experience and by examination of stores in use for the acquisition of knowledge requisite in inspection work. Above all, it is necessary to attract men of integrity by the offer of generous pay. The pay suggested by the Industrial Commission is on the whole inadequate and the number of inspectors is insufficient.

Question 13. Even if local agencies for the purchase of government stores are formed, I would advocate inspection being under a central agency. It would prove extremely expensive to supply the technical trained staff for each agency, and the standard of acceptances would tend to vary between agencies. This has been found to occur to some extent even with central control.

The site of local inspection depôts need not coincide with the position of local purchasing agencies. The former should be placed where most convenient for receipt and distribution.

Question 19. The advantage of the Government of India holding stocks would be that urgent demands by consumers would not be as likely to lead to the acceptance of inferior articles to meet immediate requirements as at present, but the disadvantages probably outweigh this.

Question 22(b). Records of bad work by supplying contractors are kept by inspecting officers.

Question 25. The purchase and inspection by Government on behalf of bodies not government departments should not be considered to constitute any interference with the legitimate sphere of private enterprise. If the supplier is honest, he should have nothing to fear from government purchase and inspection.

Question 26. I have given my views regarding the qualifications required in inspectors in answer No. 12. I would urge that inspectors and examiners must be generously paid as they are subjected to a great amount of temptation to accept bribes and commission from supplying firms.

Inspectors for special classes of work, where the quantities justify it, should be selected from those with technical knowledge. For general work, inspectors should be selected from men with a good education and of high character. Some technical experience is advisable. A thorough training in inspection work under experienced inspectors is essential and opportunities should be freely given to inspectors to study manufacturing processes at home and in India and also to study methods of inspection adopted in England.

The same remarks apply to the subordinate staff of examiners except that in place of a high standard of education more insistence should be made on technical knowledge of many of the trades to be dealt with.

The inspection staff should be divided into groups corresponding with the classes of articles to be dealt with. There should be a headquarters for each group and all particulars to tenderers and local inspectors should be issued from such headquarters. These headquarters would be administrative as regards actual inspection work and would be under the head of the inspection agency. There should be local inspection agencies staffed according to requirements. The personnel of these should be administered by the head agency, except as regards inspection processes, etc., for which each class of inspector will be administered by the head of the group to which he belongs.

Question 27. Yes.

It may be necessary to have different percentages for different classes of stores to correspond with markedly different expenditure in purchase and inspection, but it would probably be advisable to commence with a flat rate.

Question 30. No, but I consider that deputation to England to study English methods would often be advisable.

Lieutenant, Colonel W. B. SPALDING, called and examined.

Witness's Indian experience dated from 1900 and his experience as an Inspector from October 1912.

In his opinion systematic inspection was necessary if full value for money was to be obtained. This was especially so in India where many so-called contractors did not appear to understand the obligations which a contract carried with it. During the war the manufacture of counter-samples for supply to contractors tendering for government orders had become a specialised business amongst expert mistris in Cawnpore and supplies made against contracts rarely came up to the counter samples which had been furnished with the tenders. It was very necessary to test the capability of the firm by actual inspection of the works and by trial orders before entrusting it with any large order.

The only satisfactory way of inspecting general stores was at inspection depôts and each contractor's supply should be inspected at the one depôt as otherwise there was a danger that articles which had been rejected at one depôt might be offered to and accepted at another. In special circumstances inspection could be done at the contractors' premises provided the contractors set aside for the inspection work proper accommodation which should not be inferior in conditions of temperature, lighting, etc., to those to which the inspection staff would be accustomed at their own inspection depôts and must be cut off from all interference from the contractors or their staff. Many of the firms at present contracting for government stores were small and he knew very few who would be able to provide suitable accommodation.

Even where proper accommodation could be provided he was not in favour of inspection at contractors' works. It was unsafe to allow passed stores to remain in the hands of contractors for despatch even if the stores had been marked with an acceptance mark. He knew of one case where the passed mark had been cut out of passed tents and transferred to tents which were inferior. Also the less the subordinate inspection staff came into contact with

contractors the better and since none of the subordinate staff should be allowed to pass or reject stores without the approval of an inspector. It was essential that an inspector should accompany the inspection staff to the works and this was often an uneconomical proceeding especially when much time had to be spent in travelling. Moreover conditions of travel and of chance accommodation were so indifferent in India that outstation inspection was always liable to be hurried. There was also a feeling of strangeness which was disturbing and he had noticed that out side inspection work was rarely so well done as that done under familiar conditions.

It might be objected that the expense of sending stores perhaps long distances to inspection depôts would be considerable and that the supplier would be inclined to allow in his price for the return of a percentage of his deliveries but on the other hand the expense of sending an inspection party to out-stations would also be considerable if adequate travelling allowances were given and moreover valuable days would often be spent in travelling. There would also be the expense of providing the extra set of samples, gauges and other inspection equipment at each works.

It was his opinion that if seven or eight inspection depots were established throughout India (as was now the case with the inspection section of the Ordnance Department) with a distributing and forwarding agency attached to each then there would be no legitimate call for inspection at contractors' works, and inspection would be better done and better supervised than with any system of travelling inspection.

He recognised that in some cases inspection in contractors' premises would prove more economical, for instance, the inspection of heavy and bulky stores such as carts and waggons or of such stores as textiles which were bought in bulk of which the quality could be ascertained by test and examination of a percentage.

He foresaw considerable difficulty in recruiting staff for an inspection department in India. Leaving apart specialised experts who would join in middle life after a proper training and whose conditions of service would require to be considered individually, he thought that the least pay of inspectors in depôts and having the status of officers should be Rs. 750 per month, and the lowest pay of outside inspectors in independent executive charge should not be less than Rs. 950 per month. All the above supervising officers should be pensionable and have good prospects of promotion.

The actual inspection should be done by examiners who would be recruited as specialists in particular trades and would rise as they became qualified to undertake more general work to Rs. 400—500 per month with free quarters. Foreman examiners would be chosen from the ranks of the examiners and paid at least Rs. 600 per month with free housing. Foreman examiners with exceptional qualifications would be eligible for promotion to the officer grades.

The examiners would be assisted by viewers to do the simple mechanical routine of gauging.

At present he had Indians working as examiners and he had tried to secure Indians as inspectors but had received no suitable applications in response to his advertisement. All the viewers were Indians.

With reference to his written reply to question 10 he recognised that duplication of work would result *each* department had its own patterns and specifications prepared by its own officers, but it would be an important duty of the inspection department to initiate standardisation and also to suggest modifications which would lead to economy. There was no need however, to insist on absolute similarity in articles of the same kind except in the details affecting interchangeability. In his opinion too much of a fetish was made of having Indian stores exactly to English patterns, but it would have to be the duty of the inspection agency to combat the opposite tendency, which was to accept an article far below the English standard simply because it was made in India.

At Cawnpore, Friday 5th March 1920.

PRESENT:

BRIG. GENERAL, H. A. K. JENNINGS, C.I.E. (*Presiding.*)

G. H. COLLIER, Esq., O.I.E.
Lieutenant-Colonel C. C. H. HOGG, O.M.G., R.E.,
LALJI NARANJI, Esq.
RAI BAHADUR LALA MILKI RAM.

And the following co-opted member:—

P. H. CLUTTER BUCK, Esq., C.I.E., Chief Conservator of Forests, United Provinces.

J. C. HIGHET, Esq. (*Secretary*).

E. R. STEVENS, Esq., I. F. S., Conservator of Forests, Utilisation Circle, United Provinces.

Written Statement.

I have the honour to forward written replies to the questionnaire on which evidence is being taken by your Committee.

I have previously had under consideration the question of the procedure to be followed in the purchase of stores from Europe and America. The above replies do not perhaps fully bring out some points on which I wish to lay emphasis. I therefore send you a copy of a letter which, I wrote to the Chief Conservator of Forests, United Provinces, on this matter which will supplement the replies given to your questionnaire.

Question 1. No. Such an agency would, I consider, result in increased delays, correspondence, and expense.

Question 2. No. Indenting departments have their own experts and know their own requirements. It should suffice for Government to lay down broad lines of policy to ensure purchase in the cheapest market consistent with expedition in supply and proper guarantees as to quality.

Question 3. I consider a central agency unnecessary for undertaking purchase of any class of stores. Each department should arrange for its own purchases usually by calling for tenders from all reputable supplying firms.

Question 4. I think they would prefer to arrange for their own purchases.

Question 5. I think not.

Question 6. I do not favour the creation of local agencies.

Question 7. Indirectly, and it would appear to make for excessive delays in obtaining supplies which do not

occur when orders are placed direct with supplying firms.

Question 8. This would seem quite possible without having a central stores department.

Question 9. By the consuming department.

Question 10. No—but by the agency of the consuming department.

Question 11. Departments could generally arrange for inspection where necessary without any increase of establishments and could arrange for such increase if found essential. Purchase from reputable firms under guarantee should render preliminary inspection unnecessary in the vast majority of cases.

Question 12. Yes, timber.

Question 13. The purchasing agency, whatever it may be, should, I think, be responsible for inspection when necessary.

Question 14. Not necessarily. The system of obtaining articles not manufactured in India by indent on the stores department of the India Office is, however, unsatisfactory, and might well be abolished. If consuming departments deal direct with firms of repute, unnecessary delays are avoided.

Question 15. Should be allowed in all cases provided the price and quality of stores offered in India compare favourably with quotations from British firms for similar stores delivered in India. (*a*) (*b*) If this policy be followed firms will be encouraged to hold stocks and establish manufactures in India.

Question 16. No—nor of obtaining stores through the Director-General of Stores.

Question 17. By obtaining periodical quotations.

Question 18. All classes.

Question 19. The formation of central stock depôts by the Government of India seems unnecessary. Government departments will always find it necessary to hold stocks for current and emergent use and for new projects purchases can be made when required. The holding of large stocks by Government would have a prejudicial effect on private firms.

Question 20. Do not approve and consider central stock depôts should be maintained neither for Indian nor for imported stores.

Question 21.

Statement showing the expenditure on purchase of stores in the Utilisation Circle, United Provinces, 1910-11 to 1918-19.

Year.	(*a*) Stores purchased abroad.	(*b*) Imported stores purchased in India.	(*c*) Indian stores.
	Rs.	Rs.	Rs.
1910-11	..	..	..
1911-12	..	..	..
1912-13	..	1,485	1,710
1913-14	22,281	71,693	3,202
1914-15	34,784	1,16,638	15,365
1915-16	4,617	15,840	30,400
1916-17	..	87,577	26,070
1917-18	..	1,97,992	3,670
1918-19	3,000	7,90,844	15,455

Question 22. (*a*) Adequate stock registers are maintained which show prices paid.

(*b*) No special records are kept of the results of dealings with firms but experience generally indicates the best firms to purchase from or avoid, for quality, price and prompt supply.

Question 23. Yes. Such information would be useful.

Question 25. It would, I think, be objected to.

Question 26. Yes—if it be decided to form such agencies. The posts would carry with them extensive patronage and there would be openings for abuse. Rigid selection and a generous scale of pay would, I think, be necessary.

Question 27. This would probably be the fairest and simplest method.

Question 28. Audit is carried out by the offices of the Conservator and Accountant-General.

In placing orders whenever possible tenders are called for price and time of delivery from likely suppliers and are tabulated for comparison when large quantities are required. Small quantities are ordered from firms who it is found bill 'unquoted orders' as reasonably as 'quoted' ones.

Question 29. Probably—but are these required? As regards audit I presume there is nothing very wrong with existing arrangements in most departments. As regards rules I consider they are usually too numerous and complicated and act as a brake upon efficiency.

Copy of a letter No. 376M. XVI-45, dated the 15th August 1919, from the Conservator of Forests, Utilisation Circle United Provinces, to the Chief Conservator of Forests, United Provinces, Naini Tal.

I have the honour to say that the whole question of procedure to be followed in purchase of stores and machinery from Europe and America requires modification in the case of requirements of the industrial concerns under the management of the Utilisation Circle. Please see chapter cviii, Manual of Government Orders.

2. It is a guiding principle of this circle to employ experts in each industrial branch with varied experience in up-to-date machinery best suited to the work being undertaken. To derive full advantage from the expert class of men employed, and to obtain the best possible results whether experimentally, educationally or commercially, their advice must be followed in the selection of different types of machinery. Again when machinery of a given type is required, there should be no unnecessary delay in obtaining delivery as such delay spells loss in a business undertaking.

3. Now there are two methods of obtaining machinery depending on whether it is required (*a*) for experiment or research, or (*b*) for other purposes.

4. To deal with the latter case first article 2447, Manual of Government Orders, lays down that heads of departments are empowered to submit indents to the Director-General of Stores at the India Office. That an indent thus placed with the India Office is subject to delay and in execution is evident from article 2459, Manual of Government Orders. That in actual practice such delays must be most excessive is illustrated by the instances in Appendix III. Again the possibility of the India Office using its discretion as regards replacement of an article of a particular make by something that is likely to answer the purpose and is cheaper, is altogether objectionable in view of the fact that it has been specified on the advice of a qualified expert.

5. As regards machinery for experimental and research purposes (see article 2456 (*c*), Manual of Government Orders). Here the procedure is most reasonable. It is realised that the machinery is ordered by experts and that it is probably required without delay and direct purchase out of India is allowed without any unnecessary formalities.

There is, however, one objectionable feature as regards the list of officers empowered under this article which is the exclusion of the Conservator of Forests, Utilisation Circle while his subordinate officer the Principal of the Government Central Wood Working Institute is included. My predecessor pointed out this anomaly last year in letter No. 53-L. C.—L. 2, dated the 25th September 1918, and asked that the Conservator of Forests, Utilisation Circle, be included in the list but this proposal was negatived in G. O. No. 2002—XVIII-480, dated the 2nd October 1918. As a result of this I have been obliged to order machinery urgently required for experimental purposes by proxy through the Director of Industries and latterly at his suggestion through the Inspector General of Forests, though

presumably I could have done so through the agency of my subordinate who happens to occupy a position on the list and effected much saving of time thereby. This course however seemed undesirable in the case of machinery not actually required for use in the institute. The Inspector General of Forests in his letter No. 515-219-2, dated the 4th June 1919, to my address, points out that he is in no way concerned in the direct administration and suggests the desirability of my taking steps to be placed on the list in question being presumably unaware that such a proposal had already been made and rejected.

6. In ordering machinery or spare parts for same from abroad it is frequently necessary to cable instructions to firms and under existing ruling (Article 2397, Manual of Government Orders) local Government's sanction must be obtained in every case. This involves unnecessary correspondence and delay. Generally speaking the majority of cables in this connection are in reply to cabled enquiries from the firms themselves and have obviously to be despatched in anticipation of sanction.

7. It is, I think, fairly obvious that many of the rulings in the Manual of Government Orders in reference to purchase of machinery and despatch of cables in connection with same are quite inapplicable to the Utilisation Circle and demand drastic revision on commonsense lines. Authority should be given to the Conservator of Forests to act direct with business firms abroad in regard to purchase of machinery and stores required for industrial concerns irrespective of whether such be required for experiment, research or other purposes and to use his own discretion in the matter of sending cables. This is not much to ask merely the power enjoyed by the manager of any business firm the world over. Hitherto machinery ordered has been required for experimental concerns and article 2456, Manual of Government Orders, has accordingly to a great extent saved the situation and enabled progress to be made. It is anticipated, however, that our experimental concern will soon prove themselves to be commercially successful and machinery required for expansion can then no longer be ordered direct under the provisions of this article.

8. Since writing the above I have read an article on Indian Industrial Organisation in *The Pioneer* of 14th instant which quoting from the *Times Trades Supplement* with reference to Sir Thomas Holland's report on the Industrial Commission says under the heading of—

PURCHASE OF STORES.

"The Commission recommended new machinery for much more effective realisation than hitherto of the pious principles of the Stores Rules for indents for Government and railway purposes to be met as far as possible from India. The existing system of purchase to so large an extent through the Stores Department of the India Office was described as unsuited to modern conditions and as having had a deterrent effect on attempts to develop new industries in India. The representatives of manufacturing firms in Great Britain who have established branches in India claim that with their local knowledge, they could in many instances supply the requirements of Government much more expeditiously and more cheaply if supplies were obtained direct from them than through the Stores Department of the India Office, etc., etc"

It would appear from this abstract that the system of purchase through the India Office has already received the condemnation of the Industrial Commission and that direct purchase from firms and preferably from branches of same located in India has been recommended by the Commission.

Mr E. R. STEVENS, called and examined.

Witness was in his 22nd year of service in the Forest Department.

He had no great experience of stores as distinct from machinery, and where he used the word stores in his written statement, he had in mind mainly machinery.

His experience of obtaining stores and machinery through the Director-General of Stores, India Office was very limited and was confined practically entirely to the period of the war, and was therefore not a fair ground on which to condemn the working of the Stores Department of the India Office. His unfavourable opinion was based rather on complaints he had heard of than on his own actual experience.

All the same he was in favour of granting freedom of purchase to all departments. He feared that a central purchasing agency might force articles of inferior quality on the consumer on the claim of economy. This fear was based on his knowledge of the pens, ink, and sealing wax at present supplied by the Controller of Printing, Stationery and Stamps.

In his opinion the advantages of inspection were overrated and Government would obtain equally satisfactory results by relying on the guarantee of firms who would be kept up to the mark by the fear of being black listed.

He explained that his written reply to question 14 was not intended to mean that the Stores Rules of 1913 did not require modifications but that the need for their modification was not altogether dependent on the creation of central or local agencies for the purchase of government stores.

The Hon'ble Mr. C. Y. CHINTAMANI, Editor, *The Leader*, Allahabad.

Written Statement.

Questions 1, 5 and 6. I am of opinion that purchases on account of departments of the Government of India may advantageously be made through provincial agencies. As the purchases will have to be made in one province or another, and as provincial governments will have to maintain their own departments, it will, in my opinion, be an unnecessary duplication of establishments and therefore an uneconomical measure, for the Government of India to maintain another costly establishment. I should think it will quite suffice if the latter have one officer (with necessary staff) to whom all orders of Government of India departments will be sent and who will send them on to the provinces, and a number of inspectors to make sure of the quality of the articles purchased.

Question 2. I should say "no", and for the same reason.

Question 3. I do not think so.

Questions 4 and 27. They make their purchases through the provincial agencies, reaching them through the officer of the central government mentioned in the answer to the first question. They may reasonably be asked to contribute to the cost of the establishments and the contribution may be realised in the manner indicated in question 27.

Question 7. No. I have only heard or read criticisms that Indian firms as distinguished from British firms in India do not always get government orders to the extent they might.

Question 8. As a rule there should be no simultaneous tendering in India and England. The latter should only be resorted to when the required articles are not available in India, of a quality and at a price that would make their purchase worth while.

Question 9. The consuming departments must have the right to say what quality of goods they require, but the inspecting officers should be under the departments of industries. Otherwise it will be necessary to employ inspectors in every consuming department—an obviously wasteful policy. An exception may be made in favour of the Army Department in view of its special responsibilities.

Questions 10 and 13. Central agency inspection will only be necessary and justifiable in the case of purchases for

departments of the central government. The purchasing officers would, according to my suggestion, be in the provinces. The former will of course be officers of the Department of Industries of the Government of India.

Question 11. Only the department or departments concerned in the defence of the country, I should imagine.

Question 12. I have no expert knowledge.

Question 14. I would say in general terms that, in the first instance, each provincial purchasing department might furnish the consuming departments of the central Government as well as those of all the provinces with lists of articles that would and would not be available in the province; secondly, that no consuming department should be allowed to place an order outside the country for any article that might be available in any province; thirdly, that it should be allowed to do so, through its own provincial purchasing department, in the case of other articles, and fourthly, that the latter should not be required to purchase in a particular country but should be allowed to make the purchase in any country from where it would be most advantageous to obtain the needed articles—preference being given to the United Kingdom and the British Empire when it would entail no loss on India.

It will perhaps be convenient if the Department of Industries in the Government of India will from time to time obtain information from the different countries and make it available to the purchasing officers of the local Governments to help them to determine in what country they should place orders for articles not available in India.

Question 15. Purchases of European stores in India may be made under the same conditions as those of Indian stores. If the required articles are not in the country at the time of purchase, it is immaterial to the interests of India whether they are obtained from abroad through the Indian branch of a British or foreign firm or direct from its head office. No special measures need be adopted to encourage such a firm to hold stocks in India, much less to establish manufacture here.

Question 16. I do not think such a step to be necessary.

Questions 17 and 18. I have already stated that I would make the purchase of stores mainly a provincial operation. Broadly speaking, I would deprecate anything in the nature of interference or even control from Delhi. As far as possible I would restrict the function of the department of the central government to advice.

Question 19. No—unless, after experience has been gained, such a step has been found to be desirable.

Question 23. Yes, but this should only be necessary as regards information relating to countries abroad.

Question 25. No.

Question 26. I have only general views. They are:—

(*i*) That recruitment should be made in India in the first instance, and in England only to the extent that suitable persons may not be available in this country.

(*ii*) That men appointed in England should be engaged for a definite term of years, being replaced by Indian as they become available; and

(*iii*) that the salaries proposed by the Industrial Commission appear to be excessive.

Question 30. Such a step seems to be unnecessary.

The Hon'ble Mr. C. Y. CHINTAMANI, called and examined.

Witness was not in favour of a central agency. He considered that there should be purchasing departments in each province under the provincial Directors of Industries; the provincial departments should do all the actual purchasing and inspection in their own province both for local government and for imperial departments. The Director of Industries with the Government of India should have a small office to collate the indents or requirements of departments of the Government of India and transmit them to such province or provinces as could produce the articles, the necessary information on the point being furnished by provincial Directors of Industries. In cases where suitable articles could not be procured in India the central government would place orders in England or other country as might be necessary. Witness considered that provincial Director of Industries would be competent to judge the quality of articles required and would have sufficient sense of justice duty not to purchase articles of inferior quality for the central government; the latter would, through the Department of Industries, keep a vigilant eye on supplies.

This system, even if it entailed duplication of establishment, would be preferable to that of centralised purchase. Witness would, however, allow the central government to place orders direct on firms if it were found more convenient in administration.

Witness considered that inspection was carried to extremes and its importance exaggerated. He could not suppose that rigid inspection by costly experts was necessary for the articles of every day use in civil administration: nor did those who had occasion to witness the operations of Government come away with the impression that the articles used by Government were of such superquality that ordinary people could not judge them. Witness agreed that in the case of the Army special arrangements might have to be made for the inspection of munitions of war. Witness was of the opinion that there was no guarantee that the opinion of an expert was necessarily a correct opinion. The opinion of experts was apt to differ.

Witness was of opinion that it would be unnecessary to resort to simultaneous tenders every time a fresh article had to be purchased, as there was a vast accumulation of data relating to prices both here and at the India Office.

Witness considered that goods of fairly satisfactory quality procurable in India at fairly reasonable prices should be purchased in preference to similar articles made in other countries even if slightly inferior and at slightly higher price in order to encourage Indian industry. It would of course be the duty of inspecting officers to see that the goods purchased were of the quality demanded by consuming departments whether imperial or provincial. Witness's idea was that it would ultimately be an advantage to the country if the taxpayer were asked to make a little and reasonable sacrifice by paying a higher price for goods made in India in order to stimulate local industries. Witness did not consider that Government should go out of their way to encourage foreign firms (*i. e.*, firms incorporated out of India whether British or Indian) to set up business in India either as merchants or as manufacturers. The proprietors of such firms had only temporary interest in India; their shares were as a rule not saleable in the Indian market and consequently the profits went out of India and the Indian capitalist was in no way benefited. Witness was not prepared to admit that the location of such businesses or factories was of any material benefit to India; it merely meant that a certain number of lower paid workmen of the coolie class drew more pay in wages than they otherwise would have. Witness complained that European industrial concerns in this country did not give to Indians higher industrial training and he would recommend such training to be a condition of the establishment of industrial concerns in this country. Witness was not prepared to admit that Indian industry had been helped in any way by the establishment of European industrial business in India.

Witness, however, had no objection to European companies incorporated in India setting up industrial business as he considered such companies as Indian seeing that the capital was raised in India. Witness stated that it was not a racial question. He would not of course advocate any restrictions being placed on European firms setting up business in India but he did not consider it to be the function of government to give special encouragement

to temporary residents to open branches or establish manufactures in the country.

In the case of pioneer industries, however, if after survey the government decided it was feasible to establish the industry and if there were no permanent residents qualified or willing to establish the industry then it would be the duty of government to encourage firms from Europe to establish the industry provided they train up Indians in the business and allowed Indians to become shareholders.

Witness agreed that the Tata Iron and Steel Works, an essentially Indian firm, employed Indians in the higher branches but did not consider this an argument in favour of the establishment of European firms he thought their employees had received their training in Indian mills or factories.

Under further examination witness would not admit that the establishment of large industrial concerns by Europeans employing in the aggregate several thousand of men was of any benefit to the country. The fact that the workmen got higher wages did not seem to him to be of any good to the country as long as the profits went to shareholders resident in Europe and not to those resident in India; he considered the establishment of such industries to be exploitation rather than industrial progress.

Witness pointed out that Sir Vithaldas Thackersey when presiding over the Industrial Conference in 1906 proposed that the Government of India should provide by legislation, if necessary, that firms registered abroad should open their share lists to the Indians to the extent of 50 per cent.

Witness considered that all salaries for the new stores purchasing agency should be fixed on an Indian basis and that an oversea allowance should be given to a man brought out from England to fill a particular post. He would employ Indians to the largest extent compatible with efficiency.

At Cawnpore, Saturday 6th March 1920.

PRESENT:

SIR FRANCIS COUCHMAN, K.B.E., M.I.C.E. (*President*).

G. H. COLLIER, Esq., C.I.E.
Lieutenant-Colonel C. C. H. HOGG, C.M.G., R.E.
LALJI NARANJI, Esq.
Rai Bahadur LALA MILKI RAM.

J. C. HIGHET, Esq., (*Secretary*).

The Upper India Chamber of Commerce.

Written Statement.

Question 1. The Committee of the Upper India Chamber of Commerce prefer to recommend that there should be a central organisation and provincial agencies.

The main reason in support of the formation of such an organisation is that it should be able to bring about economy and improvement in quality.

Question 2. Yes, for each of the departments named and perhaps for some others.

Question 3. Yes. Foodstuffs, fodder, oilseeds and vegetable oils, agricultural raw produce generally, Indian timbers and forest produce and fishery products.

These should be purchased as and where needed by provincial stores agencies, or in the case of foodstuffs, by local supply officers for the Army and by local authorities for jails, hospitals, etc.

Question 4. The right of local and *quasi*-public bodies company-owned railways and British Colonies and Protectorates to make their own purchases should not be interfered with.

If, however, they prefer to utilise the central stores agency for the purpose they should certainly be expected to pay for the convenience.

This applies also to question 25.

Question 5. Yes, for the purchase of such stores as could not be manufactured or purchased within the province itself.

Inter-provincial purchases would be conducted through the central organisation.

Decentralisation would be obtained by the creation of provincial stores departments worked in conjunction with local departments of Industries.

Question 6. My Committee do favour the creation of local (provincial) agencies for the purchases of local governments and consider that it is desirable that the whole of the purchasing of provincial products for departments of the Government of India should be conducted through these local agencies.

Question 7. My Committee have no criticisms to offer.

Question 8. My Committee are opposed to simultaneous tendering in India and England.

Where English producers are invited to tender it should be through their Indian representatives or houses.

Question 9. The policy of inspection should be dictated by the consuming department, but there should be constant and complete *liaison* between the inspection branch of the central stores department and the local department of industries, whose essential purpose should be to foster Indian industry in such a relationship.

Question 10. By the central organisation, independent of, but working under the same control as, the agency for the purchase of stores.

The inspecting officers should be accredited to the local administration and in the closest touch with the local Department of Industries.

Question 11. This is more a question for Government itself to answer, but my Committee feel that the Army Department should have a special organisation for some of its requirements.

Question 12. Not applicable.

Question 13. By local inspecting officers responsible directly to the central organisation but in close and constant relation with the local agencies.

Question 14. Yes, such modification as would render impossible the present practical disregard of these rules by indenting officers. This should be facilitated by the separation of the functions of purchase and inspection.

It is also desirable that the ordering powers of individuals or departments should be increased.

The new rules should be framed with the main set purpose of bringing about the eventual reduction of home indents to an unavoidable minimum.

Question 15. Open competition in the Indian market should be the one condition.

Question 16. There should be a very close scrutiny with the clear intention of reducing home indents to a minimum.

Question 17. The only practicable method is the invitation of tenders and open competition in India.

Question 18. No. Every article obtained from abroad should be procured through the central organisation, which should have special facilities for direct colonial purchase of Colonial products.

Question. 19. My Committee are not in a position to reply. This is a matter for the consuming departments.

Question 20. (*a*) At the principal seaports and the main centres with railway distribution facilities, *e. g.*, Calcutta Bombay, Madras, Karachi, Rangoon, Lahore, Delhi, Cawnpore, Patna, Nagpur and Bangalore.

(*b*) Yes.

Questions 21 & 22. Not applicable.

Question 23. The process should rather be reversed, the local purchasing officers collecting the information and keeping the central organisation informed. The central organisation would then of course see that this intelligence was properly and promptly disseminated, where desirable, to all local agencies.

Question 24. Not applicable.

Question 25. This matter is sufficiently dealt with in the reply to question 4.

Question 26. None.

Question 27. No. The expenses of the central department and of its local purchasing and inspecting agencies should be met from general imperial revenues. Also see the reply to question 4.

Questions 28 & 29. Not applicable.

Question 30. There should be a free interchange of personnel all round.

Mr. J. G. RYAN, called and examined.

The written replies presented the views of the Upper India Chamber of Commerce which represented all the industries of the province, but mainly industries connected with cotton, wool, leather and sugar. Engineering was also represented.

The Chamber inclined towards a central organisation with provincial agencies which would be staffed with officers deputed to the provincial Governments from the central organisation, and in close relation with, but not necessarily under, the provincial Directors of Industries, who would have no responsibility either for actual purchase or for inspection. The provincial agencies would make all purchases of Indian products within their own provinces. For purchases which it was desired to make for their province in any other province they would not deal direct with one another but through the headquarters of the central organisation.

In deciding where purchase should be made economy should always be studied and he was against preference in price being given in any province to any local product which could not be purchased as cheaply as it could be imported from another province, freight being taken into consideration.

The provincial agency would constantly seek the advice of the Director of Industries regarding local resources but it would not be necessary to refer every demand to him.

Large and important purchases could, if desirable, be arranged direct with the manufacturers from the headquarters of the central organisation provided the provincial agency concerned was kept fully informed of all such dealings.

Separate purchasing officers would not be essential for each class of stores provided there were expert inspectors or advisers for each mainclass.

The central organisation or the provincial agencies should not undertake purchase of perishable articles but should leave these to the consuming officers, who should, if such were found imperative also be allowed some latitude to purchase when their requirements were insignificant or in real emergencies.

As regards stores which had to be imported the suggestions of the Chamber were all subordinate to the idea that purchase should be arranged by a central organisation in India. His Chamber wished to see the centre of purchase for government requirements transferred from England to India. This would greatly encourage manufacture in the country as manufacturers in India could have no objection to compete with any firm which had representatives in India. If the system of calling for tenders in India was introduced the competition might be limited at first but many more firms would soon come out to India. The privilege of tendering need not be confined to British firms. His Chamber had no desire to restrict the field of competition in any way.

It was recognised that it would be necessary to maintain some agency for the purchase of certain special stores in England. The actual relationship between the central organisation in India and the agency at home was not very material so long as close touch was preserved. Such home purchases should be cut down to the absolute minimum.

He was opposed to the headquarters of the central organisation being located at any large trade centre, as likely to result in the province in which the chosen centre was situated receiving an undue share of government patronage. So long as an important trade centre was not selected the headquarters might be located in any suitable and centrally situated place. If Delhi were selected there was no reason why the headquarters should move to Simla with the central Government.

Rai Sahib Dr. MURARI LAL, M. B., nominated by the United Provinces Chamber of Commerce, Cawnpore.

Written Statement.

Question 1. Central agency will not prove so useful as the local agency, as the latter is more likely to stimulate the development of industries more uniformly in the various provinces. There will be a desire of each provincial head to make his province as much self-sufficient as possible, while the central agency will be apt to look to convenience. The advantages of the central agency can be achieved by a sort of Board of Directors consisting of the Director of Industries of at least the major provinces and some other business men with an executive officer under them who would meet say quarterly at Calcutta and Bombay, where the office of the head of Commercial and Industrial Intelligence be situated. The function of the executive officer will be that of distributing and co-ordinating the purchases under the direction of this Board.

The provincial agencies (Director of Industries) will be provided with the special staff recommended under the central organisation who will work entirely under him.

Question 2. No.

Question 4. I am inclined to leave these bodies to make their own arrangements, as the government agency may be productive of an effect of interference on the one hand and hampering private enterprise on the other.

Question 5. The agencies recommended in answer to 1 would be quite suitable for the purchases of local Governments.

Question 6. The departments of the Government of India should make their purchases through agency recommended above.

Question 9. Initially the consuming departments are the best judges, but later on the department responsible for the development of industries may dictate the policy and can recommend advantageously the substitutes also.

Question 10. Yes, whether it be central or as one recommended herein.

Question 13. The provincial staff of the organisation recommended by the Committee to be attached to the Director of Industries ought to be part and parcel of his staff and this will form the department of local inspection under the Director of Industries.

Question 14. No. What is required is to bring the Rules Nos. 1 and 2 of the Stores Rules of 1913 into operation as far as possible.

Question 15. This ought to be governed by existing Rule 3 of Stores Rules which need not be modified.

Question 16. Yes.

Question 17. Yes. This can be secured by co-operation of the department of Commercial and Industrial Intelligence with the purchasing agency I have recommended.

Question 18. Such articles as have to be imported from other countries by the Director-General of Stores or the Trade Commissioner are such as are best suited for research work, may be ordered direct from those countries to avoid delay as is recommended in the Stores Rules as well.

Question 19. In my opinion provincial depôt will be more necessary. In any case the various departments cannot dispense with their depôts though they may not be so expensive under the scheme.

Question 20. Stock depôt for imported goods will be necessary at the chief ports. These though separate should be adjoining to the provincial one and can be managed by the same agency.

Question 25. See answer to No. 4.

Question 27. Yes.

Rai Sâhib Dr. Murari Lal, called and examined.

The United Provinces Chamber of Commerce was composed mainly of importers. Very few of the members were manufacturers. The written replies represented his own personal views. He had however discussed the matter beforehand with few other members of the Chamber and he understood that the Chamber accepted his views.

He adhered to the practicability of the scheme proposed by him in all its aspects. Even though the number of headings to be dealt with was as many as 10,000 and tenders had to be called for in various parts of India, he still thought it would be possible for his board to dispose of the volume of work entailed at quarterly meetings which may last for several days.

The tenders may be tabulated by the executive officer of the board who will be a whole-time servant carrying out the instructions of the board and acting as a co-ordinating agency between the provincial directors. The means of comparing the prices of articles in India and abroad will also be available.

The staff for any new organisation should be recruited primarily from Indians.

At Lucknow, Monday 8th March 1920.

PRESENT:

Sir FRANCIS COUCHMAN, K.B.E., M.I.C.E., (*President*).

G. H. COLLIER, Esq., C.I.E.
Lieutenant-Colonel C. C. H. HOGG, C.M.G., R.E.
Brigadier-General H. A. K. JENNINGS, C.I.E.
Rai Bahadur LALA MILKI RAM.

J. C. HIGHET, Esq., (*Secretary.*)

F. C. FREEMAN, Esq., Controller of Stores, Oudh and Rohilkhand Railway.

Written Statement.

Question 1. I advocate a central control on existing agencies. (See note). A control on purchases would reduce work, ensure uniformity, check extravagance and encourage industries.

Question 2. Particular departments of the Government of India would require special establishments attached for this service.

Question 3. The central control should only arrange for—

(*a*) stores supplied under contract excluding such items as chicks, tatties, straw, sand, clay, bricks, surkhi, lime, etc;
(*b*) heavy machinery and plant;
(*c*) all items of European manufacture against which consumption is heavy and regular.

Question 4. It would be advantageous for local *quasi*-public bodies, and company-owned railways to purchase through the control. British Colonies and Protectorates would presumable prefer to purchase through their own established firms. All bodies using the agency should be required to pay towards its maintenance.

Question 5. See note.

Question 6. See note and reply to question 3.

Question 7. Yes. For Railway stores, the existing system of calling for tenders to supply on contract is satisfactory.

The system of calling for tenders to meet special demands is burdensome and, as the supply cannot be enforced, it is unsatisfactory.

Question 8. Yes.

Question 9. The policy of inspection for passing stores should be dictated by the consuming department.

Question 10. See note, paragraph 8.

Question 11. Most departments would require special inspection for some particular items.

Question 12. Specialised instruction is necessary for engineering structures, such as girders, etc., sleepers, permanent-way fittings, timber, cement, electric plant, heavy machinery, paper, paints, varnishes, oils, coal, rolling stock.

Question 13. See note, paragraphs 8 and 10.

Question 14. Yes. Most of these rules would require revision.

Question 15. Purchasing stores through the India Office is more economical, but if it is intended to purchase from established firms, the purchase of any European store which can be manufactured in India should be restricted and monopolies should not be permitted.

(*a*) No great change.
(*b*) If unrestricted import for government requirements were allowed, local industries would suffer.

Question 16. Yes. (See note).

Question 17. If firms in the United Kingdom were made to realise that they were competing on equal terms with Indian industries and firms established in India, they would take steps to ensure their rates and conditions being fully known to the Indian purchasing agency.

Question 18. No.

Question 19. I recommend the formation of central storage depôts, if this results in the doing away with the numerous petty depôts existing at present. Otherwise, the formation of such depôts will only result in larger sums being tied up in stocks and in additional expenditure.

(*b*) Private firms should not be seriously affected.

Question 20. Central storage depots, if formed, should be near the large sea ports and important commercial centres. There should be at least one such depôt in each province.

Question 21. All available information has been intimated by the Audit Department direct.

Question 22. (*a*) Card records are maintained for each item shewing all purchasing transactions, rates, etc.

(*b*) Firms are classified according to their ability to meet demands. Any firm failing repeatedly on insufficient grounds to meet its quotation is struck off the list of suppliers and consequently only the more reliable firms remain on the list.

Question 23. This procedure would be incorrect. The "purchasing officer" should collect all information for his district or province for the information of the central agency.

Question 25. Yes, in compelling them to adopt a standard quality of manufacture and not allowing them the option of accepting inferior qualities at reduced rates against an accepted standard which course is sometimes advisable.

Question 26. See note.

Question 27. The cost of the maintenance of the purchasing agencies should be met by a percentage charge on stores supplied.

Question 28. The audit is carried out by the Stores Audit Department of the Railway and the following procedure is followed:—

On receipt of the verified part VI from the Controller of Stores the Audit Office sees that the document is in order including arithmetical calculations and limits of powers.

Purchases of country stores exceeding Rs. 1,000 and of English stores exceeding Rs. 500 in each individual case are required to be supported by a purchase list sanctioned by the Agent. Reference to the purchase list is quoted by the Controller of Stores on the part VI in such cases prior to submission to audit.

The Audit Office after scrutiny of part VI posts the value in the purchase account register to the credit of the firm concerned.

Suppliers submit their bills direct to the Audit Office supported by the part V accepted by the Controller of Stores and corresponding to the part VI already sent in by the Controller of Stores. On receipt the Audit Office compares the bills with the parts V and VI. If these

agree and bills are in every other respect correct the bills are passed by debit to contractors account against the credit entry as previously entered from the part VI in the purchase account register.

Question 29. See paragraph 9 of note.

Question 30. The home Stores Department should have an Indian stores officer as a representative on the Board. The Indian experience of such an officer should prove useful.

NOTE BY MR. FREEMAN.

1. I do not recommend the formation of a central agency for purchases such as has been outlined in the proposals appended to the questionnaire as they would be neither economical nor efficient. The delay and hinderance in purchasing requirements would outweigh the savings in price that might result after paying for the cost of the proposed establishments.

2. Government has, in the present stores establishments, an efficient and trained staff of inspecting and purchasing officers distributed throughout India. These officers should be made full use of and only a control established to enforce uniformity and distribute information. The lack of co-ordination between the present stores establishments is the principal fault in the existing system for procuring stores.

3. I recommend that all stores establishments in India should be combined as an independent department under the control of a Controller General of Stores with headquarters at Simla. The Controllers of Stores should be empowered to report for correction any undue waste or extravagance that might come to their notice. These officers should also be used to purchase and pass stores from their sphere of control for any department requiring their services.

4. In order to check and control their work, the Controllers of Stores should have to send in a daily or weekly purchase list to the Controller General, shewing the quantities of each item purchased and the prices paid. The Controller General would have these lists compared and take up any extraordinary transactions. The Controllers of Stores should also send copies of these lists to the provincial Director of Industries, who, after criticism, would forward them to the Director of Industries at Simla. The Director of Industries and Controller General of Stores could then mutually decide on the future policy for procuring any particular items.

5. In order to enable the Controller General of Stores to take advantage of combined demands, the Controllers of Stores should be required to prepare separate annual indents for Indian and European stores, forecasting their requirement by at least six months. All items ordinarily procured under contracts in India or obtained through the India Office would be shewn in these indents. The Controller General would arrange in consultation with the Director of Industries for contracts for the supply of all Indian products and through the India Office or established British firms for European stores. Copies of these indents shewing the action taken to meet the demands would be sent to the Director of Industries by the Controller General for his information and should prove useful in developing Indian resources to meet departmental demands for stores in subsequent years.

6. There should be no need to appoint a staff of experts to help in selecting and passing stores. The government test house, Alipore, a second test house at Bombay, Inspectors of Manufacture at the large centres and the Metallurgical Inspector, Sakchi, should be able to give all the required assistance. The Controllers of Stores can always, when necessary, refer to the local heads of the consuming departments for advice and assistance in dealing with items requiring technical experience in selection.

7. The Provincial Directors of Industries will have their time fully occupied in guiding and encouraging local manufactures in the provinces. If they are burdened with placing orders and making purchases for all government departments, they will have little or no time to spare for their legitimate duties.

8. To assist in the uniform development of manufactures throughout India and Burma, the Director of Industries, Simla, should be given a staff of imperial inspectors whom he could depute periodically to visit the centres of manufacture, inspect the work in the factories, and give the Provincial Director of Industries the benefit of their advice. This would be a more useful and economical course than for the inspectors to only pass or reject the finished articles, as they would be able to correct faults before the completion of the articles and so save needless expenditure on faulty articles which would ultimately have to be rejected as useless.

9. One of the most serious defects in the present system for the purchase of stores is the delay in making payments which is chiefly due to firms having to wait till their supplies are received and passed before they can submit their bills. The defect would be partly overcome if supplies were accepted at the nearest depôt, but there is no reason why suppliers against contracts and all reputable firms should not be paid the cost of the stores on production of the railway receipt. If stores are lost or damaged in transit the suppliers are not responsible and recoveries should be made from the responsible railway, while, if on receipt, the stores are not in accordance with the sample or specification, they can be returned and the cost recovered.

10. The estimated additional establishment required to work this system would be :—

	Rs.	
Controller General of Stores	4,000	
Deputy Controller General of Stores, Indian Produce	2,500	
Deputy Controller General of Stores of European Manufacture	2,500	
4 Assistant Controllers (2 for each Deputy) 400—800	2,400	average
Office establishment	12,000	
Rents and Contingencies	5,000	
Monthly Total	28,400	
Yearly expenditure	3,40,800	
6 Inspectors attached to Director of Industries Office on Rs. 1,500 each	9,000	
Travelling Allowance	800	
Monthly Total	9,800	
Yearly expenditure	1,17,600	
GRAND TOTAL	4,58,400	
In round figures	4,60,000	yearly.

Mr. F. C. FREEMAN, called and examined.

Brief particulars of service :—

1897 to 1902 Engineer on Construction.

1902 to 1908 Engineer on open line North-Western Railway.

1908 to 1913 Storekeeper, Eastern Bengal Railway

1913 to 1919 Storekeeper, North-Western Railway

1919 to 1920 Controller of Stores, Oudh and Rohilkhund Railway.

In referring to the present stores establishment he had in mind the Stores Department of railways, both State and company-worked.

The Controller General of Stores suggested by him would enter into contracts for the supply of all Indian products ordinarily procured under contracts, excepting those shewn in the attached list*; and obtain through the

* See below.

India Office such stores as are usually asked for in English indents, and not obtainable in India at a reasonable cost and of a suitable quality. Selected Controllers of Stores would make all other purchases for the various Departments of Government in which inter-departmental competition was likely to arise. Railways would still have to maintain stocks on, say, a four months' consumption basis, and a railway Controller of Stores in each province would maintain a separate stock for provincial departments.

He considered that inspection when required was best carried out by the consuming department concerned, but ordinarily the local Controller of Stores would be able to do all the inspection and passing necessary. The chief duties of imperial inspectors suggested by him would be to assist manufacturers with advice.

As regards dealing with reputable firms and paying in anticipation of the actual receipt and acceptance of stores, witness admitted that there were many small firms who supplied suitable stores at cheaper rates than reputable firms but with whom such procedure could not be recommended.

His written reply to question 14 was based on the assumption that the Committee would recommend increased purchasing in India. Personally he did not see how firms in India would be encouraged to keep larger stocks in the absence of a definite guarantee of purchase as without this they would not know what stocks to hold. He would prefer to retain the present system of obtaining imported stores by indent on some government agency in England as being more economical than obtaining stores through established Indian firms.

The present system of purchase of stores for government departments did not tend to encourage Indian industries. There was no systematic means of knowing what the capabilities of the country were. The supply of such information would be one of the most important functions of a central agency.

Even if railway and departmental stores were left as at present he thought that for many items the purchase of their combined demands by a central agency on running contracts would result in economy.

He would not advocate acceptance of articles of a lower standard in order to encourage Indian industries. The policy should be to improve the standard of Indian workmanship and not to encourage outturn of an inferior quality.

The purchases of which a central agency might relieve railways would not allow of any appreciable reduction in the establishment in railway stores department. Som saving might be feasible in clerical staff.

Items obtained under contracts recommended for exclusion from central control.

Bamboos of sorts.
Baskets of sorts.
Bricks.
Ballast.
Chicks, door.
Chicks, verandah.
Chalk, Delhi.
Charcoal.
Clay.
Country pottery.
Cowdung.
Doors and windows.
Firewood.
Flour, wheat.
Flower Harsinghar.
Furniture, Office and Station.
Jagri (unrefined sugar).
Line Clear hoops.
" " clips.
Lime stone, unburnt.
Lime, slaked.
" unslaked.
Ladders, bamboo.
Moonj, raw.
Mats, flooring of sorts (excluding coir matting in rolls).
Purdahs, cotton padded.
" Durrie.
" Tat.
Sand.
Straw.
Soorkhi.
Salt.
Stone for building purposes or protection works.
Tatties, khus.
Tin ware.

F. J. HARVEY, Esq., Agent, Oudh and Rohilkhand Railway, called and examined.

In principle witness was in favour of a central purchasing agency, but he thought it would be found in practice that the time factor would restrict the purchasing function of the agency to classes of stores in large and regular demand of which requirements could be forecasted with fair accuracy. There seemed to be a danger in over-centralisation of purchase, that small manufacturers who were striving to make a start might be stifled by larger manufacturers, and that big suppliers might oust the small suppliers from whom cheaper supplies were usually obtainable. Centralised purchase at regular periods might also have a tendency to increase prices either by combination or speculation amongst sellers.

He was not in favour of the purchase of wooden sleepers for railways being centralised more than at present.

It was important that the functions of a central agency should include surveillance over the stocks held by all government departments and railways. To his own knowledge a case had occurred in which one railway was found to have a stock of a particular item far in excess of its own immediate requirements while another railway was in great difficulty for want of the same item. Such excesses and deficiencies were unavoidable in railway working, and when the items in excess would be absorbed in time, it was not customary to enter them in the surplus stores lists which were circulated to other railways.

He considered that considerable relaxation of the restrictions placed on the purchase of imported stores in India by the present stores rules would prove beneficial on the whole. He would like to see the condition requiring imported stores to be already in India at the time of purchase abolished. He thought that quicker delivery on as favourable terms would be obtained by placing orders in India instead of indenting on the Director General of Stores, India Office. If the purchase of imported stores in India were made the practice instead of the exception, he thought that firms would be induced to hold larger stocks and to give more consideration to the possibilities of manufacturing articles in India.

The purchase in India of plant and machinery through branches or agencies with expert representatives of manufacturing firms would be particularly advantageous as it was often difficult to explain in an indent what was required.

Expert inspection was desirable and no distinction should be made between suppliers so far as inspection of supplies was concerned.

He was doubtful whether any economy would result from combined stocks for groups of railways. It would be unwise to attempt any considerable reduction in the stocks which railways held at present and no appreciable reduction would be feasible until more progress had been made with standardisation. To hasten standardisation he would prohibit any orders being placed for non-standard items, for instance, he would scrap locomotives of non-standard types as required to find the parts necessary for the maintenance of locomotives of the same types until eventually all non-standard types disappeared.

He considered that an intelligent scrutiny of all home indents by some central authority was necessary to prevent orders going out of India unnecessarily. So long as Indian made articles were suitable and up to the work required from them he would recommend their acceptance even though they were inferior in finish to imported articles of the same kind, and provided that a superior finish was not essential.

At Lucknow, Tuesday 9th March 1920.

PRESENT:

Sir FRANCIS COUCHMAN, K.B.E., M.I.C.E. (*President*).

G. H. COLLIER, Esq., C.I.E.
Lieutenant-Colonel C. C. H. HOGG, C.M.G., R.E.
Brigadier-General H. A. K. JENNINGS, C.I.E.

J. C. HIGHET, Esq. (*Secretary*).

Colonel C. AINSLIE, R.E., Commanding Royal Engineer, 8th (Lucknow) Division.

Written Statement.

Question 1. Yes.

(*a*) Purchasing by a centralised expert department should result in the most favourable market rates being obtained.

(*b*) Indirect economy through the saving of the time of a number of officials purchasing on their own accounts.

(*c*) Standardisation of materials used on government works.

Question 2. The Military Works Services should be represented by an officer charged with the duty of standardising its requirements, subject to reply 3. At present purchases both in and out of India are made on no particular system, and stocks accumulate because there are so many different patterns of the same articles in use in various districts. Their accumulation is perhaps too small to be of importance, but it might be avoided. As the greater number of military works buildings are built to some standard type, the materials used could, to a great extent, be standardised, and become interchangeable between districts. I propose some one on the lines of the Military Liaison Officer in paragraph 11 of Mr. McPherson's note. As the materials used in the Military Works Services and Public Works Department are to some extent the same their wants could be co-ordinated on certain lines. For instance, teak wood doors and windows of a few standardised types would meet practical requirements in a large number of cases. Most of the wood is imported at Calcutta or Bombay. If it were made up there to standard types economy would result, I think. The same applies to the articles of hardware, paints, oils and varnishes, and to supplies of window glass. The requirements in machinery and electrical apparatus are probably too small and varied to admit of much standardisation, but something might be done. For instance, steam road rollers need not be of more than three or four types to suit all the requirements of the Public Works Department and Military Works Services.

Question 3. Yes.

Stone and sand for buildings and roads; bricks and tiles of ordinary local manufacture; lime; timber, bamboos, and petty bazar supplies for current requirements, excluding paints, oils, greases and varnishes and standardised hardware; special bricks, such as fire bricks and glazed bricks, and special tiles such as are manufactured at Firok, Mangalore and Raneegunj should be purchased by the central agency, except for small quantities.

For the local purchases mentioned, I suggest the local engineer officers as the agency.

Questions 4 to 8. No remarks.

Question 9. By the consuming department. I do not see how any reasonable policy of inspection dictated by the consuming department is going to check industrial development on sound lines.

Question 10. Yes. Purchase, as I understand it, is the procuring of materials to certain specifications at the most favourable rates, the framing of contracts, checking of quantities, and payment of bills. Inspection is the expert check on the quality of materials purchased by the test of the specification. These are quite separate matters, but must be worked under one head.

Central purchase involve central inspection before distribution, if only to avoid possible carriage of materials not up to specification.

Questions 11 to 13. No remarks.

Question 14. The expression "not unfavourable" used in rules 3 and 4 seems to admit of a greater latitude than is given by rule 2(*b*) but in my experience the cost of articles obtained through the India Office has always been very much below prices in India, so that all our purchases have been made under rule 5, on the grounds of "serious inconvenience to the public service."

Question 15. I do not see the necessity for any restrictions, if purchase and inspection are centralised, and home indents are scrutinised by a central department before transmission to the Director General of Stores. Firms are likely to increase their stocks and establish manufactures if they know that they will be allowed to tender for supplies to any extent.

Question 16. Yes, to secure that indents are not sent home for articles available in India at reasonable rates.

Questions 17 and 18. No remarks.

Questions 19 and 20. No, but there must be local government and departmental stocks, at selected railway centres, suitable for rapid distribution. As far as Military Works is concerned Calcutta, Bombay, Karachi and Lahore seem suitable. There must always be expense stocks at stations where military works are carried out, but if stores are standardised to a considerable extent these could be kept small.

Question 21. As reports have been collected from all districts by the Director General, Military Works, figures for my own Division only would be of no value.

Question 22(a). Before the war a price list of articles obtained through the India Office was compiled and distributed to districts. In my experience the prices paid for stores purchased under rule 5 were not tabulated. The prices of local products and petty supplies were tabulated, as the basis of local contracts for supply.

Question 22(b). I know of no systematic recording the equipment of firms dealt with, but notes on their success or otherwise were recorded in a register of contractors.

Questions 23 to 27. No remarks.

Question 28. All bills pass through the Office of the Examiner of Accounts, Military Works Services, who calls for action in cases when European stores have been purchased without proper authority. Such purchases have been on a comparatively small scale, and the audit seemed to be sufficiently effective.

Questions 29 and 30. No remarks.

Colonel C. AINSLIE, called and examined.

Even though central stock depôts were not established witness considered that a central purchasing agency would be a benefit to the Military Works Service by arranging supply of large annual requirements, particularly on running contracts.

There was much room for co-operation in standardisation between the departments doing similar work, for instance Military Works Services and the Public Works Department. The inspection branch of the central agency would be able to suggest directions in which standardisation would be beneficial.

The inspection branch should be distinct from the purchasing branch. His experience was that when a department of supply also did the inspection there was a tendenc for supplies to be inferior.

Stores supplied by the Director General of Stores, India Office, had always been satisfactory but took a long time to get even when cabled for. Part of the delay might be accounted for by the formalities which orders had to undergo after they left the indenting officer and before they were despatched from India. He would prefer to be able to purchase imported stores in India, either through branches, agents or selected merchants, when prices were reasonable even at the loss of the competition of firms who might be able to produce better articles but who were not represented in India. If it were made the custom to buy everything in India he thought that many more firms would send representatives to India and larger stocks would be maintained. The quicker delivery which would result was worth paying something for. At present the prices of imported stores, available for purchase in India were exorbitant. He, however, obtained imported British cement at Darjeeling Rs. 2 per c. ft. cheaper than Indian made cement.

At Lahore, Friday 12th March 1920.

PRESENT:

Sir FRANCIS COUCHMAN, K.B.E., M.I C.E. (*President*).

Lieutenant-Colonel C. C. H. Hogg, C.M.G., R.E.

Brigadier-General H. A. K. Jennings, C.I.E.

Rai Bahadur Lala Milki Ram.

And the following co-opted member:—

The Hon'ble Mr. C. A. H. Townsend, I.C.S., Director of Industries, Punjab.

J. C. Higbet, Esq. (*Secretary*).

E. A. Scott, Esq., Assistant Director of Industries, Punjab.

Written Statement.

Question 1. Yes. To ensure economy and uniformity of supply, to develop Indian industries and to record what India is capable of producing.

Question 2. Yes. Special arrangements will be necessary, some of the existing stores depots of these departments must remain, but each case should be investigated.

Question 3. No.

Question 4. Whether it would be advantageous or not depends on circumstances, it is not at present possible to form an opinion.

In the above cases if purchases to any large extent are made outside the central agency, the central agency should make it their business to find out prices, quality, etc., of stores so purchased.

If they purchase through central agency, a fixed per cent. as a general charge should be made.

Question 5. Local Governments should in the first instance apply to the local agency for their stores. If the local agency is unable to supply or is unable to supply at reasonable rates, the requisition should be forwarded to the central agency for disposal and the local Government informed.

Question 6. If the local provincial agency can supply the stores required by the Government of India on more favourable conditions than can be supplied elsewhere, the local stores agency should be asked to supply them.

Question 7. Yes. I do not think sufficient advertisement is given to such tenders and in many cases sufficient time is not given to possible suppliers.

Question 8. Yes. This should be done. It would be instructive.

Question 9. By the department responsible for the development of the country. The consuming department would accept countersamples and always be consulted.

Question 10. Yes.

Question 11. No, but some departments may necessitate the employment of special inspectors under central agency.

Question 12. Yes, munitions of war and certain ordnance stores, electric supplies, machines and engines, chemical and laboratory apparatus, certain railway materials.

Question 13. Inspection should be done by local inspection agencies working under general instructions issued by central agency and approved by the local Government.

Question 14. Yes. The central agency would compile new rules.

Question 15. See your question 8. It would be inadvisable for many reasons to do anything that would discourage *genuine* Indian branches of British manufacturing firms. Conditions under which purchases could be made from such firms would be prices they asked. This would encourage holding of stocks by such firms which would relieve Government of doing so. The establishment of Indian branch factories by British manufacturer would not be affected. The establishment of such factories in India would depend on the import duties.

Question 16. Yes, this is essential.

Question 17. Regarding India it should be the duty of the local department of Industries to regularly supply the central agency with this information; regarding the United Kingdom branch agencies in England and foreign countries would supply this. These foreign agencies should form an essential part of the scheme.

Question 18. Stores should be obtained from any country where prices and quality justify such purchase. The Director General of Stores in England should be abolished and his functions performed by the branch of central agency established in England.

Question 19. No. I do not advocate this. I foresee that it may be necessary for the central agency to keep certain stocks, but this should be avoided if possible and the central agencies' functions be confined to advice publication of useful information and administration. The holding of stocks by government departments should be controlled by the central agency and that held by private firms encouraged

Question 20. See reply to question 19.

Question 23. Certainly, this would be part of its duty.

Question 25. No. The private enterprise would deal with the central agency instead of the company, railways, etc.

Question 26. They should be professional or businessmen or both, if possible.

Question 27. Certainly, this would be the most practical way.

Question 29. Yes, it probably would.

Question 30. Yes, this would be advisable.

Mr. E. A. Scott, called and examined.

Witness had about 25 years' engineering experience on the North-Western Railway of which about 13 years had been as Signal Engineer. In addition to his other duties he had been Deputy Controller of Munitions, Punjab, during the war. He had joined the Industries Department, Punjab, on October 1919.

He contemplated local agencies staffed from an all-India service working for the time being under the respective provincial Governments but supervised by a central agency.

The purchase of stores for Government would be one of the chief instruments in the development of industries and if the Directors of Industries were to be responsible for this

development witness considered it essential, in the Punjab at any rate, that the Director of Industries should have a larger say in the purchase of stores within his province than witness thought it likely that he would have, if all purchasing was done by a central agency—even with branches in the province—independent of the provincial Government.

All local requirements should be sent to the local agency which would be free to purchase within its own province even at slightly higher prices than ruled elsewhere subject to the criticism of the central agency.

Government must be prepared to suffer some loss of economy until industries had been properly established.

Witness did not approve of the suggestion of one of the Committee that subsidies should be given to manufacturing suppliers, instead of slightly higher rates. A local agency would pass on to the central agency any demands which it could not meet itself and the central agency would distribute these to the appropriate local agencies for compliance.

He considered that each local agency should be given a chance of supplying from its own province the wants of railways and departments of the Government of India within its province or a reasonable proportion of such demands as the province could supply; this policy should be followed for the next few years to allow backward provinces a fair chance of making up leeway.

The Director of Industries, Punjab, should be consulted before any large orders for Indian products for the use of the North-Western Railway were placed outside the Punjab. He would prefer this procedure to the mere publication of a statement of requirements of railways and departments of the Government of India showing the quantities required in each province.

With a properly equipped central purchasing agency,—assuming such to be set up,—no special arrangements should be required for any particular department of the Government of India and he would modify his written answer to question 2, in replying to which he had in mind an agency which would hold central stocks.

His experience of the government system of calling for tenders was limited to local supplies but it was his opinion that the wider the publicity given to calls for tenders the lower the rates which would be offered. He suggested that the central agency shoud publish a weekly bulletin containing full information regarding government requirements. This would be available to all and no potential supplier would then have any ground for complaint that government requirements had not been sufficiently widely advertised.

All inspection should be done by a staff working under a central agency. As a Director of Industries he was quite prepared to accept, for provincial requirements, the standard set by the inspectors for departments of the Government of India. He was opposed to the acceptance of any inferior quality even in finish alone for Indian made articles.

There was no need at present for a test house in the Punjab.

Witness considered that there should be much greater freedom of purchase of imported stores in India than the present Stores Rules allowed. Increased purchasing of imported stores in India would encourage firms to keep larger stocks and would probably result in cheaper supplies.

Whatever purchasing agency was maintained in England it should work under the instructions of the central agency in India.

It was very desirable that the central agency should have knowledge of the stocks held by railways and government departments so as to be able to effect transfers of excessive stocks.

Rai Bahadur Ganga Ram, C.I.E., M.V.O.

Written Statement.

The Public Works Committee appointed by Government in 1916, of which I was a member, went into the question of purchase of stores very closely, and hence I invite the attention of the Stores Committee to the recommendations of the Public Works Committee in regard to purchase of stores and the agency and method of purchase.

I am strongly in favour of a central agency for purchase of all stores, and for all departments, including Army Department, Railway, Public Works, Posts and Telegraphs and Royal Indian Marine. I would go a step further and urge the purchase of stores for District Boards and Municipal Committees. There should be provincial agency first, and then a central agency under the Industries Department.

The central agency should not pass any orders to England unless they are thoroughly satisfied that the stores are not obtainable from any stores in India, and any stores that cannot be had in India should be well advertised in The *Indian Trade Journal*, which should be largely expanded. This should become a *weekly*, and develop into a *daily* publication.

In answer to question 7, I can say that the certificates required under the present system of indents are generally signed by indenting officers as a matter of routine. When witnesses were examined before the Public Works Committee, one officer, holding the position of Superintending Engineer, did not know if cement was being manufactured in India now.

I think I will be able to answer other questions in my oral evidence.

Rai Bahadur Ganga Ram, called and examined.

Witness favoured a scheme in which purchases for local Governments would be made by provincial agencies staffed from an All-India Stores Service, but under the control of provincial Directors of Industries. Any provincial purchasing agency unable to meet a demand from its own area would forward it to a central organisation who would distribute it to proper provincial agencies for compliance. Departments of the Government of India and railways would send their demands to the central organisation for distribution amongst provincial agencies. A controlling central organisation was essential to the scheme to coordinate the work and prevent competition between provincial agencies to see if the indent could not be met from surplus stores of other provinces, and to see that no undue preference in prices was given by any provincial agency to manufacturers within its own province. The manufactures of India should be treated as a whole and not by provinces and preference should be given to any suitable articles made in India from raw materials produced in India even though the price was slightly higher than imported articles of the same kind so long as the producers in India were manufacturing as cheaply as they could and were not attempting to make excessive profit. In buying out in India, the guiding principle should be price and quality. If these were equal, preference should be given to goods produced in India first and other places within the British Empire, next.

All home indents should pass through a central organisation. Some organisation for the purchase of stores would be required in London for many years to come and perhaps always; but he thought that it should be under the direct control of the Government of India or at any rate divorced from the India Office whom the Government of India were diffident about worrying with enquiries regarding delays in supply. He suggested that it might be placed under the Indian Trade Commissioner in London.

The requirements of Government should be more widely published than at present and he thought that this could best be accomplished by the issue by the central organisation of a stores paper on the lines of the *Indian Trade Journal* in which all government requirements would be published and probable future requirements notified.

In his opinion, it was preferable to encourage firms in India to keep stocks than to form government stores depots in which there was always the danger of accumulation of worthless stocks. Increased purchasing of imported stores in India would induce more firms to establish branches and agencies and to keep larger stocks and duplicate parts of machinery, and also possibly to manufacture in India but the same benefits could not be expected from middlemen or commission agents.

The central organisation should have knowledge of the stocks held by all departments and railways so as to be able to regulate any excessive holdings. The issue of present surplus stores lists was practically useless. Executive Engineers should be empowered to waive the charge of storage on all surplus stores, so long as they could procure list prices.

His own impression of inspection was that it only added to the cost. The provincial purchasing officers should be capable of passing their own purchases and be held responsible for quality. He had hopes that in time private consultants who could provide expert advice and inspection would set up practice in India. These private practitioners would be more likely than a government department to keep abreast of the times.

In public interest he recommended that government should control the purchases made by District Boards and Municipal Committees to ensure that stores of good quality were obtained, and at a price not higher than what government departments could get.

Any regulations that might be introduced to ensure that all purchases practicable were made in India should be made applicable to company-worked railways.

At Lahore, Monday 15th March 1920.

PRESENT:

Sir FRANCIS COUCHMAN, K.B.E., M.I.C.E. (*President*).

Lieutenant-Colonel C C. H. HOGG, C.M.G., R.E.	LALJI NARANJI, Esq.
Brigadier-General H. A K. JENNINGS, C.I.E.	Rai Bahadur LALA MILKI RAM.

And the following Co-opted Member :—

The Hon'ble Mr, C. A. H. TOWNSEND, I.C.S., Director of Industries, Punjab.

J. C. HIGHET, Esq. (*Secretary*).

Colonel H. A. D. FRASER, R.E., Commanding Royal Engineer, 1st (Peshawar) Division and Secretary to the Hon'ble the Agent to the Governor-General and Chief Commissioner, North-West Frontier Province.

Written Statement.

Question 1. Yes. As far as Military Works Services are concerned this should result in savings as follows :—

(*a*) Great reduction of stocks now held at all large military stations which means a direct saving under 'suspense' and should reduce losses from depreciation and bad stocking to a minimum.

(*b*) It should ensure getting better value for many articles in very common use which are now often purchased locally at unfavourable rates and of bad quality.

(*c*) It should save Assistant Commanding Royal Engineers and all indenting officers much time and trouble in indenting for stores and accounting for them.

(*d*) It will avoid an immense amount of accounting for articles normally issued from stock to contractors.

Apart from these considerations, which, though generally applicable, are of a departmental nature only, it is clear that a central purchasing agency run in close conjunction with the new department of industries, must form an important factor in developing local resources and giving the head of the Industrial Department just such information as he will want for further development in those directions in which the recent war has shown to be of great military and national importance.

Question 2. Each department will require its own branch depôts suitably located for serving groups of users or for special military needs. Thus the Military Works Services will need such a depôt at Lahore to serve the whole of the North-West Frontier both in peace and war. At this depôt will be held reserves of mobilisation stores and also sufficient stocks of articles in common use. Executive officers within a specified area will indent on and receive from these depots all their supplies. The officer-in-charge of the depot should place orders direct on the Controller of Stores for ordinary stock. Orders for special stores such as machinery will probably be placed on the Controller through the Chief Engineer and sometimes perhaps through the Director General of Military Works.

I think too that the staff of the central agency should include a certain number of officers whose chief duty will be to inspect and report on stocks held locally by the Military Works Services and other government departments with a view to avoiding unnecessary accumulations, recording complaints as to quality, delays, etc., and taking action to remedy defects and complaints of all kinds. It must be remembered that local users of stores have often neither the time nor the business instincts to devote proper attention to stock, and that Government consequently suffers losses in many directions for lack of frequent expert inspection.

These travelling officers might perhaps be called 'Efficiency Officers,' a name which serves to indicate their duties without further explanation.

Question 3. None, provided the central agency is officered as it should be.

Question 4. It would certainly be most advantageous for them to do so if the central agency is run on sound business lines. They should contribute by paying a small percentage on the value of goods supplied.

Question 5. I am entirely opposed to decentralisation at all events in the first instance. It will be difficult enough to get a central purchasing agency going on sound lines without complicating it at its start with measures of

decentralisation dictated more to fit in with modern ideas of decentralising everything than because such decentralisation will in this case tend to efficiency and economy. If experience proves that such measures are necessary later on, there should be little difficulty in then initiating them. To introduce provincial Directors of Industries between the original indentor and the central agency in the manner proposed in paragraph 197 of the Industrial Committee's proposals is to introduce delays and to complicate a new machine which to be efficient must have the fewest possible number of wheels in its design. Provincial Directors of Industries should, of course, keep in close touch with the central supply agency and with its local officers, and there is no reason to expect that legitimate provincial aspirations in the industrial line need suffer in any way on account of all purchases for Government being strictly centralized. A provincial Director might, under the proposals made in paragraph 197, prefer to buy locally certain stores obtainable better or cheaper in other provinces with the misguided object of fostering some local industry despite natural local disadvantages against production as compared with other parts of India. Such a policy could not generally speaking be advantageous to India as a whole, and requires the wholesome check that centralised buying alone can give it.

Question 6. My last answer covers this question. The central agency should buy in the best markets through its local agent or agents whether for the Government of India or for local Governments. It will lie with the Director of Industries with the Government of India to study the results and to develop other sources of supply if circumstances demand it, working through provincial Directors in all cases.

Question 7. Not much, but whilst buying engineering stores for the Kashmir Durbar in England in 1906-09, I got to know certain manufacturers and to hear their criticisms of the methods of the India Office Stores Depot. One common complaint was that the specifications on which tenders are called are often much too precise in quite unimportant details. I was told that they frequently show evidence of having been drafted by persons not conversant with manufacture and not concerned in, or familiar with the use of, the machine or article in question. Thus the dimensions of unimportant non-wearing parts are sometimes given to four places of decimals of an inch without any latitude being specified. This gives obvious openings to unscrupulous inspectors to reject really good articles unless the firm makes it worth their while to be reasonable.

The remedy is to consult *manufacturers* before finally deciding on important type specifications or working drawings and to fix permissible tolerances for various parts.

Still more important it is to systematically inspect and watch the doings of the numerous staff of low-paid inspectors employed in factories. This will be the chief duty of the Head Inspectors (alluded to in answer to question 26) who must gain the confidence of the heads of firms. A further safeguard against dishonesty will be to shift inspectors fairly frequently. Certain firms in England plainly told me that they had to charge the India Stores Department 5 per cent more than they would charge other wholesale buyers in order to cover their expenses in keeping official inspectors reasonable. I make these remarks with some diffidence as I have nothing to prove that they were justified by facts. My impression at the time was that manufacturers suffered from over inspection in unimportant details rather than from dishonest inspectors, but even so the result might be as stated, *viz.*, an increased charge for a standard article.

Another complaint was that would-be tenderers found it difficult to get business-like replies to enquiries regarding doubtful points made prior to tendering and generally experienced far more delay and officialdom in handling government contracts than in dealings with commercial firms. It is only fair to add that one of my informants at least was alluding particularly to Ordnance instruments which probably do not concern the India Stores Department at all.

Question 8. Yes, in many cases.

Question 9. It is not quite clear what is meant by the policy of inspection. It should never rest with the Controller of Stores to dictate to users what quality of stores they must accept, but one great advantage of keeping inspection out of the hands of users and in the hands of the department responsible for commercial development is that the latter will be in the best position to *suggest* to users the adoption of the articles which can be manufactured in India though not exactly as specified. If such suggestion is not accepted, it will rest with the Industrial Department to raise the standard of Indian productions to that which is essential to users.

There are many articles in common use by several departments, and if the specifications put forward by each department differ in detail, it will rest with the Controller of Stores to attempt to standardise production by getting one specification accepted by all users. Ultimately the users of stores are the judges of the efficiency of the supply and inspection department, and though the latter may, and should attempt to bring them into line, and should suggest advantages or economies attainable by slight departures from specifications the users as represented by the heads of departments must not be dictated to.

In this sense, therefore, users must in the first instance dictate the policy of inspection, whilst the Industrial Department will aim at so co-ordinating and moulding the policies thus dictated as to afford the utmost economy in the utilisation of Indian resources. Such a division of functions is in the best interests of both parties, and whilst tending to raise the standard of Indian productions and to extend their use, it will simultaneously lead to economy and the introduction to users of new ideas.

Question 10. By a central agency provided that Efficiency Officers of the right stamp are appointed in addition to inspecting officers, who will keep in the closest touch with local heads of consuming departments and with actual users of stores and provided also that *ultra*-departmentalism is avoided. Complaints are nearly always troublesome things to deal with and there is apt to be a tendency on the part of the Head of a Department to support the actions of his departmental officers somewhat blindly. From accounts given me by officers who were in Mespot genuine complaints were not infrequently very curtly dealt with in a most discouraging manner. One great advantage of having the purchasing and inspecting branches under one head, though otherwise entirely separate, is that this tendency will be avoided.

Question 11. Not that I know of. But purchasing departments should be allowed to reserve the right to inspect for themselves articles of a very special and abnormal nature on the comparatively rare occasions when such are ordered. Even where a purchaser does not arrange for such special inspection when placing an order, it will sometimes happen that no inspector having the requisite knowledge will be available and in this case the using department should be asked by the Controller of Stores to make its own arrangements for inspecting and be given every facility for so doing.

Question 12. Yes, high class surveying instruments and other things of a similar nature used for scientific work or investigations.

Question 13. By a central agency for reasons given in paragraph 9 of Mr. D. McPherson's Note.

Question 14. Yes, they could be much simplified if not abolished altogether.

Question 15. The Controller of Stores should be given a perfectly free hand subject to compliance with the spirit of a general policy to be laid down by the Government of India for his guidance.

The answer to the latter part of the question depends mainly on the nature of the policy thus laid down.

Question 16. It is inevitable if purchases in India are to be developed to a maximum, but as it must mean delay, Heads of Departments should be permitted to order direct from England in cases which they consider

really urgent subject to immediately reporting the action taken to the Controller of Stores.

Question 17. Only the free use of the cable or of the air post when this comes.

Question 18. None so long as he is the only agency with an inspecting staff.

Question 19. Yes, provided there are enough of them, and provided contractors are permitted to draw on them on payment against indents certified by proper authority. Over centralization of stock depots would be a great mistake and it will probably be found best to permit departments to maintain branch depots where they most want them from which to distribute to their own local officers. Such a branch depot will certainly be required by the Military Works Services at Lahore for mobilization purposes and can be utilised economically for peace purposes also.

(*a*) The sum total of the stocks held by such depots would be less than the sum total of stocks which would otherwise have to be held by local officers, so there would be a direct saving to Government. The officer in charge, though a departmental officer, should be subject to inspection by the efficiency staff of the Controller of Stores who would report to their own Controller with copies to the departmental Head concerned.

(*b*) Presumably the general policy to be laid down by the Government of India (see answer to question 15) will result in the Controller of Stores laying down from time to time the total quantities of certain articles to be held in stocks in India and the more he holds in Government depots the less will it be necessary for private firms to hold at his disposal.

Question 20. Bombay, Karachi, Calcutta and Rangoon probably. These would be the depots under the Controller of Stores, when such local depots as are required by departments will be supplied.

The function of a stock depot is very similar to that of a service reservoir in a water supply installation. The latter is required to equalise and regulate the demand from the filters and to allow for some of them being out of action temporarily: it has also to hold a sufficient reserve of water to meet possible temporary breakdowns in the supply mains and sudden very heavy demands, i.e, peak loads. No water supply system can be satisfactory without a reservoir of some kind and in the same way no supply system, whether for Indian or for imported goods, can work smoothly and continuously without a stock depot.

Questions 21 and 22. Please apply to Examiner of Accounts, Military Works Services, Delhi.

Question 23. Only at great expense. And if purchases are to be made by the central agency such information would be of no use to users, i.e., to purchasing officers, except perhaps in the case of running contracts. Even these articles should, however, usually be bought by the Officer Commanding Branch Departmental Depôt, *vide* reply to question 19.

Question 24. No knowledge.

Question 25. Yes, to some extent, though I consider it should be left to the option of such bodies to make use of the central purchasing agency. Seeing however that the Controller of Stores will have to deal with the private firms on behalf of these bodies, the interference is more apparent than real when they exercise their option.

Question 26. Only general views.

The Department under the Controller should consist of:—

(*a*) Purchasing branch.
(*b*) Inspection branch.
(*c*) Efficiency and complaints branch.
(*d*) Testing branch.
(*e*) Forwarding branch.
(*f*) Depots branch.

(*a*) Should be recruited from business men of experience.

(*b*) Inspection branch should consist of:—

(*i*) Officers who are experts for inspecting articles requiring special technical knowledge. These will usually be engineers or physicists.

(*ii*) Head Inspectors. These should be business men whose chief duty will be to watch and control the operations of the actual inspectors.

(*iii*) Inspectors. These need not as a rule be highly paid men and will usually be of the foreman class in the trades concerned. As their opportunities and temptations will be great they will need very close watching by the Head Inspectors.

(*c*) The economical and satisfactory working of the department from the users' point of view will depend very largely indeed on the efficiency of officers. Good men will be hard to find but may be recruited from any branch. Given really good men the success of the department as a whole will depend largely on the extent to which their reports and suggestions are acted on by the Controller and by Heads of Departments.

(*d*) This will probably develop into a big branch which should be self-supporting financially by charging suitable fees. Its services should, I think, be open to the public and not strictly confined to dealing with the business of the department.

(*e*) A very great deal will depend on this branch particularly in war time. It will be their business to give packing, marking and forwarding instructions and through the inspecting department to see that they are carried out and that invoices, packing accounts and railway receipts reach consignees well in advance of the goods.

Judging by results as I saw them during the Afghan operations, the organisation of the Munitions Board must have been very defective in this respect, and the results caused very serious delays and losses to Government with endless confusion.

(*f*) *Depot branch.* A capable business man must control each general depot with ample staff under him.

In addition to the above there will be other minor branches under the Controller of which one of the most important will be the scrutiny of indents and home order branch.

Question 27. No, it should be met by a percentage charge on goods supplied by them.

Question 28. Please refer to Examiner of Accounts, Military Works Services, Delhi.

Question 29. These are points on which I have no remarks to offer except that as regards compliance with rules in force officers do not easily break rules except when they are so unbusiness like and difficult to work so that they cannot get on with their work without breaking them. To attain real success the department must not be hide bound by rules and regulations. It should aim at making things easy for the original indentors and users of stores, by supplying them with good articles of the kind they want and when they want them with the minimum of correspondence and red tape. One test of the measure of success achieved by the department will be the infrequency of offences against such rules and regulations as they may have to issue for the guidance of users.

Question 30. Yes, very desirable. The more this can be done the better.

The institution of a central purchasing agency may be said to have two main aspects. Firstly, it will provide an accurate index of the requirements of the Government of India and also I hope of *quasi*-public and local bodies for stores of all kinds. This index will be invaluable to the Director of Industries in fostering local manufactures and productions.

Secondly, it will aim at economy in the cost of stores both directly by the punctual supply of exactly what is the losses at the minimum cost and indirectly by reducing wanted arising from unnecessarily large suspense accounts and by minimising losses due to dishonesty.

Even if it fails to approach perfection in its second aspect it can hardly fail in the first of these main objects.

It is to succeed as an economical source of supply it must I think be run on broader lines than any existing government department. Its Controller must be given wide powers to act within the spirit of the policy dictated by Government and to run his business as nearly as possible on commercial lines. With few exceptions his staff should be non-pensionable and should be manned with what is generally (but I think incorrectly) called temporary establishment, and over all such staff he should have very wide powers as regards salaries, entertainment and dismissal. All or nearly all his staff other than superior pensionable officers (if any), should be admitted to the advantages of a provident fund on lines similar to those of certain railways. They should be promoted for efficiency and honesty rather than by seniority. The department under an able Controller of Stores should be allowed to develop gradually to meet requirements and there should be no attempt to cast it in a rigid mould or to handicap it at its birth by decentralisation for the sake of decentralisation.

Let the chain of demand and supply be as short as possible. Every extra link means delays, correspondence and serious possibilities of mistakes. Let responsible local officers have ample powers to meet really emergent demands by local purchases anywhere in India. This is essential in war time and what one has to do in war one should practice in peace. If occasionally powers are abused or mistakes are made deal with the offender as an individual and do not cripple every one else by at once making hard and fast preventive rules. It is better to suffer slight losses occasionally than to permanently reduce the efficiency and initiative of all for the sake of a few offenders.

Colonel H. A. D. Fraser, called and examined.

Witness had 30 years' Indian service, about half of which was in the Survey of India.

If a central purchasing agency was to be successful, it must be efficient within its own scope. Therefore its scope must be very limited at first and expand gradually. The truest measure of the success of the agency would be the number of satisfied clients, and so that this test might be available he would apply no compulsion to heads of departments or provincial Governments to make use of the agency. The cry from engineers in India for powers to make their own purchases arose from the feeling of distrust in government supply agencies engendered by experience of the Indian Munitions Board and the delays in dealing with the Indian Stores Department in London.

The 'efficiency officers' which he had suggested, were therefore, he considered, essential to the success of a central agency. They should be fairly senior officers with stores experience, tact and common sense. The checking of accumulations in stores depots would be an important part of their work but their main duty would be to maintain personal touch with the consuming officers and to see that everybody was satisfied.

As a start he would cease indenting on the Director General of Stores, India Office, for any items which he did not require specialised inspection and give the central agency in India full power to arrange such purchases either through firms in India or direct from firms in England or elsewhere, reasonable preference being given to goods produced within the British Empire.

It would be fatal to success if the central agency in India was bound down by hard and fast rules. Its business should be to buy wherever it thought best. The responsibility for the accuracy of the indents received should rest entirely on the head of the department making the demand.

He had no complaint against the quality of stores supplied by the Director General of Stores, India Office, but there were many articles of standard stock for which inspection was insisted on unnecessarily and which, he was certain, could be obtained of equally good quality and at the same time cheaper by cutting out the India Stores Department and dealing direct with the makers or distributors.

Inspection of all things might be sound in principle but in practice inspection could be carried too far. There were very few ordinary stock articles which could not be bought with safety on the guarantee accorded by the names of well-known makers.

He advocated that the central agency should not attempt at the outset to deal with the placing of orders for steel structures and the like.

Though he thought that with experience the tendency would be for the central agency to hold some stocks, he did not recommend that it should start off by establishing and filling stock depots.

Running contracts would not obviate the necessity of holding stocks as a reserve against unforeseen demands unless the contracts provided that the supplier himself should always hold a certain stock in hand against emergencies.

The greatest need at present was for the abolition of the many small and scattered stores depots which various departments maintained, and their replacement by departmental store depots at convenient centres in charge of experienced storekeepers. These small depots were a relic of the days when facilities for the purchase and distribution of stores in India within reasonable time did not exist. The engineer officers in whose charge they were had not the time to devote proper attention to the preparation and scrutiny of the annual demands for the replenishment of these stock depots, with the result that the annual restocking had become too much a matter of routine, the same items in the same quantities being often indented for year after year without regard to actual consumption.

If suitably situated departmental stores depots existed there was nothing to be gained by passing stores intended for the departmental stores through a central agency store.

He thought that the headquarters of a central agency should be with the Government of India.

Messrs. Dina Nath and Hem Raj, General Merchants and Government Contractors, Lahore.

Written Statement.

Question 1. Yes. Our reasons are as follows:—

(*a*) It will render a complete control over the purchases of all departments and will enable more favourable terms to be obtained for large orders.

(*b*) It will help to standardise a number of articles in common use of various departments and railways.

(*c*) It will help towards obtaining stores of indigenous nature and tend to develop the resources of the country.

(*d*) It will be an incentive to Indian firms and also to British firms in England in developing and extending their manufacturing operations in India.

Question 2. Yes. The Army Department will probably require special treatment; but a good many articles used by the Army Department could also be controlled by the central agency.

Question 3. Probably ammunition, arms, bricks, lime and similar articles which need not be obtained through the central committee.

Question 4. Yes, if the local bodies wish to avail themselves of the central agency. Matters should be left optional.

Question 5. Large demands of local Governments might, with advantage, be met with through the central agency. Ordinary requirements as well as articles manufactured in a particular province might be allowed to be dealt with by the local Governments themselves. Such as potteries, furniture, chicks, firewood, charcoal, baskets, etc., for such purchases local agencies should be established at selected important centres to work under the Director of Provincial Industries.

Question 6. All government requirements should be obtained through the central and local agencies (*vide* our reply to question 5.)

Question 7. Yes. We have a good deal of experience of this. For certain class of stores, tenders should be invited about the time when the new crops are about to come in the market, such as castor oil, linseed oil, rape oil, etc. Further tenders should be so arranged as not to be calling for quotations for too large quantities at the same time, as such a course might occasionally lead to suppliers who happen to be holding stocks to put their prices up. By careful management there should be no difficulty in arranging to suit the conditions of the various markets and to get tenders for quantities within the supplies available in the markets. This difficulty could also be overcome by keeping up a list of approved firms dealing in a particular line of business and getting quotation from them, instead of calling for general tenders. Tenders could be called for from such firms in their line of business. The list of approved firms should be carefully prepared and kept corrected up-to-date.

Question 8. Yes. In the case of certain classes of stores and special items. In the case of large items such as engines, machinery, etc., tenders should be obtained from England by cablegram and if time permits, tenders could be obtained simultaneously by post both from England and India and dealt with in India. It is a matter of arrangement.

Question 9. Policy of inspection should be dictated by the consumer, who should give a clear specification of what he requires. In some cases assistance could be obtained from the Industrial Department, particularly where local manufacture were to be substituted for imported articles.

Question 10. The purchasing and inspecting agents should be independent of each other, but both of them should be under one central authority.

Question 11. Possibly. Military Department.

Question 12. See reply to question 11.

Question 13. There should be both central and local agencies for inspection, to make inspection on the spot where stores are supplied; but these should be under one central authority.

Question 14. Yes. The rules will require a good deal of revision, if purchases in India are to be extended.

Question 15. All purchases of stores whether of European or indigenous manufacture, should be purchased in India as far as possible. Branches and agencies of British firms in India as well as large importing merchants in India should be encouraged to meet government requirements in India. This will lead to firms in India holding larger stocks and gradually establishing their manufacturing houses in India.

Question 16. Yes. The India Office Store Department should be a branch of the Indian Stores Department.

Question 17. Yes. By means of the price lists which almost all large firms publish monthly or quarterly.

Question 18. Stores obtainable from places other than England should be obtained by the central agency direct through agents appointed in those countries.

Question 19. There appears no advantage in maintaining central stock depot. Each railway and government department should maintain its own stock as at present.

Question 20. See my reply to question 19.

Question 21. This does not concern us.

Question 22. This does not concern us.

Question 23. There would appear to be no difficulty in doing this. It is simply a matter of arrangement.

Question 24. No reply.

Question 25. We do not think it should. But local bodies should be left optional to join the central purchasing agency or not.

Question 26. In our opinion officers of experience and standing should be recruited for the important work and Indians should be more extensively employed as their knowledge of Indian conditions and requirements will help a good deal to foster Indian industries and create new industries.

Question 27. Yes. By small percentage to cover actual expenses.

Question 28. Does not concern us.

Question 29. Does not concern us.

Question 30. This may occasionally be done to give men employed in England, experience of Indian conditions. Staff recruited in India would be quite capable in managing the Indian affairs.

Mr. Hem Raj, called and examined.

Witness' firm had been established for 35 years. Its headquarters were at Lahore but there were branches in Calcutta, Bombay and Lucknow. They owned a cotton waste cleaning plant in Bombay; rope works in Calcutta; a castor oil factory in Cawnpore; and a lamp factory and a hardware shop in Lahore. They dealt both in imported and indigenous stores and kept stocks which were replenished when the markets were favourable. They made large supplies to the army and to various railways, but the bulk of their business was with retail merchants.

So far as his firm was concerned, the present system of separate buying for railways did not affect prices. The great danger of centralised purchase was in going into the market for too large quantities at a time as the larger dealers then bought up the stocks of the smaller dealers. The purchase should be regulated according to the state of the markets.

Witness stated that a few years ago his firm had supplied the Oudh and Rohilkhand Railway with identically the same blue serge as the North-Western Railway had obtained that year on indent and that his rate to the Oudh and Rohilkhand Railway was four annas per yard less than what the North-Western Railway had paid. This was accounted for by the trade discount which his firm had received.

The increase purchased of imported stores in India would lead to firms' holding larger stocks.

Indian mills gave a large discount to dealers as they were unwilling to deal direct with Government themselves owing to the trouble of inspection and the delay in receiving payment and this was the only reason that blanket cloth was supplied by the Egerton Woollen Mills to the North-Western Railway at Rs. 3-3-6 per yard while his firm supplied the same at Rs. 2-15-0.

It was immaterial where the headquarters of the central agency were located. It would probably be found necessary to have purchasing branches at various trade centres. These branches should be under the central agency and not under provincial Governments.

He thought that there would be no difficulty in obtaining capable Indian business men as purchasing officers on salaries of from Rs. 1,500 to Rs. 2,000 per month.

At Lahore, Tuesday 16th March 1920.

PRESENT:

SIR FRANCIS COUCHMAN, K.B.E., M.I.C.E. (*President*).

Lieutenant-Colonel C. C. H. HOGG, C.M.G., R.E.
Brigadier-General H. A. K. JENNINGS, C.I.E.
LALJI NARANJI, Esq.
Rai Bahadur LALA MILKI RAM.

And the following co-opted member:—

The Hon'ble Mr. C. A. H. TOWNSEND, I.C.S., Director of Industries, Punjab.

J. C. HIGHET, Esq. (*Secretary*).

C. F. LANGER, Esq., M.B.E., Controller of Stores, North-Western Railway, Lahore.

(*Written Statement.*)

Question 1. Not as far as this Railway is concerned.

It might be argued that certain items in common use in many departments and purchased in large quantities, *e.g.*, articles manufactured from raw jute, also oils, paints, varnishes, baskets, firebricks, brushes, cement, earthenware pipes, grindstones, lamps and lamp fittings, ropes, etc., etc, would result in minimum prices being obtained. On the other hand the wholesale prices of articles are more or less fixed and I doubt whether the experiment would be worth trying taking into consideration the large consumption on this railway and in view of the expense of establishment which would be entailed by the formation of a central purchasing agency.

So far as this railway is concerned therefore it seems problematical whether any appreciable reduction in prices would result even in the case of articles such as mentioned above and it is considered that there would be a decided dislocation of the control which the railway is at present in a position to exercise in relation to suppliers. The purchasing of stores certainly for some time to come might be left to the departments concerned as at present. Conceivably it might be advantageous.

Question 2. No. But as a railway storekeeper I should like to be in a position to obtain my requirements with the least possible delay. I would therefore prefer to obtain from the provincial Department of Industries reliable information regarding such stores as are known to be obtainable or capable of being manufactured in my province. Any surplus not obtainable in the province would be obtained from elsewhere through similar information furnished by other provinces.

Indents for all other stores obtainable in India would be dealt with by me, such information being furnished in lists specially prepared in the office of the Director of Industries and circulated for the guidance of all consumers. As industries developed, intimation of additional items would be conveyed to consumers and in this way annual indents on the India Office Stores Department would be reduced to items of stores unprocurable or unable to be manufactured in India.

I would refer to the answer to question 2. It is conceivable that there might be advantages in obtaining a few items of common use through a central purchasing agency. Departments concerned should preferably make their own purchases, arrangements for inspection where necessary being provided by the Department of Industries.

Question 4. Yes for British Colonies and Protectorates, but not for the others.

Yes, they should contribute to the cost if they make use of such agency.

Questions 5 and 6. In the absence of knowledge of the methods employed at present by local Governments, I have no remarks to offer.

Question 7. Yes as far as State Railways are concerned.

For years past so-called contracts have been entered into, but they do not constitute a fair and square legal contract between two parties. In former years the state railways were at liberty to take over just as much as was required, or more, during the contract year, and latterly this rule was modified by making it incumbent on the railway to take at least 50 per cent. of the total quantity contracted for. Contracts should, I suggest, specify as follows:—

(1) The actual quantity of material required split up into instalments.
(2) The dates on which all instalments to be supplied should be definitely stated in the contract and the time of payment, *e.g.*, 30 days from receipt of the claim for payment made by the contractor, should also be clearly defined.

Such a contract would in itself constitute the order to supply and would reduce clerical labour in the preparation of orders from time to time. Further the penalty clause for late delivery would operate automatically, and it would be the business of the Audit Office to keep a check on the Stores Department to see that quantities were actually taken to account on the dates specified in the contract and that penalties were systematically inflicted. There is a tendency to put too much on the Storekeeper which to my personal knowledge has resulted in money-making subordinates omitting to advise the Auditor of deductions to be made. This applies also to recoveries of freight on rejected material. I enclose a set of documents* now being adopted in this railway relating to contracts for the supply of stores. This form of tender could be altered to suit the class of material contracted for.

Question 8. There is nothing to prevent simultaneous tendering in England and India for certain classes of stores required on this railway even with the existing organisation, but there is no doubt that a central stores organisation in India would facilitate such simultaneous tendering if it is both necessary and desirable to introduce.

Question 9. The policy of inspection should be dictated by the department responsible for the development of the country, but the actual inspection must be in accord with the requirements of the consuming department.

Question 10. Independent, yes. This department would after all be only an inspecting department, the duties of which should not entail the additional function of advising the purchasing agency as to the best sources of supply. Such information would, I presume, be conveyed through the Directors of Industries.

Question 11. Yes; railway requirements for example.

Question 12. Yes, *e.g.*, glassware, Manilla ropes, hardware, brushware, textiles, leather, both tanned and manufactured, cast iron manufactures, earthenware pipes and fittings, oils, rolling stock, rails, etc.

Question 13. By local inspection agencies under the control of the central inspection agency.

Question 14. No. The necessity for modifications in the existing rules depends on the policy to be adopt-

* Not reproduced.

ed and not on the organisation for purchase, also on the powers conferred on such organisation.

Question 15. (*i*) That a similar article suitable for the purpose required cannot be manufactured in India with due consideration to price and quality and that the responsibility for importing such probable requirements of articles will rest with the importer and not with the department or departments concerned.

(*ii*) That the article is actually in the country at the time the order is placed. *N. B.* Except that in cases of emergency which must be certified to by the highest local administrative authority, an order limited to the minimum quantity required may be placed with an Indian branch or agency of a British manufacturing firm.

Condition (*i*) encourages the holding of stocks of articles which cannot be manufactured in India. To assist firms to estimate the probable requirements of consumers it should be permissible for Heads of Departments to furnish information showing estimated annual requirements, stocks on hand and quantities due on English indent and when expected to be landed in India. Such information should however be furnished only in regard to articles known to be in regular demand and to recognised agents of British firms. These particulars would assist firms to regulate imports in order to avoid overstocking.

The first clause of condition (*ii*) applies more to condition (*i*). In the exception, *i.e.*, the emergency demand, the restrictions hitherto imposed would be removed and the importation of emergent material would be both facilitated and expedited.

When it is declared and generally known that manufacture in India is to be encouraged no business firm will attempt to import raw material into India unless such material is unobtainable in India or that the cost of labour in manufacture and other conditions considered are such as will enable the firm to establish a manufactory guaranteed to yield substantial profits.

In any case, however, imports of raw materials for purposes of manufacture will, it is presumed, only be permitted on production of checkable estimates by manufacturing firms.

Question 16. No objection provided there are no abnormal delays in submitting indents to England. It must be remembered that quantities are estimated on state railways on the average of three years' issues and in the case of special stores such as locomotive and carriage and wagon duplicates and permanent way materials, etc., by the Heads of Departments concerned.

In addition to the foregoing, information would be available of articles obtainable or capable of being manufactured in India. English indents would therefore be reduced solely to articles obtainable out of India. The central department would then become a post office.

Question 17. By the purchasing agency in England submitting a periodical list of average prices as was the practice prior to the war and by the central office in Calcutta obtaining prices in India.

Question 18. No; no classes of stores should ordinarily be obtained from abroad otherwise than through the Director General of Stores. It has, however, been the practice to obtain stores such as lubricating oils and some kinds of sleepers by means of contracts with British firms of repute established in India. It is recommended that this practice which has been established for years and recognised should be allowed to continue.

Question 19. Not so far as railways are concerned. Even assuming that it is decided to establish central purchasing agency, I see no necessity if the system of purchasing by contracts as I have outlined in reply question 7 is adopted. I make this statement from the point of view that as far as possible all unnecessary expense should be avoided. The holding of stocks by government departments should be evenly distributed over a 12 months' period. With dates for delivery and quantities specified there would be no necessity for firms to maintain large stocks but only such quantities as would be required for delivery from time to time.

Question 20. I do not approve. In my opinion forwarding agencies at the ports for imported stores only would be required.

Question 21.

Return of Expenditure on stores purchased by the North Western Railway during the years 1910-11 to 1918-19.

Year.	Value of imported stores purchased in India.	Value of stores produced in India.		Value of stores purchased through the Director General of Stores.
		Cost of goods obtained from Government factories.	Cost of goods obtained from private dealers.	
	Rs.	Rs.	Rs.	Rs.
1910-11 . .	20,28,044	41,667	1,36,34,351	1,04,16,706
1911-12 . .	15,70,546	1,17,548	1,24,31,988	2,27,81,069
1912-13 . .	14,81,606	6,212	1,49,17,362	2,14,30,491
1913-14 . .	13,34,863	66,884	1,62,99,744	3,28,87,038
1914-15 . .	10,98,885	56,203	1,30,89,113	2,15,85,444
1915-16 . .	14,88,728	37,180	1,51,28,836	77,08,957
1916-17 . .	28,36,570	15,490	1,54,93,934	23,67,302
1917-18 . .	44,78,061	1,61,521	1,83,34,856	54,60,415
1918-19 . .	55,61,963	4,714	3,01,15,277	68,10,529

Question 22. I have, since taking over charge of the Stores Department of the North Western Railway in April 1919, arranged for registers to be maintained for prices paid daily so as to arrive at the last purchase rate and the date thereof, as regards English stores both imported from England and purchased in India, also stores of country supply and manufacture. I have registers of firms capable of supplying the various kinds of stores, the names of all defaulting firms being removed therefrom from time to time.

These registers, however, do not place me in possession of the knowledge of all the most reliable firms and the classes of stores stocked or manufactured by them. Such information is what is required and would I presume be furnished by the Director of Industries. With such first hand knowledge I would be enabled to continue making my own purchases from the most reliable sources.

Question 23. Yes, by means of an intelligence bureau at cities such as Calcutta, Bombay, Madras, etc., and by information obtained from Directors of Industries.

Question 24. I regret I am not in a position to offer an opinion.

Question 25. None whatever so far as I am aware. As regards inspection I know that a private individual existed in Calcutta as an analyst (I do not know if he is there now), but if my information is correct, greater reliance was placed in the Alipore Test House.

Question 26. Men should be recruited from railways and large commercial firms. As regards organisation this can only be planned, built up and the total number of the personnel decided on when it is definitely known what the scope of the work would be and as the scheme progresses.

Question 27. Yes, similarly as is done at Karachi for the landing and forwarding of stores for government departments provided it is decided to establish central and local purchasing agencies.

Question 28. Please refer to the Manual of Store Accounts issued by the Railway Board.

Question 29. This is a most important factor as quick and efficient audit will ensure minimum quotations and prompt delivery. As regards this Railway I strongly advocate supplies being consigned only to store depots not to individual indentors. I am about to advocate this procedure as I can prove that the so-called direct despatches are causing constant delays in payments and considerable annoyance to contractors and suppliers which naturally has its effect on prices.

Question 30. Provided the central purchasing agency is established, yes both between the home and Indian stores departments, the Indian stores department and the local purchasing departments. The object would be not so much to become acquainted with the procedure of work as to gain a practical knowledge of what is actually required and the purpose for which intended.

Mr. C. F LANGER called and examined.

Witness had been on the East Indian Railway from 1886 to 1907 and on the North Western Railway from 1907 up to date. Has had experience in all branches of a railway stores department and has also studied the systems of working on the London and North Western Railway, the Great Western Railway and the Midland Railway of England. During the period of the war was employed in Bombay for sixteen months in the purchase and shipment of stores for Mesopotamia and East Africa and other war areas.

Witness explained that his written replies had been framed under the impression, which he had received from the form of the questionnaire, that the central agency contemplated would take over all purchasing. Any such scheme was to his mind unworkable.

He could see possible advantages however to Government as a whole from a central purchasing agency which would deal only with items which representated in the aggregate very large quantities and vast expenditure. The benefits would, he thought, lie more in the direction of the development of industries in India than of economy in purchase. Speaking as one of the biggest purchasers in the country he did not think that the North Western Railway would obtain any more favourable rates through a central agency than by making its own purchases.

The first step towards securing better rates in India should be the devising of some method of securing more prompt payment to suppliers than at present. In this connexion, it was his experience that delays were less likely to occur when the supplies were received in a stores depot than when despatch was made direct to the indenting officers.

His experience was that imported stores purchased in India were invariably more expensive than similar stores obtained through the Director General of Stores, India Office. He attributed this mainly to such purchases being made in small quantities and in emergencies.

If government requirements were made public and purchases were made regularly in India, he thought that firms in India would maintain larger stocks; competition would increase, would be obtained; and manufacture favourable prices in India would be encouraged. Increased purchasing in India would moreover reduce the work in the stores departments of railways. The quicker the stores were obtainable, the less the stock which had to be held. He thought that deliveries would be obtained very much quicker through firms than through the Director General of Stores, India Office. The advantage of quicker delivery was well worth paying something extra for.

The approximate time taken by the Director General of Stores, India Office, in supplying materials in pre-war days was:—

Class A.—Bridge Work	8 to 12 months.
Class B.—Engineers' Plant excluding Petty Tools.	4 to 11 months. (Pumps. 15 months.)
Class C.—Workshop Machinery and Heavy Tools.	5 to 10 months.
Class D.—Ballast and Permanent Way.	4 to 13 months.
Class E.—Rolling Stock—	
Ordinary Duplicates	6 to 12 months.
Engines and Carriages	12 to 20 months.
Class F.—Station Materials and Fencing.	5 to 11 months.
Class G.—Tools and Stores	4½ to 12 months. (1st instalment usually received within 6 months.)
Class H.—Electrical Plant and Materials.	4 to 13 months.
Materials ordered by cable	1½ to 6 months.

He was sure that in normal times most firms would be able to guarantee delivery of G class stores within 12 weeks.

The central purchasing agency in India should be at liberty to place orders anywhere it liked. Better quotations were likely to be obtained from firms in England direct than through an intermediate agency in London. Whatever agency was maintained at home should be a branch of the central agency in India.

He would be prepared to recommend some slightly higher payments in order to encourage local productions with the idea that this would benefit the railway in the end.

At present the bulk of his purchases was inspected by comparison with approved samples supplied by the contractor. This worked quite satisfactorily and witness preferred this system to asking contractors to inspect and quote to a standard sample.

He considered that the headquarters of the central agency would be best located in Calcutta as being the most centrally situated business centre.

The central agency should not require a large number of purchasing officers. The men appointed as purchasing officers need not be technical experts but it was important that they should have a business training.

Witness advocated the grant of wider powers of purchase to Heads of Departments and Controllers of Stores and the limitation of the scope of the central agency to demands very large in quantity and value.

Major G. NOTTIDGE, O.B.E., R.E., Officer-in-charge Central Mechanical Transport Stores Depot, Rawalpindi.

Written Statement.

My functions as Officer-in-charge, Central Mechanical Transport Stores Depot, Rawalpindi, are executive only, not administrative. Mechanical transport stores are a peculiar class of supply; I have only been concerned for three years with storekeeping in India on any considerable scale.

I am not therefore in a position to offer a useful opinion on the broader and more general points raised in the questions.

The Central Mechanical Transport Stores Depôt has three means of obtaining stock, *viz.*:—

(*a*) Submission of draft English indent to Army Headquarters.

(*b*) Issue of a "Purchase Requisition" to the Purchasing Officer for Mechanical Transport Stores, at Bombay or Calcutta.

(*c*) Direct purchase from institutions, or commercial firms, at localities in India other than Bombay or Calcutta.

Procedure (*a*) usually results in a home indent being forwarded to the India Office, by the Quartermaster General, after obtaining concurrence by the Indian Munitions Board. The draft indents are, however, occasionally modified at Army Headquarters.

Procedure (*b*) makes it incumbent on the Purchasing Officer to obtain the stock required, if available at reasonable price, in Bombay or Calcutta, as the case may be. If not available, he transfers the demand to the Purchasing Officer at the other port.

In deciding whether stock required shall be obtained in India or by home indent, the Central Mechanical Transport Stores Depot is guided by the urgency of the demand against which the stock is required, and by its past experience as to whether there is a reasonable chance of obtaining the stores in India.

Instances of procedure (*c*) are purchases of engine brushes and spoke brushes, which are manufactured specially by Messrs. Brushware, Limited, Cawnpore; similarly considerable purchases of spare parts, pneumatic tyres and common stores have been made from firms in Rawalpindi, to save time, in cases where the Stores Depôt unexpectedly runs out of stock, owing to unusually heavy demands and non-arrival of stores on indent from England.

The bulk of the Depôt's stock consists of spare parts and tyres, though it has a considerable holding of accessories (*e.g.*, pumps, lamps, etc.) and common expendables (*e.g.*, brake linings, beltings and water connections). It

would seem that most of the stock should continue to be supplied through the India Office, it being of special nature. It is desirable that the depôt should standardise accessories as far as possible, for example, if the Depôt stocks oil lamps of multifarious patterns, and when the user loses the oil container off one of these, the whole lap has to be scrapped, because the depôt cannot also stock small replacement parts for numerous patterns of accessory. It is understood to be the intention that the depôt shall eventually stock in the main, those patterns of accessory which have been standardised by the War Office in England. If so, this policy would entail the obtaining of accessories (and spares for them) by English indent, and not by purchase in India.

The value of the Depôt's present holding of stock is probably about rupees fifty lakhs, but, even so, the stock is still (after three years' working) by no means complete or adequate in many directions. This is because there are so many diverse types of vehicles dependent on the Depôt, and because the number of such vehicles has been continually increasing; another factor is that some six or eight months usually elapse between the submission of a draft English indent to Army Headquarters and the arrival of the resultant stores at the Depôt. As stocks at the Depôt become more adequate, and as the types of vehicles become less (by gradual standardisation of type), it will become proportionately more easy to foresee demands and consumptions, and to prevent stocks running out, by submitting English indents, many months in advance; this will considerably decrease the number of emergent purchases to be made in India, consequent upon stocks becoming exhausted.

As regards questions in the questionnaire:—

Questions 1 to 6. As regards the special case of the Central Mechanical Transport Stores Depôt, the present system seems to be reasonably satisfactory; rapidity of purchase being generally the most important factor, this would probably be impaired if purchases had to be made through any general agency, either central or local.

Questions 7 and 8. In the case of purchases in India, there is seldom time to call for tenders or quotations. Sources of supply in India being few, it is generally a question of accepting stock offered by any firm which can supply it.

Questions 9 to 13. If any special "inspection agency" is to be established in connection with the Central Mechanical Transport Stores Depôt, it should presumably be located within the Depôt itself.

Question 16. Such scrutiny would hardly seem necessary in the case of indents from the Central Mechanical Transport Stores Depôt.

Question 18. It would seem convenient to obtain from the actual manufacturers (without the intervention of the Director General of Stores) spare parts for such vehicles as are manufactured abroad, *e.g.*, Ford and Hupmobile parts from America, Fiat parts from Turin, Italy and so on. In such instances the order might be placed either direct with the manufacturing firm or else through the firm's agent in India.

Questions 19 and 20. The Central Mechanical Transport Stores Depôt at Rawalpindi is in effect a "central stock depôt" specialising in mechanical transport stores. It is supposed to hold enough stock to cover six months' consumption by the military motor vehicles running in India, South and East Persia and Aden.

Question 21. The Central Mechanical Transport Stores Depôt was brought into being only at end of 1916. Approximate figures are thus:—

Year.	Approximate value of		
	Stock received from England.	Stock purchased in India.	Stock issues.
	Rs.	Rs.	Rs.
1917-18 . . .	14½ lakhs	5½ lakhs	6¼ lakhs
1918-19 . . .	17½ lakhs	8½ lakhs	13½ lakhs

As regards purchases in India, the Depôt has kept no records which enable it to differentiate between "imported" and "Indian" stores. But the proportion of "Indian" stores purchased is naturally small.

Question 22. All receipts of stock are priced in the Depôt's ledgers. An "issue rate" is fixed for each item from the average cost of the various receipts. The pricing is effected either from the priced English invoice or (in the case of purchases in India) from the supplier's bill. The Officer-in-charge, Central Mechanical Transport Stores Depôt, is himself a disbursing officer and actually pays all bills on account of stock purchased in India. When any stock receipt turns out to be priced more than ten per cent higher than the current "issue rate" for the item concerned, the transaction is specially brought to the notice of the Officer-in-charge, by his Accountant, so that the high price may be looked into.

The Depôt keeps up no particular records as to relative performance of various firms. Most of the purchase in India is effected through the Purchasing Officers in Bombay and Calcutta who use their own discretion as to firm to be dealt with, the Central Mechanical Transport Stores Depôt exercises no control over the Purchasing Officers in this particular direction.

Question 28. The Depôt's cash account undergoes the usual military audit, with vouchers, month by month. But as regards stock accounts, the Depôt has its own accounts staff, which operates very similarly to the "central audit" on a state railway. The Depôt's stock accounts are not completely audited, but are subject to partial inspection audit by the Controller of Military Accounts, 2nd Division.

Major G. NOTTIDGE, called and examined.

Witness had held charge of the Central Mechanical Transport Stores Depôt since it was established in November 1916. The Depôt was concerned only with spare parts and accessories. The supplies of new complete motor vehicles were arranged by Army Headquarters.

As yet, the Depôt had had no respite from emergent and unforeseen demands. The number of vehicles to be catered for had been continually increasing and, owing to the exigencies of war time, vehicles of many different varieties had had to be employed.

Sufficient statistics were not yet available to enable the approximate consumption under varying conditions of service to be forecasted with any accuracy.

At present spares and accessories to the value of about one lakh a month were being purchased in India. The prices which had to be paid in India were higher than the prices of similar articles received on indents. The bulk of these purchases was necessary because of the delay connected with the supply on indents through the Director General of Stores, India Office.

He thought that if purchases were made regularly in India, prices would improve. Personally, he would prefer to be able to go direct to the manufacturers or agents instead of through the Director General of Stores as delivery could probably be quicker.

It was particularly desirable that direct ordering of spare parts for cars of foreign make should be made permissible. It was not necessary to inspect standard parts of motor vehicles obtained from manufacturers or agents.

Even though increased purchases in India resulted in larger stocks being held by firms it was doubtful whether a stock of less than six-monthly estimated consumption in the Depôt would satisfy the military authorities.

On the whole he could see no advantage in introducing a central purchasing agency between the Depôt and the suppliers of spare parts and accessories.

At Lahore, Thursday 18th March 1920.

PRESENT:

SIR FRANCIS COUCHMAN, K.B.E., M.I.C.E. (*President*).

G. H. COLLINS, Esq., C.I.E.
Lieutenant-Colonel C. C. H. HOGG, C.M.G., R.E.
Brigadier-General H. A. K. JENNINGS, C.I.E.
LALJI NARANJI, Esq.
Rai Bahadur LALA MULKI RAM.

And the following co-opted member:—

The Hon'ble Mr. C. A. H. TOWNSEND, I.C.S., Director of Industries, Punjab.

J. C. HIGHET, Esq. (*Secretary*).

The Hon'ble Mr. F. W. WOODS, C.I.E., Secretary to the Government of the Punjab, Public Works Department Irrigation Branch.

Written Statement.

Question 1. This idea of a central purchasing agency appears to have originated in paragraph 195 of the Report of the Indian Industrial Commission, 1916-18, with which I am not at all in agreement. For instance, I do not think it can reasonaby be inferred that, because economies may have been effected by the Munitions Board through the special powers conferred on it during the war, it necessarily follows that a central agency acting in peace time, without such special powers, will be able to effect similar economies. And I do not agree that the present system of local purchase by individual officers is, in "any case" wasteful. I do not advocate the establishment of a central agency, because:—

(*a*) I think that its cost is likely to exceed greatly, the provisional estimate of Rs. 8,56,000 per annum.

(*b*) The loss of time entailed. My experience of business transacted through the Director General of Stores, India Office, leads me to believe that business transacted in that way, through a central agency, tends to delay, rather than expedite, business.

(*c*) The agency could not, except at very great expense, include experts in all lines of business, whilst the consumer, in the case of the canal engineer, is an expert in the matter of his own requirements.

(*d*) Stores may be divided into two classes, *viz.*, "ordinary," including such items as steel section, bolts, rivets, wire, paints, oil, etc., and "special", including such items as plant, machinery, etc. and though the agency might be able to deal, possibly with some advantage, with the former, they cannot do so with the latter, which form a large proportion of the stores required for agriculture, irrigation, water works, and Public Works Department requirements generally; and I consider that the most satisfactory method is for the consumer to come into direct contact with the supplier.

(*e*) The consumer and supplier would not come into touch with each other, and the educational value of the connection would be lost, the consumer remaining ignorant of what, to him, would be useful developments, and the supplier ignorant of the lines on which development should proceed.

(*f*) If business be transacted chiefly through a central official agency, manufacturers are not likely to establish their own expert agencies in India.

(*g*) The central agency, having become responsible for supplies, will be apt to treat complaints from the consumer, regarding such supplies, as being complaints against itself; and will be apt to throw the blame for defects in supplies on the consumer rather than on the supplier.

(*h*) The personnel of the office establishment of the agency will probably not be more competent than that of the engineer of the Public Works Department.

(*i*) The introduction of a third party merely leads to complications, delays, and disputes. If there is no third party it will be necessary for the Public Works Department to maintain a stores directory and a record of specially good, or specially bad, work done by manufacturers.

Question 2. Yes. Every province and every department must be represented thereon; and very extensive laboratories for testing and inspecting will be required.

Question 3. Yes. Special stores as defined above. The Executive Engineer in the case of the Public Works Department.

Question 4. No reply.

Question 5. No. Grant of adequate powers to the local Executive Engineers.

Question 6. I do not favour the creation of local agencies.

Question 7. No reply.

Question 8. I do not consider this advisable, as it would tend to discourage the establishment in India of branch engineering services of British firms.

Question 9. By the consuming department.

Question 10. Appendix 5 of the Public Works Department Code, 10th Edition, in conjunction with the selection of the firms, will cover all our requirements.

It will be necessary for the Public Works Department to maintain a list of firms to be dealt with, and red and black lists of satisfactory and unsatisfactory engineering firms.

Question 11. As for question 10.

Question 12. Specialised inspection, except by the consumer, or purchasing engineer, is not advisable, because this will throw the responsibility on to the purchaser instead of on to the supplier.

Question 13. No. The steps outlined in the reply to question 10 are all that is necessary.

Question 14. Yes. To enable all purchases to be made in India, and thereby encourage the home manufacturers to set up branch establishments in India. As far as the Irrigation Branch is concerned, purchases made in direct communications with the manufacturers, which would

thus be rendered possible, would often be much more satisfactory than if made through the Director General of Stores, India Office.

Question 15. Under conditions resembling those laid down for contracts in general in the Public Works Department Code.

This would encourage (*a*) and (*b*); which is highly desirable.

Question 16. If it is still found necessary to retain the Director General of Stores. No.

Question 17. The scrutinising department is not required. The consumer can obtain the prices from the manufacturers.

Question 18. All special stores as defined above.

Question 19. No. The tendency of the agency will be to overstock itself with supplies of articles of type which might speedily become obsolete for want of knowledge of local requirements.

(*a*) This would still be necessary owing to the uncertainty of obtaining the supplies promptly when required through the agency.

(*b*) It would discourage the private firms from doing so.

Question 20. No. No.

Question 21.

Year.	Stores purchased abroad.	Imported stores purchased in India.	Indian stores.
	Rs.	Rs.	Rs.
1910-11	2,37,360	1,77,023	4,20,714
1911-12	47,989	2,04,196	5,64,823
1912-13	5,86,312	3,30,746	7,72,234
1913-14	34,987	3,11,117	7,35,780
1914-15	1,00,672	2,65,362	5,84,943
1915-16	3,09,445	2,68,060	3,68,444
1916-17	1,06,106	2,47,963	4,19,729
1917-18	4,807	2,57,939	3,25,768
1918-19	148	4,53,511	2,67,244

Question 22 (*a*). There are the initial records; but, so far, there has been no attempt to collate them in a suitable form for ready reference, except in the case of stores purchased abroad.

(*b*) No record kept hitherto *ad hoc.*

Question 23. It will be quite feasible, but the agency need not be of the kind this questionnaire contemplates setting up.

Question 24. No reply.

Question 25. No reply.

Question 26. I fail to see how this can be satisfactorily done, except at excessive expense.

Question 27. Yes, and this financial consideration one of the most serious objections to the scheme.

Question 28. The register referred to in question 22 is inspected by engineer and audit officers.

Question 29. No.

Question 30. No reply.

The Hon'ble Mr. F. W. Woods, called and examined.

His written replies represented the general opinion of the Irrigation Branch of the Public Works Department in the Punjab, for which the demands for stores and plant of a special nature far exceeded the demands for ordinary stock articles.

The existing system of obtaining stores for Government did not tend to foster industries in India, as it encouraged officers to place orders for stores with the India Office, rather than in India; especially in cases where the application of the regulations might be open to doubt.

The development of industries would be best encouraged by giving individual executive officers a free hand to purchase stores of any kind anywhere, up to the limit of their powers of executing contracts for works.

One great advantage of bringing the executive officers into direct touch with the suppliers would be that the latter would know that any unsatisfactory supply would mean loss of future custom. On the other hand an official agency having placed an order, and therefore sharing the responsibility for supply, would naturally be disposed to defend its action. As a case in point, witness referred to the case of a planing machine, which had been obtained through the Director General of Stores, for the Amritsar workshops, and had proved defective in certain respects. The Director General of Stores attributed the defects to the manner in which the machine had been worked; but it was discovered later that the makers had found it necessary to modify their design, in the particular points which had been brought to notice; thus admitting the justice of the complaint.

He would permit executive officers to correspond freely with firms, even outside of India. This would be more likely to lead firms to establish representatives in India, than a central official agency with which, he was afraid there would be a strong tendency to deal with large manufacturers in England rather than with smaller concerns in India.

In his experience official agencies were, as a rule, efficient, but more expensive, than private agencies.

He considered it inadvisable to place the responsibility for inspection and testing on a central agency. All responsibility for satisfactory service should be thrown on to the suppliers.

In his opinion the good quality of stores received through the Director General of Stores, India Office, was not explained by the inspection they were subjected to.

W. R. Macpherson, Esq., General Manager, Messrs. Spedding & Company, Lahore.

Written Statement.

It would appear that the Government of India are alive to the fact that there is necessity for encouraging Indian industries, while at the same time securing economy and efficiency in the purchase of government requirements.

The terms of reference all point to the fact that Government will naturally purchase in the cheapest market, probably from England, where industries are already established, which policy may be detrimental to the improvement of existing industries, and the initiation of new ones in provinces backward in industrial activities such as the Punjab.

This I am confident cannot be the intention of the Government of India and to guard against it provision should be made in the modification of the Stores Rules which are contemplated under para. (*c*) of the terms of reference which should be a guide to local stores agencies when arranging for local supplies.

A point that deserves serious consideration is that it appears to be the intention of certain government departments to open factories themselves and to compete against commercial firms. The writer has knowledge of one such factory that has already been established. In such cases Government having the advantage of raw materials, this is not only unfair competition, but it is a wrong policy, and one that will check privately enterprise very seriously, and I would therefore suggest that in the purchase of stores Government should buy their requirements from commercial firms provided that same can be obtained at reasonable market rates.

Question 1. Yes, provided the necessity of encouraging Indian industries provincially is consistently kept in view,

and that the central institution confines itself strictly to agency work and not maintaining large stocks (see reply question 19).

Question 3. No, provided provincial agencies are consulted.

Question 5. Local Governments should always be given the opportunity of making their own purchases.

Question 6. Government of India should buy through local agencies *where* the supply is most satisfactory.

Question 7. Yes, sufficient time and advertisement is not given.

Question 8. There is no reason why simultaneous tenders shoud not be called for, but if it is to be only a matter of getting the cheapest price either in England or India, what about developing the industries of India?

Question 13. Inspection should be made by local agencies who place the orders and being on the spot can be continually consulted by the manufacturer. Central agency inspection is likely to cause delay which is not in the interest of the manufacturer, and in certain cases is likely to cause considerable loss.

Question 15. The purchase of European stores in India through Indian branches or agencies should be encouraged.

(*a*) If Government deals direct with the home firm, local agencies and branches will not be able to hold stocks, and will eventually have to shut down, to the disadvantage of the public generally and especially to the small consumer.

(*b*) Establishment of factories in this or any other country are not affected by abolishing agencies or branches as this depends entirely on import duties, freight, etc., etc.

Question 19. This is a matter for Government's consideration regarding loss by depreciation and otherwise.

(*b*) Private firms should be encouraged to hold stocks.

Question 20. See above.

Mr. W. R. MACPHERSON, called and examined.

From 1909 to 1913 witness had been Assistant in Spedding and Company serving in Forest and Timber Depôts, and from 1914 to date General Manager of Spedding and Company, all branches.

He recommended local purchasing and inspection agencies working under the direct control of a central agency and independent of provincial Governments.

With reasonable assistance from Government he felt sure that India could in time establish herself industrially in the world's markets. The Government assistance should take the form of buying Indian made articles at prices remunerative to the manufacturers though slightly more expensive than similar imported articles. He was unable to suggest a limit to the difference in price. This would depend on the importance which Government attached to the establishment of particular lines of manufacture in India. Government assistance would be withdrawn as soon as an industry had been firmly established. He suggested an import duty on imported articles of which it was desired to establish manufacture in India.

Witness favoured the purchase through firms in India of stores which had to be imported. Government's policy of refusing to deal with branches and agencies in India and going direct to England was detrimental to the increase of stocks in India.

His firm made large supplies of Deodar sleepers to the North Western Railway. He could see no advantage in centralising the purchasing of railway sleepers. So far as the Punjab was concerned no increase in supply was practicable no matter what method of purchasing was adopted.

The supply of additional sleepers can only be provided for by private firms, subject to their being given forest leases for definite periods on the understanding that they guarantee to give their first class sleepers to railways.

This was the case in the past when the supply of sleepers available for railways was considerably greater than it is at present.

With reference to his remarks regarding government factories, witness explained that he considered that Government might be entitled to undertake manufacture for their own requirements to a limited extent but not for sale to the public. Before Government started any factory, commercial firms should be given a fair chance of taking up the scheme. He understood that this had been done before the government Resin and Turpentine Factory at Jallo was established; but he did not think this was the case with the wood working factory recently set up near Bareilly. The latter was the factory to which his remarks referred. He was sure that many commercial firms would have been willing to establish a factory on the same lines provided a long term agreement for supply of the raw materials from the forests had been offered. The main hindrance to the exploitation of forest products by commercial firms was the disinclination of Government to give leases for periods longer than three to five years. No firm could afford to incur the expense and risk of setting up works so long as there was uncertainty as to the cost of raw materials at the end of so short a period.

Witness desired to mention the adverse effect which the special freight rates charged for the carriage of railway stores had on local firms. The saving to the railways was only apparent as the cost of transporting railway stores was no less than that of carrying stores for any other purpose: but this apparent saving led railways to deal mainly with firms at seaport.

A. S. MONTGOMERY, Esq., Secretary to the Government of the Punjab, Public Works Department, Buildings and Roads Branch, called and examined.

Witness was not asked to submit a written statement.

Witness had entered the Public Works Department in 1893, and was now Chief Engineer, Public Works Department (Buildings and Roads Branch), Punjab. He would welcome a central purchasing agency in India but not for all purchases. The Public Works Department should be allowed to retain a free hand for the purchase of stores required in small quantities. For steel sections, galvanized iron sheets, cement and such like stores, and also for machinery of standard stock types, the central agency would be useful; but it would be best to allow departments to purchase any special types of machinery or special stores they might require.

The direction in which a central agency would be of greatest use would be in arranging running contracts against which executive officers could draw supplies as required.

He had always been satisfied with the quality of imported stores purchased in India and the prices had not been exorbitant. He recommended larger powers to selected officers for the purchase of imported stores in India through branches or accredited agencies or even through middlemen provided the rates quoted were reasonable.

He would also welcome a properly run inspection agency in India though for the general run of stores used by the Public Works Department rigid inspection was unnecessary. Paints and oils were mainly used by the Public Works Department for indoor work and unsatisfactory results were more frequently due to faulty appreciation than to bad quality.

His department had not had much occasion to make use of the Test House and Laboratory at Alipore. He considered that there might be room for improvement in the facilities for testing tar, which was now coming so much into use for dustless roads. At his request the manufacturers had sent samples to the Test House but the results were not sufficiently detailed to show him where the samples corresponded with the specification

laid down by the Road Board in England which he desired to follow.

Whether firms in India held better stocks or central departmental stock depôts were established, it would not be practicable to abolish the smaller store depôts of district officers as the work which the Public Works Department had to carry out in government buildings had generally to be done within a limited time and it was necessary to collect all the stores required beforehand in some depôt near the work in order to eliminate the risk of delays and loss in transit.

Lieutenant-Colonel B. C. BATTYE, R.E., D.S.O., Executive Engineer in Charge, Sutlej River Hydro-Electric Project Division, Rupar, called and examined.

Witness was not asked to submit a written statement.

He considered that a radical change in the existing procedure for the purchase of stores, etc., was necessary if industries in India were to secure proper encouragement. Nothing would help more towards this end than calling for all tenders and making all purchases practicable in India.

In buying plant and machinery, direct *personal touch between the officer responsible for the work and the suppliers was most important* and this was obtained by dealing with branches or qualified representatives in India.

When orders for plant and machinery for important projects had to be placed with firms in England who were not represented in India an officer selected by the officer-in-charge of the work should always be deputed home, or the officer-in-charge should be permitted to appoint his own representative at home in order to secure the direct personal link.

When in charge of the Simla Hydro-Electric scheme, he was responsible for the selection and installation of large quantities of machinery of various kinds. Tenders had been invited from and submitted by a large number of firms all over the world all of which had (or arranged to have) representatives in India. These tenders were made to carefully drawn up printed specifications prepared by himself and were not the result of so-called "consultation" with various manufacturing firms. This came to the knowledge of the India Office who then insisted on the tenders being let in England. Eventually it was agreed that such tenders as were received direct in India should be passed on to the India Office with a recommendation as to which it was desired should be accepted; and that all tenders received in the India Office should be sent to India so that witness might select the tender which he considered most suitable. The selected tenders were then accepted by the India Office. This arrangement had proved satisfactory though he felt handicapped by not being personally acquainted with the Electrical and Mechanical advisers to the India Office.

Subsequently when he had carried out a similar work for a municipality, he had selected his own representative at home who, he knew, would give his own personal attention to any problems which might arise during compliance with the orders. This arrangement had been most satisfactory.

In his opinion it was a mistake to employ as consultants any firm whose business was too big for the enquiries of every client to receive the personal attention of the head who gave the firm its name and reputation.

He had sent many indents for ordinary stores to the Director General of Stores, India Office, and his only complaint was the time taken to supply. It was not sufficiently recognised that the money value of even a week's delay to works through the non-arrival of stores to time often outweighed any saving from the cheaper purchase in England.

He considered that expert consultants in hydro-electric matters, would find plenty of work in India but it would be necessary for such firms either to establish themselves in India or to send out a representative frequently.

He was insistent on the importance of not interfering with the responsibility of the officer-in-charge of the work and interposing a third party between him and his manufacturer.

At Lahore, Friday 19th March 1920.

PRESENT:

SIR FRANCIS COUCHMAN, K.B.E., M.I.C.E. (*President*).

G. H. COLLIER, Esq., C.I.E.
Lieutenant-Colonel C. C. H. HOGG, C.M.G., R.E.
Brigadier-General H. A. K. JENNINGS, C.I.E.
LALJI NARANJI, Esq.
Rai Bahadur LALA MILKI RAM.

And the following Co-opted Member:—

The Hon'ble Mr. C. A. H. TOWNSEND, I.C.S., Director of Industries, Punjab.

J. C. HIGHET, Esq. (*Secretary*).

F. A. HADOW, Esq., Agent, North Western Railway, Lahore, called and examined.

Witness was not asked to submit a written statement. Mr. Langer's replies had been drawn up in consultation with him.

Witness could not foresee any advantages from the transfer of general purchase from the special departments which railways had built up to a central agency.

Many disadvantages were apparent. The railway stores departments understood the essentials in railway stores which it would be difficult to explain precisely to a central agency; this would be a fruitful source of correspondence and delays vexatious to railways. Under present conditions the Controllers of Stores of railways were able to deal effectually and promptly with defaulting contractors; if the contracts were made by a central agency action could not be so prompt, on account of the larger machinery which would have to be set in motion, and would probably not be so effectual. The larger the organisation the greater was the difficulty in preventing malpractices. In this

opinion local industries would develop much more widely under a system of decentralised purchase than with centralised purchase. He was in favour of greater freedom of purchase of all classes of stores being given to selected executive officers than at present.

There were possibly a few items of which centralised purchase might prove beneficial, but on the whole centralised purchase did not seem to offer any saving to the principal railways as their demands individually were sufficiently large to secure the best rates obtainable.

The function of a central agency of most benefit to India would be to watch that no orders went out of India unnecessarily by exercising an intelligent scrutiny over indents. This must not, however, be allowed to cause delay in the transmission of indents.

He considered that with two purchasing agencies one in India and one in London—one must be, or become in time subservient to the other, and that it would probably be best for India that the agency in London should be definitely placed under the agency in India.

Any central agency established in India should have absolute discretion as to how and where to buy.

He was all in favour of co-operation between the purchasing officers of railways and the provincial Directors of Industries. As Agent of the North Western Railway, of which approximately 3,500 miles out of a total mileage of 5,000 miles were within the Punjab, he was willing to assist in the initiation of promising new industries in the Punjab with orders so long as the prices were not unreasonably high.

The revision of the present system of payment for stores purchased in India was an urgent necessity if better terms were to be expected from suppliers. It should be possible to evolve a method of payment by the purchasing officers before audit.

There was a need in the Punjab for facilities for chemical analysis. He did not think there would be enough work for a physical test house.

Calcutta seemed to him to be the most suitable headquarters for a central purchasing agency.

Colonel C. W. WILKINSON, C.M.G., D.S.O., R.E., Chief Engineer, North Western Railway, Lahore, called and examined.

Witness was not asked to submit a written statement.

Witness did not think that the purchase of all sleepers for railways by one central agency would be an improvement on the system at present in force which had not yet had time to become established.

This year, the supply of sleepers had fallen far short of requirements and there had been numerous complaints regarding the distribution of the number available. This was not peculiar to the Punjab alone where the shortage had been aggravated by a cholera epidemic and by the lack of water in the rivers, which had been the cause of the failure of several contractors to meet their obligations.

He preferred supply through contractors to departmental supply by the Forest Department as with the latter there was no redress for any failure to come up to the quantity relied on.

On the whole he thought that the purchase of sleepers would be best left in railway hands.

He had had no cause to complain regarding stores received through the Director General of Stores, India Office, either in regard to quality or period for delivery. Nor had he knowledge of any case in which the existing Stores Rules had operated to hamper work.

The Engineering Department of the North Western Railway had very seldom had occasion to make use of the Test House and Laboratory at Alipore. The want of a similar institution in the Punjab had not been felt.

At Delhi, Monday 22nd March 1920.

PRESENT:

SIR FRANCIS COUCHMAN, K.B.E., M.C.E. (*President*).

Brigadier-General H. A. K. JENNINGS, C.I.E. | Rai Bahadur LALA MILKI RAM.

J. C. HIGHET, Esq. (*Secretary*).

J. S. PITKEATHLY, Esq., C.V.O., C.B.E., D.S.O., Electrical Engineer, Delhi.

Written Statement.

Question 1. I advocate the formation of a central agency for purchasing all raw materials, such as steel, cement, timber, ironmongery, etc., and annual expendable stores required by various departments of the Government of India as I consider that consolidated purchase of large quantities of such materials would enable Government to obtain its requirements at favourable rates, and such an agency would be in a position to arrange for efficient inspection. Such an agency would be of considerable assistance to engineers carrying out ordinary works in isolated districts remote from sources of supply of Public Works Stores as it would relieve them of all delays and troubles attendant in obtaining tenders and arranging for inspection of the stores required from time to time. While advocating the formation of a central agency for purchasing stores I am strongly of the opinion that the agency should be prepared to delegate its powers of purchasing stores to any department of Government which is sufficiently well organised to carry out these duties.

Question 2. I consider that special arrangements would be required for all the departments mentioned in the question.

Question 3. I am of the opinion that in large public works projects such as a new capital or a hydro-electric undertaking which entail the use of large quantities of highly technical stores and machinery and on which experienced engineers who are responsible for obtaining certain engineering and financial results, are employed the purchase of all stores and machinery required should be done by the engineers and not through a central agency.

Question 4. I consider that the turnover of stores in a company-owned railway is large enough to enable that railway to buy its stores at favourable rates and of suitable quality without the help of the central stores agency.

In the case of stores required by local and *quasi*-public bodies I consider that the purchase of the stores for these bodies by the central agency might seriously interfere with the legitimate enterprise of local traders. With regard to the purchase of stores on behalf of British Colonies and Protectorates it would appear that a central stores agency would be an eminently suitable organisation for purchasing stores on their behalf and I consider that they should be expected to contribute towards the maintenance of the central organisation.

Question 5. I consider that local agencies for the purchases of local Governments will be essential.

Question 6. I consider that the policy should be for departments of the Government of India to obtain through local agencies such stores as are manufactured in the areas under the jurisdiction of such local agencies.

Question 7. I have no useful criticisms to offer.

Question 8. I see no great difficulty in introducing a system of simultaneous tendering in India and England, but consider that we should aim at encouraging English manufacturers to establish themselves in India. It is far more satisfactory to deal with people on the spot who know all local conditions and who are prepared to undertake all responsibility and, in the case of machinery, to quote for plant erected, tested and ready for service.

Question 9. With regard to raw materials such as steel, cement, timber, etc., and manufactured materials required for general use for which standard specifications can be framed and adhered to, I consider the policy of inspection should be dictated by the department responsible for the industrial development of the country.

With regard to special machinery and technical stores demanded for special purposes by officers and departments who are responsible for obtaining engineering and financial results, I am strongly of the opinion that the policy of inspection should be dictated by the officers or departments responsible for the suitability of stores purchased.

Question 10. Yes.

Question 11. Yes. The Army, Railway, Posts and Telegraph and Public Works Departments require special inspection organisations of their own.

Question 12. I have expert knowledge of various electrical and mechanical appliances and special inspection of these would be necessary.

Question 13. Local inspection agencies would undoubtedly be necessary.

Question 14. The Stores Rules of 1913 would require considerable modification and should be completely revised to provide for the purchase in India of all classes of stores whether in India or not at the time of the purchase.

Question 15. The purchase of European stores (whether in India or in the United Kingdom at time of purchase) through established Indian branches of British manufacturing firms should be encouraged in every way possible and no restriction should be placed on such purposes. The only condition I should impose would be:—

(*a*) Quality must be in accordance with specification;
(*b*) prices must be favourable;
(*c*) all stores will be inspected in India.

The concession would greatly encourage firms in India to hold large stocks and would also be a great incentive to firms to establish manufactures in India.

Question 16. As a general principle I approve of the scrutiny by a central department in India of all home indents before their transmission to the Director General of Stores, but in case of stores such as spare parts of special machines or machinery which the demanding officer knows is not manufactured or available in India the scrutiny is unnecessary and only causes needless delay.

Question 18. I consider that all classes of stores which do not require inspection during course of manufacture or before despatch from Europe should be procured otherwise than through the Director General of Stores.

Question 19. With the exception of depots of stores required for mobilisation purposes, I do not advocate the formation of stock depots by the Government of India. The whole policy should be to encourage the holding of stocks by private firms and establishing stock depots by Government will in my opinion have the reverse effect.

Question 21. This information is not available.

Question 22. During past four years the demand for stores has exceeded the available supplies and prices have varied considerably. No attempt has been made to maintain detailed records of prices paid for stores beyond the usual record of all purchases which is maintained for audit purposes. No definite records of success of firms dealt with are maintained beyond a note of any unsatisfactory supply by a Firm. In practice any firm not found satisfactory in dealings is not asked to tender again.

Question 23. I consider this will be one of the most important duties of the central agency.

Question 24. I have no experience in shipbuilding in India.

Question 25. It is most probable that the purchase and inspection of such stores by a central government agency would interfere with the private enterprise of smaller traders at local centres.

Question 26. The staff will have to be selected men with large experience and commercial knowledge. A system of attaching officers of various consuming departments to the central or local stores departments for certain periods should be developed.

Question 27. Yes. This seems the only practical way of debiting the actual cost incurred in obtaining the stores and materials against the works or projects on which they are used.

Question 28. The pre-audit system is in use here. Briefly the procedure is as follows: a copy of any order for stores is sent to the Audit Officer when the order is placed with the supplier. A copy is also sent to subordinate officer who will receive and inspect the stores. After inspection the stores are brought on charge. The bill covering cost of stores is forwarded to the receiving officer who checks it against the order and stores received. If correct the bill is forwarded to the Audit Officer duly verified by the receiving officer. The Audit Officer again checks the bill of cost of stores against the official order and if correct the cheque is forwarded direct to the supplier by the Audit Officer.

Question 29. I do not think so.

Question 30. Yes, I consider it most desirable, in fact if efficiency is to be maintained frequent interchange of personnel will be essential.

C. G. BARNETT, Esq., Superintending Engineer, 1st Circle, Delhi, called and examined.

Mr. Barnett appeared in place of Mr. Pitkeathly who had left India.

Witness had 18 years' service in the Public Works Department in Burma and India.

The written replies submitted by Mr. Pitkeathly represented the views of the Engineering staff of the New Capital Works, Delhi, and were concurred in by the Chief Engineer.

If the development of industries in India was to receive the full measure of encouragement which Government could give, it was essential that the centre of purchase of Government stores should be transferred from London to India, and that everything *deliverable* in India should be *purchasable* in India.

Many purchases would still have to be made in England, and for these an agency, which should be a branch of the agency in India, would be required.

So far as the Public Works Department was concerned, Chief Engineers should have power to direct how their subordinate officers in charge of special works should purchase—either for themselves or through the central agency.

In order that the central agency might have a fair chance of proving its worth it would be necessary, at first, to define certain commodities for which it was to be employed. The

employment of a central agency should in any case be compulsory for articles in large demand in the purchase of which objectionable interdepartmental competition was found to exist.

Once the central agency had established a reputation for efficiency there would soon be a cry from consuming officers for the expansion of the scope of its purchases.

Such imported stores as he had purchased in India before the war had been on the whole as good as those received through the Director General of Stores, India Office, but cost more on account of the small quantities purchased.

Since 1914 he had made large purchases in India but owing to war conditions this period afforded no useful comparison.

He would not debar wholesale importers from tendering for government requirements in India but would encourage all firms alike and not only branches or accredited agencies of makers. In time unsatisfactory firms would be eliminated and a list of approved firms would be maintained. Too much importance could not be attached to the proper maintenance of this list of approved suppliers. The more strictly this was kept the less would be the need for inspection. Firms would not likely risk the loss of prestige in being removed from the government list.

Any local purchasing agencies which it might be necessary to establish at important centres of trade or industry should be branches of the central agency and not under the provincial Governments.

It was felt that there would be a tendency for the central agency to deal mainly with the larger firms and that its employment by local and *quasi*-public bodies might be to the detriment of small local firms who undoubtedly had a considerable claim to the custom of such bodies.

He had not felt the want of consulting engineers in India. Engineering firms were always willing to quote for any special structures to their designs and this seemed preferable as firms were able to prepare plans according to the material they had most readily available.

Witness suggested that when the need arose for more facilities for engineering testing throughout India, the engineering colleges should be made use of. The work would be interesting and instructive to the students. He himself had derived great practical benefit from the tests which he had had the opportunity of witnessing in the testing laboratory attached to the Royal Indian Engineering College.

He thought that central provincial stock depots for all departments would prove unworkable. Each department should keep its own stocks. Running contracts with suppliers would result in the transfer of stock-holding from Government to firms who could maintain stocks more economically than Government and recoup them quicker.

The headquarters of the central agency would be best located with the Government of India.

With reference to the written reply to question 11, witness explained that it was not meant that the departments named should have separate inspection organisations of their own, but that officers from the different departments should be attached to the inspection branch of the central agency for definite periods.

BANWARI LAL, Esq., of Messrs. BHANAMAL GULZARIMAL, Iron Merchants, Delhi.

Written Statement.

Question 1. No. I do not advocate the formation of a central agency for purchases on account of different departments of the Government of India. But a central agency is needed which should only be a testing and information collecting and disseminating body for articles that can be obtained in India. But for the articles that cannot be so obtained, the central agency may even be a purchasing body.

Reasons.—

(*a*) Besides local knowledge will be essentially useful in making purchases, which the central agency cannot possibly have to the efficiency and intimacy of local officers and agencies. The purchase of articles which are obtainable in India would be unnecessarily delayed if purchased through the central agency. When once an article has been approved of and considered up to the mark by the central agency, it will be quite useless to purchase the same through the central agency, which will mean so much waste of time only.

(*b*) For articles for which running contracts may be entered into by the central agency, it would certainly be better and would avoid delay to get articles direct from the contractors.

(*c*) Regarding the articles that are not at all obtainable in India, and for such articles as are obtainable in India, but at a very high rate, it is advisable to make the purchases through the central agency from abroad. The central agency will in that case make a collective indent for all the provinces and departments and store the indented articles at suitable ports.

Question 2. Even if the central agency for purchases is formed special arrangements will be required for particular departments of the Government. The experts of each department should be appointed; otherwise the formation of such an agency will be useless. The Assistant Controllers, as recommended by the Industrial Commission in paragraph 198 of their proposals, should be the experts of different branches for which they are appointed. It may be suggested that if these appointments are conferred on capable Indians, they will be more useful, as their knowledge of personalities of different merchants, proprietors of firms and their honest dealings or otherwise, will be better known to them than to those who may be new to this country.

Question 3. As stated in the reply to question 1 the purchase of all materials, whether of Indian or foreign make, which are obtainable in India, should be made by local Governments, and not by the central agency. The Director of Industries and the experts appointed for the purpose should constantly supply information to the local Governments as to the names and other details about reliable firms, from whom the local Governments may make their purchases.

Question 4. It would certainly be advantageous if the requirements for the local and *quasi*-public bodies are also obtained in the same way as for government departments, so as to have a uniform rate for works, executed by them and by the Government. They should not be charged anything extra over and above the rates on which the articles are issued to Government works.

The issue rates of articles purchased for the Government even will, of course, not be the same as the cost price of the articles, but a little percentage will be added on to them, to meet the expenses of the upkeep of the agency.

The agency should also help the public when advice is sought without any charge. This will help the industrial development of the country, which is the object of the Government.

Question 5. No. A central stores department will not be a suitable agency for the purchases of local Governments except in the case of articles indented from abroad. The decentralisation will be easy as all foreign requirements of different departments in each province will be referred to the central agency which will supply the required articles from the nearest port on which it has been stored.

Question 6. All requirements of the Government of India should be supplied through the local Government of the place where the particular industry has been developed. As the local Government, in consideration of the special concessions and patronage over the firms, will be in a better position to materially help the industry and thereby induce the proprietors to accept reasonable rates for supply of articles to the Government.

Question 7. No. The principle underlying the calling of tenders itself is condemnable. The evils attendant on

the system are too many to be enumerated here. I advocate the principle of getting open quotations with a statement of ready stock.

No firm ever makes its purchases by the system of tenders, either in India or elsewhere, so far as I know. Further no respectable firm ever cares to go in for a contract to be secured by the system of tender, at least I have seldom done so, and that seldom too always with the knowledge and presumption that I shall not be the favoured mortal.

The system offers temptation to all; the officer receiving tenders, the merchant tendering, and even the store receivers and others concerned.

Question 8. Simultaneous tendering for important contracts in India and England and even in other foreign countries may be quite possible by the establishment of a central stores department, but I do not advocate the system of calling tenders, I am for open quotations and a fair comparison of prices and rates.

Question 9. Having in view on the one hand even the special responsibility of certain departments (*e. g.*, the military departments) for the suitability of stores purchased and on the other, taking into consideration the great advantage that the industries of India will derive when assisted by a centralised inspection agency, I beg to suggest that the policy of inspection should not be dictated by the consuming department, but the policy of inspection should be directly and chiefly safeguarded and even dictated by the department responsible for the industrial development of the country; while the right of giving the details of, and pointing out defects in supplies should be given to the consuming department. The chief object of the Government of India is to develop Indian industries and great stress should be laid on this, though in the beginning the Indian product will be inferior to, and possibly more expensive than, the foreign product, but this should be tolerated if the Government of India do really wish to foster and patronise and develop Indian arts and industries, because without this no genuine industrial development will be possible in India. Some fastidious consuming officials will condemn the Indian product as worthless, but the department responsible for the industrial development of India will see that for the sake of mere sentiment and prejudice, the real principle in view is not violated.

Question 10. Inspection should be carried out by the central agency as advocated above, which should be quite independent of the purchase agencies or officials. As it would be much better if the development of one and the same industry in different parts of India is noted by one and the same body of men. By doing so this body will know the improvement the various firms have made in the same industry, and by their advice and suggestions they will eventually bring the industry up to the perfection of a model.

In fact the central agency should be a department directly and readily assisted and co-operated with by the Director of Industries.

Question 11. This refers to the different departments and they shall be well advised in maintaining their own official inspection so that unnecessary and futile complaints may not be preferred against the supplies. They need not have an inspecting department with experts to assist them as this should be left entirely to the central inspecting body which will employ experts for inspections, tests, and reports.

Question 12. I, as the humble representative of my noble grandfather and father, Messrs. Bhanamal Gulzarimal, and as the proprietor of the above firm, have 25 years' experience of iron founding and iron articles of Indian and European manufacture. In iron products, whether cast, wrought or of steel, expert knowledge is essential. Iron and steel is my chief line and in this specialised inspection, I am positive, is not only advisable but is absolutely necessary.

Question 13. Assuming the creation of local agencies for the purchases of local Governments, the inspection should be carried out by the central inspection agency. It is not at all advisable to create local inspection agencies, as they would naturally be subservient to the local Government, which is not right on principle. The inspecting staff should be independent and superior in organisation to the body inspected. The centralisation of inspection will unite industrial India in one compact whole, which will further the industrial development of the country.

Question 14. Many alterations are not needed in the rules except as under:—

Rule 2(*b*) is not at all favourable to the industrial development of India. It should be abolished, otherwise it will be impossible for the Indian manufacturer to compete with the wealthy capitalists and skilled workmen of other countries. To expect the sameness of standard and price is an absurdity at this stage of India's industrial development. Though I am perfectly sure that under the patronage of a sympathetic Government and its officials, as the British Government and its officials certainly are on the whole, Indian industries will, after some time, attain to the desired perfection.

Rule 3 is very stringent for purchases in India and under its clause (*a*) it does not offer any encouragement to the Indian stockist. The limits should be removed and every option given to the local purchase agency, to make such purchases of foreign articles as may be available in India at a cost which may only slightly exceed the supplying cost through the India Office. The present limits about the costs are ridiculously low and the local purchase agencies should be given a very much wider latitude.

In rule 3, clause (*b*), it is laid down that articles not manufactured in India may be supplied by the contracting firm, provided the firm is approved by the Government of India, and is included in the list of firms so approved. In this connection it may be pointed out that almost all the recognized firms are European firms, with the solitary exception of Messrs. N. D. Hari Ram & Co., of Rawalpindi, as far as my knowledge is concerned. Every respectable and reliable Indian firm should be given an opportunity to take contracts of big construction works, and it should be allowed to supply materials for the work with the instructions that if the materials are below the standard fixed by the central agency, they will be rejected.

In Rule 5 the limit of Rs. 750 should also be abolished or considerably enhanced, specially because of the high prices reigning the market at present.

The rules should be so made that almost all the purchases of the local Governments and of the Government of India, whether of Indian or European articles, should be made in India; except in cases where the purchase in India of the home made article, causes a great loss to the Government owing to the difference in prices.

If these changes are not made and the indents for home made articles are placed as usual on the Home Government, the main object of the Government, *viz.*, to encourage the Indian trade and industry will be frustrated.

From the general rules it is clear that if the orders are placed through the India Office, the bigger material requires a period of a year before it can be supplied, while if stockists are encouraged the purchase agencies will get ready goods available at a very short notice.

Rule 10, clause (*i*) is also faulty and should be changed. The freight added to the prices of the Rate List should be that as paid actually by the merchant and not that as paid by the India Office.

Rule 12 restricts the purchases of the iron and steel materials to the firms approved by the Government. The list of the approved firms should be overhauled and Indian merchants also patronised and included in the list as suggested above. But even then this restriction should be removed and firms having stock and offering to sell it at reasonable prices should be patronised, provided the article supplied is of the quality and kind approved of by the central agency or by a competent head of a government department.

Question 15. It may be further added here that the Government of India will not welcome the idea of foreigners establishing their factories here with their own capital and genius. It is suggested therefore, that all such foreign companies and individuals as desire to establish their factories here in India, should be asked to co-operate with the Indian capitalist and thinker; i.e., they should invite Indian capital and Indian Directors to co-operate with

them. I should suggest that their ratio should be half and half both in money and men.

In my humble opinion this will improve the industrial condition of the country and will also create a spirit of mutual trust and co-operation so essential for our future industrial welfare. It will also educate the Indian thinker and encourage the Indian capitalist.

Question 16. Certainly, scrutiny of all home indents before their transmission to the Director General of Stores is not only desirable, but absolutely necessary by the experts of the proposed central agency.

Question 17. The monthly price lists of reliable firms in India and at home can be the only possible method by which the scrutinising department can have up-to-date information.

Question 18. I could not say. For all goods obtainable from abroad it would be better if direct quotations from the manufacturers were called forth and the order placed *direct.* This will save the extra charge which the Director General of Stores shall levy on the article to meet the expenses of his department.

Question 19. No. I do not advocate the formation of central stock depots by Government of India. I am afraid it will not prove profitable for the Government of India to form a central stock depot on the following grounds:—

(*i*) The Government will have to bear an extra expense for the establishment of the central depot.

(*ii*) The market fluctuations of the rates will mean sometimes heavy losses to the Government, whilst future purchase contracts can be entered into by the Government to avoid the rise in prices in the market, if there be a danger of that kind of which the Government is likely to have a prior notice.

(*iii*) The lot Rahtiya (useless goods) will be left, which will be sold at almost no price and will mean so much loss to the Government.

(*iv*) Last but not the least objection is the tampering with of the materials.

(*a*) The effect will be that the government departments will not hold any stocks whatsoever, but will indent their requirements from the central stock depot. But I advocate local stores and local purchases. I do not consider the idea of a central store to be useful either for the Government or for the stockist.

(*b*) The private firms would surely suffer by the creation of a central goods depot. For in that case the Government would not purchase from them even the small quantity which it does now purchase sometimes and the firms instead of being encouraged will be discouraged and will not keep stocks of such articles as are generally required by the Government.

Question 20. I do not approve of the formation of such depots, but if the Government forms such depots then for the Home articles they must be at the ports and for the Indian articles at the places where such articles are produced or manufactured, *i. e.*, physically they should be stored at the place of their production and mentally stored on paper, so that they may be distributed easily wherever they are wanted.

Question 21. This refers to government department.

Question 22. This refers to government department.

Question 23. Yes. It ought to be so, otherwise where and what will be the use of such an agency. It ought to exist primarily for the purpose of giving prompt and reliable information regarding the prices, capacity and performances of contracting firms to purchasing officers and agencies.

Question 24. We do not know.

Question 25. No! On the contrary it will be profitable to the company-owned railways and local and *quasi*-public bodies to make their purchases under the instructions of the central agency; and the goods purchased by them should also be inspected by the experts of the agency, for in that case they will not purchase inferior articles. Such an inspection and control of company-owned railways, etc., instead of interfering with the private enterprises, will help them and also help the respectable and reliable firms in keeping a large stock of articles required by such bodies. As these bodies will then have to purchase their requirements from reliable firms and not from bogus firms of low standing.

Question 26. They should be manned mostly by able and educated Indians as they are considerably cheaper and are more efficient, having quite a lot of local experience and knowledge.

Question 27. The question has already been dealt with under question 4. As no central purchase agency has been advocated by me I should not write anything on the point; but as a central agency for foreign articles has been advocated by me, I beg to suggest that a certain percentage should certainly be charged on things supplied, otherwise I am afraid the Government will realy be a loser, though outwardly and seemingly it will be trumpetted to be a gainer. Let me try and explain it further; if a lump sum is allotted in the budget of India for the expenses of the central stores agency, and no source of income found to support the department, it will mean so much drain directly on the purse of the Government of India. So I am positive that a certain percentage should necessarily be levied on all issued goods to whatever department it may be, so that the agency, if established, at all may become a self-supporting department of the Government of India. I do admit that if the agency is established for the purposes I have given above, it will be a direct drain on the purse of the Government, but it will be a useful drain.

Besides no dealer or merchant will be able to compete with the prices of the central stores agency, as they will be really false prices, as they will not take into consideration the expenses of upkeep which the Government will have to bear.

Question 28. This refers to government departments.

Question 29. We think so.

Question 30. Yes. We advocate a central information collecting bureau both here and in England. The interchange of personnel between the home and Indian department will be a great help in fostering Indian industries.

Mr. BANWARI LAL, called and examined.

With reference to his written replies to questions 1 and 3 witness explained that he meant that the central agency should limit its connection with the purchase of Indian products, or of articles which could be bought in India solely to arranging running contracts for items which lent themselves to this mode of purchase.

With reference to question 6, when the same commodity was made in more than one province the departments of the Government of India should be at liberty to give their patronage to whichever province could give the best and cheapest supply.

The main evil of the government system of calling for tenders was the lack of secrecy. Information leaked out which enabled unscrupulous firms to corner the supply and to control the price. The lowest tender was too generally accepted on a sample to which the actual supply did not always correspond.

He advocated that everything should be bought in India provided the quality was correct and the price reasonable.

To assist Indian manufacturers to make a start he thought that Government should make some allowance in quality for Indian articles and even be prepared to pay a little more than for imported articles. He was prepared to do this himself for his own personal wants though not in his business. Because he did not profess to live for others, while he presumed that the Government was aiming at the good of India and was trying its level best to see that Indian industries and arts do develop and he would therefore most emphatically advise the Government

to accept for some years at least goods of inferior quality on higher rates, even if they were of Indian make in preference to foreign articles and thus to advance the arts and industries of the country.

R. GRANT GOVAN, Esq., of Messrs. GOVAN Brothers, Delhi.

Written Statement.

I have been requested by the Chief Commissioner, Delhi, to express my views on the questionnaire, which has been issued by your Committee.

I am not in a position to express an opinion on many of the questions and I will only deal with those about which I feel qualified to express an opinion.

Question 1. I advocate the formation of a central agency for purchases on account of departments of the Government of India for the following reasons:—

(*a*) The introduction of a central agency would co-ordinate purchasing organisations throughout the country and thereby ensure the utmost efficiency.

(*b*) The utmost resources of manufacturers would be readily ascertainable through a central agency whereas the distribution of purchases through any other organisations, for instance, local agencies, would make the collections of production statistics more difficult.

(*c*) A central agency would tend to encourage local industries very much more than if purchases were done through scattered agencies which would not be under one central control.

Question 4. I consider it would be advantageous for local and *quasi*-public bodies, company-owned railways, and British Colonies, which buy stores in India, to make their local purchases through a central stores agency, thereby increasing the purchasing power of this agency which would be an important factor in the industrial development of the country. At the same time, I consider that such bodies shoud have the option of making their own arrangements direct should they prefer to do so, as it would not be desirable to definitely place control over such bodies in connection with their purchases. Any such bodies making use of the central stores agency should be charged a percentage towards the maintenance of the organisation (this answers question 27).

Question 5. A central store department would be a suitable agency for purchases for local Governments, and provincial organisations could be co-ordinated with the provincial Directors of Industries, and I support the scheme prepared by Mr. D. L. McPherson in this connection.

Question 7. I have not got very much experience but so far as it goes, it leads me to the conclusion that there is complete lack of cohesion between the different purchasing organisations in India as at present constituted.

Question 9. I consider the policy of inspection should be dictated by the department responsible for the industrial development of the country.

Question 10. In my opinion it is essential that inspection be carried out by an independent organisation but under the same control as the agency for the purchase of stores.

Question 15. There should be no hindrance to the purchase of European stores through established Indian agencies of British manufacturing firms. This would tend to accelerate the establishment by large British manufacturers of manufactories in India.

Question 16. I consider that a scrutiny by a central department in India of all home indents will enable valuable statistical information to be collected.

Question 19. I advocate the formation of central stock depots, which would result in reducing the quantity of stocks held by Government departments in comparison with the system in force to-day. I do not consider that the formation of central stock depots will make it necessary for private firms to hold larger stocks than they do at present, as the purchasing power of the central agency would very soon be gauged and stocks would be held in proportion thereto.

Question 20. Central stock depots should be maintained for *all* Government stores and should be maintained at the chief ports and also at the chief railway and manufacturing centres, such as Delhi, Cawnpore, etc.

Question 23. I consider that a central agency working in co-ordination with provincial Directors of Industries would have every facility for collecting and disseminating reliable information regarding the price, capacity and performances of contracting firms.

Question 25. I consider the arbitrary purchase and inspection of stores for company-owned railways and local and *quasi*-public bodies by a central government agency would constitute a serious interference with the legitimate sphere of private enterprise but this could be overcome by leaving it to the discretion of such bodies to use the central government agency or not.

Question 30. I consider it would be very desirable to arrange interchange of personnel between the home and Indian stores departments or between the Indian stores department and any of the local purchasing departments.

There is one other point I would like to take the liberty of referring to. It appears to me from the correspondence and the views put forward that there is a possibility, under the new proposed organisation, of manufacturers in provinces receiving preference from their own local Government. I consider that it should be made very clear that this is not the case and that every manufacturer (within reason) will be given an opportunity of tendering for government requirements whether for military, railway, provincial, etc., and in this connection there should be no obstruction or difficulty put in the way of serving all manufacturers with tenders either direct from the Controller General of Stores or through provincial agencies.

Mr. R. GRANT GOVAN, called and examined.

Mr. Grant Govan is senior partner in Messrs. R. G Govan and Company and Messrs. Govan Brothers, and the former firm are Managing Agents of the Delhi Flour Mills Company, Limited, and the latter Managing Agent of the Clive Engineering and Motor Works, Limited. The latter firm are also General Importers but their business with Government in imported goods is only on a small scale.

Witness considered that the advantages of a central agency would lie in the intelligence and useful statistics which such an agency would be able to collect and disseminate and also in economy from the consolidation of demands.

At present it was very difficult for an industrialist to gauge the likely demand for articles of which he was considering the manufacture.

While a full knowledge of the probable total demand was essential to industrial development, the art of buying in large quantities, on the other hand, lay in concealing the total magnitude of the periodical requirements from the suppliers by buying in reasonabl, large quantity from time to time. In general, in normal times, the smaller the quantity—within limits—for which tenders were called the finer the rates quoted. It was the business of the suppliers to know what supply of the particular commodities in which they were interested was available in the country and a call for too large a quantity induced suppliers to profit by this knowledge and to quote a high rate.

In his opinion Indian manufacturers should be able to compete successfully in prices with foreign. He would give no preference in price to Indian made articles

except in the initial stages of any industry which it was particularly desired to foster in India.

From such experience as he had witness considered that some form of inspection was very necessary; without it goods might be obtained cheaper but quality would be likely to decline.

He advocated the purchase of imported stores in India in fair competition. There was no reason why supply should not be as cheap and as good as those imported through a government agency. Firms would hold larger stocks and manufacture in the country would be encouraged. Government custom should not be restricted to established branches or accredited agents of the actual makers. Recognised importers should be permitted to compete.

With reference to his written reply to question 9 in which he recommended that the policy of inspection should be dictated by the department responsible for the industrial development of the country, witness explained that he desired to ensure that special conditions which handicapped industrialists in India should receive full consideration. As an example of what he meant witness instanced the specification for flour for the Army in India which required a proportion of gluten which was not always to be found in Indian wheat.

On reconsideration he desired to modify his written replies to questions 4 and 25 to allow local and *quasi*-public bodies, etc., to make use of the agency would aggravate the disadvantages of overcentralisation of purchase and he would exclude these bodies from participation.

At Simla, Thursday 22nd April 1920.

PRESENT.

Sir FRANCIS COUCHMAN, K.B.E., M.I.C.E. (*President*).

A. W. DODS, Esq.
Lieutenant Colonel C. C. H. HOGG, C.M.G., R.E.
Brigadier-General H. A. K. JENNINGS, C.I.E.
Rai Bahadur LALA MILKI RAM.

J. C. HIGHET, Esq. (*Secretary*).

J. MACKENNA, ESQ., M.A., C.I.E., I.C.S., Agricultural Adviser to the Government of India and Director of Agricultural Research Institute, Pusa, called and examined.

(*Witness was not asked to submit a written statement.*)

Witness was about to return to Burma where he had been appointed Development Commissioner.

The little purchasing which the Agricultural Department did was practically entirely of units of specialised machinery for trial as regards suitability for adoption in India or adaptation to Indian conditions. These purchases were usually the outcome of personal observations of individual officers of the Department in other countries or of descriptions seen in trade catalogues. It was possible that some of the purchases which had turned out useless would have been avoided had the expert mechanical advice, which the central agency might be expected to possess, been available, but on the whole the present arrangements suited the Agricultural Department extremely well.

He felt sure that officers of the Agricultural Department would welcome the establishment of government purchasing offices in industrial and commercial centres through which they could make such purchases as they required to make in India. He considered that such offices would be most efficiently run under the control of an imperial agency.

The Agricultural Department would not be a source of supply to other government departments. Its function was research and experiment, development was left to private enterprise.

He thought that purchasing offices in provinces would prove very helpful to provincial Directors of Industries. A branch in Burma of an Indian Stores Department would provide a suitable channel through which industrial Burma could keep in touch with Government requirements in India.

A scheme which was decided to be suitable for India would in general be quite suitable for Burma also. It was desirable, however, that provision should be made as far as possible for direct communication between Burma and London in connection with stores which had to be supplied from the United Kingdom.

He preferred Calcutta as the Head-quarters of an Indian Stores Department, as being the premier city of India, and most conveniently situated for Burma.

Major-General Sir H. W. PERRY, K.C.M.G., C.B., C.S.I., R.A.O.C., Director of Equipment and Ordnance Stores, Army Headquarters.

Written Statement.

Question 1. Yes, provided the duties of the agency are limited to the preliminary arrangement and the purchaser deals direct with the provider as soon as the contract for supply has been made.

Question 2. No special arrangement except that the purchasing department must decide on specification and pattern and carry out inspection.

Question 3. No special exceptions provided 1 and 2 above are accepted.

Question 4. See reply to question 27.

Question 6. Local agencies should not be necessary.

Question 7. So far as purchases made by this directorate is concerned we call for tenders from such contractors as we consider suitable in view of contractors' capabilities and the place where the stores have to be delivered. I have no suggestion to offer.

Question 8. Conditions are so different in India and England that I see no point in simultaneous tendering. Tentative tenders with a view to testing the market can always be called for in either country. See also Rule 10.

Question 9. There is no question that the purchasing department must dictate the policy of inspection. "The man that pays the piper has the right to call the tune." If the inspection were in the hands of the department responsible for industrial development all sorts of useless stuff might be foisted on other departments.

Question 10. No.

Question 11. The Army Department undoubtedly requires its own inspection organization.

Question 13. Inspection should as already stated be done by the purchasing department—i.e., the department which pays. It should be done at the place where this department takes delivery from the contractor.

Question 14. No, Rules 1 and 2 appear to cover the case of industrial development.

Question 15. I see no point in making purchases in the manner suggested—it is only trying to create other agencies, but when a firm is willing to establish manufacture in India and the manufacture is likely to be successful, trial orders might be given with a view to encouraging a new industry. Any excess of cost of articles so produced, while the industry was developing, should however be borne by the department responsible for industrial development, not by the purchasing department.

Question 16. No, certainly not. It would only mean additional delay. Copies might be sent for examination by the department responsible for industrial development so that it could see what articles were in demand.

Question 17. The department should be in touch with the Director-General of Stores.

Question 19. Certainly not—no use to Army Department which hold its own stocks. Unless some new department is going to have a store vote it is not clear how it is going to get stocks to hold. It certainly would not be allowed to hold stocks of stores paid for out of Army grants.

Question 21.

Quartermaster-General's Branch (Q 17-*A*.)

Year.	Expended on		
	Stores purchased abroad.	Imported stores purchased in India.	Indian Stores.
	Rs.	Rs.	Rs.
1910-1911 . . .	6,47,400	11,174	11,71,626
1911-1912 . . .	5,42,600	12,570	12,08,547
1912-1913 . . .	5,81,390	13,649	20,87,809
1913-1914 . . .	9,33,950	16,797	14,81,312
1914-1915 . . .	12,67,365	20,622	14,62,863
1915-1916 . . .	11,92,650	17,740	9,03,178
1916-1917 . . .	9,18,650	30,641	12,20,853
1917-1918 . . .	18,94,430	46,854	11,05,000
1918-1919 . . .	54,76,935	8,124	14,58,956
1919-1920 . . .	17,41,080	not recorded	12,01,280
TOTAL .	1,51,95,850	1,84,171	1,33,01,017

Question 22. (*a*) Rate books are in existence and should be kept up-to-date, but the responsibility for them rests with Finance Department, not with Army Department.

(*b*) So far as this directorate is concerned we have lists of contractors and know their capabilities and record.

Question 23. Yes, certainly as regards capacity and performance of firms—prices vary—this is just what the central agency should be able to do. If they have not got the information they would be quite useless as a purhasing agency and if they get it they can 'disseminate' it.

Question 27. No. If any percentage has to be paid it would not be reasonable to expect any department to employ the agency. Grants are limited—purchasers can already get into touch with suitable contractors direct. A percentage on any saving on former average contract prices would not be unreasonable but with a percentge on price there would be a direct incentive to the agency to be extravagant. We have already experience of the percentage payment to agents even in India, while at Home the timber agency of 1914-15 aroused much adverse comment.

Question 28. Petty purchases, when orders do not exceed Rs. 200, are reported to my office and the rates are then scrutinized. For purchases in excess of Rs. 200 when orders are placed by my office there is no audit other than that carried on by the audit Branch of the Finance Department.

Question 29. This is the first suggestion that the central agency is to be charged with audit duties. The intention of the question is not clear.

Major-General Sir H. W. PERRY, called and examined.

In buying indigenous stores it was customary to prescribe that delivery should be made into arsenals or depôts where all supplies were inspected before being passed into stores. Rejections had to be removed by the contractor at his own expense.

Contracts were made by the Director of Equipment and Ordnance Stores and not by the Chief Ordnance Officers in charge of the various arsenals, who were, however, useful for making local enquiries and at times for receiving tenders. The Chief Ordnance Officers had limited powers of purchase and no increase to these was necessary. This procedure worked quite well but witness thought it would be an improvement if a central contract branch was established for the more important purchases of all departments.

He referred to the practice in the War Office where an independent contract branch, having knowledge of the trade conditions not only in the United Kingdom but also throughout Europe, made all contracts for the Army for delivery into Woolwich arsenal (or dockyard) where inspection was made on behalf of the Army by an inspection staff under the Quartermaster-General. No trouble had been experienced owing to the purchasing and inspection organisations being entirely separate. He could see no reason why a similar system should not be workable in India.

He would like to see established in India a central contract branch which would maintain complete trade records and be aware of all industrial developments of the country. This branch would not actually handle any stores. It would place all its orders in the name of the Government of India for delivery where required —in the case of supplies for the Army for delivery into arsenals.

All using departments should be allowed to do their own inspection. The user was the proper person to specify what was wanted and to see whether the goods delivered were up to specification. Provided it was clearly laid down in the terms of the contract that supply must be in accordance with the sealed pattern or specification and would be subject to inspection at the place of delivery, witness could not see why any trouble need be feared between the contract branch and an inspection branch not affiliated to it. The contractor should, however, have the right to appeal to some higher authority when he considered that his goods were being rejected unfairly. Such higher authority would only have to decide whether the conditions of contract had been fulfilled and not whether the supplies rejected were good enough for Army use.

It was essential that the departments which had to pay for the supplies should have the right of seeing the schedule of the tenders received before acceptance. It would not be satisfactory to allow the contract branch to conclude a contract without reference to the paying department so long as the price did not exceed the estimated price by more than some fixed percentage, as the paying department should also have the right of objecting to particular suppliers who might have given cause for dissatisfaction in the past in regard to delivery or in other respects. Such delinquencies were less likely to be overlooked by the department actually handling the supplies than by the contract branch. He desired particularly to emphasise the importance in India of delivery by due date as according to the financial system failure to complete contracts due within the financial year resulted in lapses in the grant for that year and payment had to be made out of the following year's grant.

Witness reckoned that between two-thirds and three-fourths of the stores with which he was concerned could be regarded as special to the Army. As long as the responsibility for the efficiency of supplies to the Army rested on the Quartermaster-General it was impossible for the Quartermaster-General to divest himself of all control over the inspection of supplies, either special or common. At least it was essential that the inspection of any supplies which might be used on active service should be in the Army hands. The inspecting staff of the Stores Department of the India Office were regarded in practice as Army inspectors and stores received through the Director-General of Stores were taken into stock without detailed re-inspection in India. The inspection branch of an Indian Stores Department would have to give equally satisfactory proof of its efficiency before its work would be similarly accepted by the Army. Until then the Army would have to retain its own inspection staff in the arsenals.

It was proposed that the inspection of supplies to arsenals should, in future, be done entirely by viewers whose work would be checked by periodical examinations of articles in store by technical officers. These

viewers would preferably be civilians from England on five year's agreement. The less knowledge they had, or were given time to acquire, of the languages and customs of India the better.

Witness considered that the expense of establishing a really efficient government inspection agency in India would be prohibitive, and even if such an agency came into being he thought that the Quartermaster-General because of his responsibility would still have to retain a general inspection over supplies for the Army.

He could see no advantages from purchasing imported stores in India. The Army had its own technical officers and he had never known any of them wanting to go to manufacturer's agents or branches for advice.

He would like to see India in a position to supply everything required by the Army. It would be great advantage to have all the Home indents for the Army scrutinised in India to see that no orders were sent out of the country unnecessarily. This scrutiny must not be permitted to cause delay. It would be quite suitable if a copy of every indent was sent to the Stores Department in India who would bring to notice items which might be obtainable in the country. There would be then time for a full enquiry before the next annual indent was prepared. There should be no attempt to force Indian products on the Army without full discussion in regard to their suitability. He thought that very little of the stuff demanded in Home indents could be made in India at present.

Personally he was of the opinion that it would be justifiable to pay more in order to have made in India essential articles of which supplies might be interrupted in war but the extra cost should not fall on the Army grant.

Brigadier-General R. E. VAUGHAN, C.B., Director of Supplies and Transport, Army Headquarters.

Written Statement.

Question 1. Yes. Because of the value of centralised information as to resources and prices. But it would be essential to have a technical mechanical transport representative in this central agency partly because of technical questions involved (patterns, nomenclature, etc.), and partly to attend to rapidity of supply which is a most important *military* consideration. Also by bringing the Military Mechanical Transport Service in touch with other departments it would assist us in the matter of resources in standardised types in India. Unless we have our own representative the centralised agency loses its value to us.

Question 2. See question 1.

Question 3. No.

Question 7. So far Mechanical Transport Service has bought direct and not by tender.

Question 8. I think it would do so, but the point is not very closely applicable to mechanical transport.

Question 9. Consuming departments. From the military point of view.

Question 10. As the mechanical transport buyer is technical he should also be competent to inspect.

Questions 11 and 12. Mechanical Transport Services require special inspection arrangements.

Question 14. The selection of supplying firms should be left to the purchasing agency.

Question 15. The main factor in the case of military mechanical transport is rapid compliance with orders, and this is practically the governing condition, subject to the goods being suitable.

This service is only interested in the stocks the firms happen to hold. It would not be satisfactory to constitute private firms as stock holders on government account.

Question 16. Yes.

Question 17. This is a matter of the internal organisation of the central agency.

Question 18. Yes. Practically all stores not made in England.

Questions 19 and 20. Mechanical transport must continue to maintain its own stock depôt.

Question 22. (*b*) No special organisation for this as yet exists, but there is general knowledge of firms' capabilities.

Question 23. It should be undoubtedly a part of the central purchsing organisation.

Question 26. We require a directing military staff for central mechanical transport stores and purchases, but freely use civilian subordinates, almost entirely Indians.

Question 27. It is preferable to charge as a separate item against military funds the actual cost of purchasing and inspecting staffs apart from prices of stores. The percentage on cost greatly complicates pricing and accounting.

Question 28. By Controllers of Military Accounts.

Question 30. The Quartermaster General has an Adviser for Mechanical Transport Services at the India Office, who will keep him in close touch with affairs connected with military mechanical transport in England.

Brigadier-General R. E. VAUGHAN, called and examined.

Witness was at the time carrying on the dual duties of Director of Supplies and Transport and Controller of Contracts.

In the latter capacity the chief item of supply with which he was concerned, apart from foodstuffs, was tin plate for containers for ghee, oils, greases, etc. All hardware and implements were now supplied by the Director of Equipment and Ordnance Stores. There was no manufacture of tin plate in India at present and the supply of containers was by arrangement with Oil Companies, possessing the necessary plant, who had placed all their spare capacity at the disposal of the Army authorities. Orders were placed either for complete containers including all materials or for the making only of the containers—on a cost price *plus* percentage basis—from tin plate supplied by Government. The latter worked out cheaper. When firms supplied their own tin plate, it was difficult to get at the price they allowed in their charge for the tin plate itself.

As Director of Supplies and Transport he was concerned with mechanical transport vehicles and stores, which included spare parts, accessories, oils and lubricants, etc.

The exigencies of war had caused much multiplicity of types in the mechanical transport in India. The policy was to work towards standardisation and assimilation as far as possible with the types used by the Royal Army Service Corps. In the circumstances it was preferable to send home all orders for complete vehicles and spares.

As a war measure it was necessary to establish mechanical transport purchasing officers in Bombay and Calcutta for the purpose of meeting urgent demands from the trade supplies in India. A recent comparison showed that the prices which had to be paid in India for various items of mechanical transport stores were from 75 per cent. to 300 per cent. more than the prices for which similar items could have been imported, had time permitted.

He had no complaint as regards the quality and price of supplies received through the Director-General of Stores, India Office, but the time taken for supplies to reach India was at times inconvenient. It was inconvenient also, and occasionally uneconomical, to have to work to annual indents for mechanical transport stores. He felt sure that the defects in the present

system would be remedied in personal discussion with Mr. Collier.

He could not anticipate any economy either from dealing with branches of manufacturers established in India, even though these were branches of the firms whose make of vehicles had been adopted as standards for the mechanical transport in the Army, or from dealing direct with makers in England. It was however, to the advantage of Government to encourge the sale of standard vehicles for private use in India so as to establish a potential reserve in case of war.

The mechanical transport purchasing officers in Bombay and Calcutta inspected their own purchases. This practice was open to objection. In his opinion the ideal arrangement would be for purchase to be arranged by a central stores department, and inspection to be made by a technical officer from the using department. It would be quite satisfactory if the inspection was made by an officer of the using department, who for the time being was employed in the inspection branch of the Stores Department. The precise knowledge required for the inspection of mechanical transport stores could only be supplied by a mechanical transport officer.

The advantages of having all purchases concentrated in a central stores department would be:—

(*i*) Standardisation of approximating specifications of different departments.

(*ii*) Close touch with the Department of Industries and therefore full knowledge regarding new developments in India.

(*iii*) Departments were apt to become too much attached to pet specifications of their own when the ordinary trade standards would suit just as well and could be obtained very much cheaper. A central stores department would bring such instances to notice.

In peace time it should be quite feasible to forecast Army requirements with reasonable accuracy, but it must be remembered that military demands might arise suddenly which were so urgent that economy must give way to quickness in supply. The military authorities must have complete freedom of action in meeting such emergencies.

The powers of purchase permitted under the present Stores Rules would be generally suitable, when the amendments now under consideration were introduced.

For the headquarters of an Indian Stores Department he considered some central position such as Delhi would be suitable. As Controller of Contracts the chief convenience of being located with the Government of India was in disposing of financial questions. Personally he would like to be in closer touch with suppliers; but, on the whole, the business of the Controller of Contracts was organised on such routine lines that no serious inconvenience was caused. Officers in various parts of the country obtained tenders locally and these were all sent to headquarters for selection and acceptance. This system worked well for foodstuffs.

Increasing use was being made of the system of competitive tender for large supplies directly arranged by the Controller of Contracts from his own headquarters office.

J. W. A. GRIEVE, ESQ., I.F.S., Conservator of Forests, Eastern Circle, Punjab.

Written Statement.

Question 1. I do not advocate the formation of a central agency for purchases on account of the Forest Department.

It is essential that the users of the materials should be in as close touch as possible with the authorities sanctioning their purchase. To effect this, Forest Utilisation Circles in each province must be re-organised in the manner suggested by Mr. A. J. Gibson, I.F.S., in paragraph 27 of his note dated Dehra Dun, 21st November 1919, which runs as follows:—

> "A satisfactory solution of the difficulties outlined would appear to be the re-organization of the Utilisation Circle practically on a company basis and to provide for management by a Board consisting of government officials and business men as suggested in the annual report of the Circle, and in the late Chief Conservator's note on the subject, Appendix IV.* On the analogy of a company Government would represent the shareholders, the Board, the Directors, and the Direction Division of the Utilisation Circle the Managing Agents."

The quantities of stores required by this Board are by comparison with those required by railways, very small, though they may be expected to increase very largely in the near future.

The absolute essential is the prompt supply of material indented for. To insure this, the officer indenting must be in direct touch with the suppliers. Ordinarily he himself will be sufficiently expert to buy his own material without reference to any one outside the department, but in cases where he is not, it is essential that expert advice should be easily accessible. This will not be the case if he has to refer to a central agency: nor is it likely that any central agency could comprise experts on all the classes of material which it would be called upon to purchase.

Question 9. In the case of the Forest Department "the consuming department and the department responsible for the industrial development of the country" are at present one and the same. The work of the utilisation circles which will deal exclusively with the economic development of the forests, will always have to be subservient to that of the ordinary Forest Department which is primarily responsible for the supply of its wants to the local population. I consider that the Utilisation Conservator should have power to appoint technical experts as inspecting officers for each particular class of work. He should be empowered to employ outside experts from any firm or other source whether in this country or not, on payment of fees at his absolute discretion. Thus, in the earlier stages of their development, it might be necessary to obtain expert advice, in such highly technical industries as turpentine production and saw milling from France or America.

But ordinarily, the technical experts in the regular employ of Goverment should be capable of passing or rejecting the material ordered by them.

Question 10. The inspecting officer where employed would be independent of, but would work under, the control of the purchasing agency.

Question 11. The Forest Department requires to be re-organised on the lines suggested in paragraphs 27 to 34 of Mr. Gibson's note,† or selected projects might be dealt with on the lines suggested in paragraph 35.

Quesion 12. No.

Question 13. Local inspection agencies must be provided for as and when required.

Question 14. Yes. The Utilisation Conservator aided by necessary outside advice would control all purchases without reference to any other agency. Any project he put up would be passed by the provincial financial authorities, after which he should have full powers to spend the sum given him.

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* Not reproduced.

† Not reproduced.

Question 15. Under any conditions considered necessary by the Utilisation Conservator and his advisers.

Question 16. No.

Question 17. It would be the business of the purchasing department to keep in touch with the prices of materials, both at Home and in India.

Question 18. I consider that the Utilisation Conservator should purchase in any country at his discretion.

Question 19. Whether stocks should or should not be held in India would depend entirely on the nature of the concern. The Utilisation Conservator should be empowered to negotiate with firms in this country with a view to retaining stocks of materials ordinarily unobtainable in it, where necessary. He should also determine where such stocks should be kept.

Question 21. The total amount expended by this Department is as follows :—

Year.	R	R	R
1910-1911 . . .	54,366	9,497	..
1911-1912 . . .	15,383	13,091	..
1912-1913 . . .	5,701	32,645	..
1913-1914 . . .	12,490	27,024	24,688
1914-1915 . . .	19,160	27,229	12
1915-1916 . . .	18,170	48,323	..
1916-1917 . . .	15,960	53,284	..
1917-1918 . . .	21,699	1,05,270	..
1918-1919 . . .	16,451	1,24,249	66
TOTAL .	1,79,380	4,40,612	24,766

Question 22. No special arrangements are in force in the Forest Department for maintaining the records in question.

Question 23. The collection and dissemination of all economic information will be part of the business of the Utilisation Conservator.

Question 25. Not in the case of the Forest Department.

Mr. A. J. GIBSON, F.C.H., F.L.S., I.F.S., Forest Economist, Forest Research Institute, Dehra Dun, called and examined.

Witness was examined in place of Mr. J. W. A. Grieve, and was not asked to submit a Written Statement.

Witness had 21½ years' service in the Forest Department and at present held the post of Forest Economist, Forest Research Institute and College, Dehra Dun.

For the Forest Department he favoured the widest decentralization. The requirements of the Department, apart from comparatively small quantities of hardware and building materials, were of a specialised nature, such as creasoting plant, lumbering machinery, distilling plant, aerial ropeways, etc., which had to be obtained from special firms and the arrangements for purchase of supply were best made direct by the experts in the Forest Department. There is no advantage in buying such special plant through the Director-General of Stores, India Office.

Plant and machinery should be purchased in India as far as possible. In purchasing imported general stores in India, he would only deal with approved firms who would be prepared to produce invoices if required to do so.

The commercial side of the Forest Department was developing very rapidly and all Conservators of Forests should be given powers of purchase of plant for experimental or research purposes and for pioneer factories and installations, at least equal to the powers at present possessed by the Chief Conservator of Forests, Burma.

The Forest Department required no assistance in purchasing, but would welcome advice in regard to the reliability of firms and regular information in the shape of periodical price lists of market rates for hardware, etc. The Forest Utilisation officers, who had been and were being appointed, would remedy the lack of co-operation which had prevailed in the past between the Forest Department as a supplier and other Government Departments which required timber and other forest products. The policy now seemed to be veering towards the marketing of forest products by Government itself, and he thought that if the particular needs of consuming Departments were sufficiently emphasized, the introduction of departmental working to meet them would now receive sympathetic consideration. It must be remembered, however, that the forests were an important source of provincial revenue and that Provincial Governments would expect a fair market price for all supplies.

Centralising purchase of timber and sleepers might prove economical. It would be necessary for the central purchasing authority to have full knowledge of all the markets and the conditions prevailing in each. For this it would be necessary to maintain a specialist in each particular area, who would also purchase and inspect. He himself had seen, as an extreme case, about 90 per cent. of spruce among one lot of sleepers offered to a railway as deodar. It was unlikely that a railway sleeper passing officer would have detected this.

At Simla, Friday 23rd April 1920.

PRESENT.

Sir FRANCIS COUCHMAN, K.B.E., M.I.C.E. (*President*).

A. W. DODS, Esq.
Lieutenant-Colonel C. C. H. HOGG, C.M.G., R.E.
Brigadier-General H. A. K. JENNINGS, C.I.E.,
Rai Bahadur LALA MILKI RAM.

J. C. HIGHET, Esq. (*Secretary*).

Major-General J. C. RIMINGTON, C.B., C.S.I., Director-General of Military Works, Army Headquarters.

Written Statement.

Question 1. Certainly not. Our recent experiences of having stores purchased for us by the Indian Munitions Board have not been such as to justify a desire for this system to be perpetuated.

The prices charged were preposterous and the quality of the stuff obtained from them was generally bad.

If prices for materials were to be fixed by the I. S. D. officer, the Executive Military Works officer could not be held responsible for the cost of his work.

We only have very limited sums available for our works and it is very necessary that we should make the money go as far as possible. It would be impossible for the Military Works officer to effect economy if his hands are tied by having another officer over whom he has no control, fixing the prices of materials. The executive officer is responsible that his work is done cheaply and well and that his estimates are not exceeded.

If he finds that some material is too expensive, it is up to him to try and find an efficient substitute or some other equally efficient method of doing the work.

Tenders are invited annually in each District or Station for local stores, that is the minor stores that are in general use. For the major stores such as bricks, lime, stone, wood, steel, etc., either the executive officer makes special arrangements for these or they are included in the contracts entered into for works.

Also in most districts stocks are kept up of certain building materials such as roofing sheets, steel sections, sheets and plates, doorbolts, locks, panes of glass, tools, etc. These are replenished annually by indents on the stores department at Home. We find that these are usually cheaper and much better than we can procure in this country.

For heavy manufactured steel work, we usually call for tenders from the big firms in the presidency or other towns.

If an Indian Stores Department were instituted and it were to issue fortnightly or monthly a list of prices of stores, it would undoubtedly be of very great assistance to executive officers in keeping them informed of the market prices and where articles could be bought most cheaply.

Another point is that dealing with an agency almost necessarily involves delay.

Question 2. I would prefer that my officers should arrange for the purchase of their own stores.

As regards 'inspection' it is only rarely that inspection is necessary as good firms can usually be relied upon for their own good name to supply materials of good quality. But in cases where inspection is necessary the officer purchasing the articles can always get them inspected by an officer or subordinates of the M. W. S. of the place of purchase. In cases of machinery he would usually ask that the Assistant Inspector of Machinery of the command or a selected electrical or mechanical officer should inspect it.

If it were arranged that it should be inspected by the Indian Stores Department, it would be desirable to know what would be the charge.

This opens up another question. Is the Indian Stores Department to be financed by the Government of India and paid for by a separate grant; or is it to be run on commercial lines and all purchasing and inspection work paid for by the Executive Officer against the works for which the materials are required?

If it is to be successfully and efficiently worked, its agents will have to be highly paid and its cost, if charged to works, will materially raise the prices of work.

Question 3. (*a*) Imported plant and machinery should be purchased in India only (*x*) when it is really urgently necessary or(*y*) when the cost is not unreasonably greater than it would be if obtained through the Director-General of Stores.

I realise that it is very desirable to endeavour to persuade some of the big British firms to set up branches in India both for the sake of the development of the country and its trade, and also to increase its resources in case of war. I think that an excess of 25 per cent. or at the most 30 per cent. above the prices of the goods delivered at an Indian port would be permissible. Plant and machinery should certainly be bought from the manufacturer's branches, if possible, as my experience is that agents and merchants levy a heavy toll on the goods that pass through their hands.

(I have just given a case of a 5 ton motor road roller being supplied by the Director General of Stores at £533, say Rs. 6,000 in Bombay. A British Agent firm in Bombay quoted for a 5½ ton motor roller Rs. 9,100 as long as exchange remains at 2*s.* 4*d.* to the rupee. At 2*s.* to the rupee the cost would be about Rs 10,600.)

(*b*) As regards "General Stores" the same principles apply except that there is not the same reason for paying an excess over the prices of stores imported from home. I personally should never countenance an excess payment of over 20 per cent. even to get the work pushed on, unless it were urgent.

On the other hand, if work is at all urgent and a firm in India guarantees to supply a consignment within five or six weeks (as they often will do) at reasonable rates I think it should be permitted to accept the offer, to save the delay of getting through the India Office Store Department.

Again I think there should be no restriction to prevent officers getting stores through the D. G. of Stores, if this course is desirable. A few days ago an indent of mine for small stores such as tower-bolts locks, hinges, panes of glass, etc., was returned by a person of the Industries Board with the remark that these things can be purchased in India. So they can, but the articles made in India or Japan are not comparable with those obtained from home and in my opinion there is a cent. per cent. saving in getting the superior home articles. Our repairs grant cannot stand any unnecessary expense.

Question 4. No. The stores rules as revised are in my opinion suitable.

Question 5. I do not think a stores purchasing officer in each province is necessary, nor do I think our officers would utilise his services much if there were one. But I think a commercial directory containing the names of firms, with a statement of the articles they supply, in each province would be useful and it would be still more useful if lists of current prices of materials in the province were issued monthly.

Question 6. Seems to me unnecessary. We have our ordinary departmental specifications and for any special works or plant our own experts would prepare the necessary specifications.

Question 7. No, certinly not. Any materials that can be supplied by the Ordnance Factories for the Army should certainly be supplied without any scrutiny or other hindrance, as there is little doubt that they would be supplied cheaper than by the trade; there can in my opinion be no good reason for the Army estimates being burdened by payments of manufacturer's profits (which in this country are very high) when the Army estimates are already paying for the maintenance of factories whence these materials can be obtained. It seems to me a matter of common sense. These Ordnance Factories are maintained and worked from Army estimates for the benefit of the Army and they also give employment to a very large civil population. It would be most unjust to the Army estimates to curtail their activities. It will be time enough to consider this question when civil firms can produce goods for the Army more cheaply than the ordnance can.

Question 8. Moreover for the sake of preparedness for war and the inevitable expansion that must immediately take place in that event, it is essential that these Factories should be maintained in a high state of efficiency and be in a position to double at least their ordinary peace output. For this reason they must have a large excess power over the ordinary peace requirements and it is only a reasonable economy that this excess power should be used for the benefit of the Army in peace.

In the event of mobilisation for war, an Indian Stores Agency would be of very great service: in fact some such organisation would be practically essential; but I trust some safeguards would be proposed to prevent us suffering from the scandal of high prices and inferior materials to which we have recently been subjected.

The alternative would be to establish our own M. W. stores offices with R. E. officers in Bombay, Karachi and Calcutta

Major-General J. C. RIMINGTON, called and examined.

The stores used by the Military Works Services were similar to those used by the Public Works Department and none of them could be classed as of a special military nature. All stores which were peculiarly military were supplied by the Ordnance Branch.

For executive purposes the Military Works Services was organised in Districts each in charge of an Assistant Commanding Royal Engineer. The equivalents in the Public Works Department were Divisions and Executive Engineers. Ordinarily Assistants Commanding Royal Engineers made their own arrangements of the stores they required, forwarding home indent for anything they could not purchase in India. Large important contracts were generally dealt with from Headquarters. Assistants Commanding Royal Engineers sought the assistance of each other in connection with purchase in their respective Districts, and Assistants Commanding Royal Engineers in large centres such as Bombay and Calcutta were frequently asked not only to purchase but also to inspect on behalf of other Assistants Commanding Royal Engineers. In fact the Military Works Services had at present its own purchasing agents throughout India.

Each Assistant Commanding Royal Engineer held a small stock which was replenished by annual indent. There were no general Stock Depôts, though the stocks held by the Assistant Commanding Royal Engineers, Bombay and Calcutta, were larger than those elsewhere and were at the disposal of other Assistants Commanding Royal Engineers. The enlargement of the stocks at Bombay and Calcutta had once been considered and turned down on financial grounds.

In connection with the recent operations on the Frontier an Engineer Base Park had been established at Lahore where very large stock had been accumulated. It was proposed that this Base Park should be retained permanently as a central store for the whole of the Northern Command.

Witness was not in favour of removing purchase from the hands of the Assistants Commanding Royal Engineers, who were responsible for the economical execution of work and therefore were more directly interested in buying well than would purchasing officers belonging to an Indian Stores Department. The Assistants Commanding Royal Engineers could of course protect themselves by stating a price than which more should not be paid without their previous concurrence, but such references meant delays. On the whole he would prefer that Assistants Commanding Royal Engineers continued to make their own arrangements for stores. An independent and disinterested Stores Department would not have the same interest in keeping prices down. In normal times he had not experienced any harmful inter-departmental competition in purchasing.

Even if the Stores Department confined its purchasing to a few main commodities he thought it would be of no advantage to the Military Works Service. His views were coloured by experience of centralised purchasing by the Indian Munitions Board.

Given time and money, there was no reason why an efficient purchasing agency should not be organised in India. He was afraid however that Government would grudge the expense and he was not convinced that any economy would result.

The present stores rules had hampered work. Much greater freedom in purchase was desirable for executive officers. Rules requiring imported stores to be in India at the time of order should be abolished.

A commercial intelligence bureau which could give information regarding sources of supply for Indian products and quality and price would be a great assistance.

The want of an inspection department was not much felt by the Military Works Services as Assistants Commanding Royal Engineers were able to arrange inspection for one another. However he would sooner have technical expert inspection by a Central agency provided the charge for inspection was not very high.

If, in order to develop industries in India, it was decided to give preference in price to any indigenous manufacture, witness considered it would be unfair for the extra cost to be charged against the Army Estimates. The extra cost should be met from a special grant for the development of industries.

Assuming the formation of a really efficient Indian Stores Department in India, witness considered that any agencies required outside India in connection with the supply of stores should be branches of the Indian Stores Department.

An Indian Stores Department organised for purchasing would be a great advantage in war.

The Hon'ble Colonel (temporary Major-General) Sir S. D'A. CROOKSHANK, K.C.M.G., C.B., C.I.E., D.S.O., M.V.O., Secretary to the Government of India, Public Works Department, called and examined.

Witness was not asked to submit a Written Statement.

Witness was very much in favour of the establishment of a Stores Department in India which would direct the policy of purchasing for all Government Departments; arrange purchases itself when such a course was desirable; and provide facilities for the proper inspection and testing of all purchases. He thought that such a step would considerably assist the development of industrial enterprise in India. The general effect would probably be that large British firms would develop agencies in India, and might eventually open branch works in the country.

His experience of the Stores Department of the India Office was that indents were complied with very satisfactorily, and at prices which were appreciably lower than those prevailing in India for similar articles. There was, however, frequently considerable delay in supply and the position was also uncertain.

From an administrative point of view, it seemed to him that there must be one Department supreme in stores matters, and that this must be the department in India, who, if there was any article which could not be obtained in India, would refer to the Stores Department at home, which would become a branch of the Indian Stores Department or to any branches or agencies which might be established elsewhere. So long as the Stores Department at home remained separate and not under the direct control of the Stores Department in India, there would be openings for friction, misunderstanding and delay between the two.

All correspondence with branches of the Indian Stores Department outside of India should be conducted through the central office in India, which could however authorise indenting officers to correspond direct on technical matters and in connection with orders whenever this course was desirable.

It would be quite unnecessary for an Indian Stores Department to take over the purchase and inspection of purely local products, such as bricks, lime, etc., such purchases must be left to the local departmental officers. On the whole he would allow as much elasticity as possible to individual executive officers in making purchases in India by limiting their powers financially and not by classes of articles. It might be desirable to impose a minimum limit below which purchases need not be made through the Indian Stores Department and a maximum limit over which purchases must be made through the Indian Stores Department (see note below).

The Inspection branch of an Indian Stores Department would be most useful, and one of its most important functions would be the preparation of specifications, for specific requirements, and also standard specification

for general purposes which were not already covered by British standards (British standards having been accepted in India) and accepted British Trade specifications. In any special case the advice of the experts in the inspection branch would be available to executive officers. So far as the Public Works Department was concerned there was no need to have Consulting Engineers in India. On the few occasions when very specialised advice was required it would be best to go to London.

The Inspection and Purchasing branches should be distinct but under one control. To have an Inspection agency entirely separate from the Purchasing agency would probably lead to friction.

Inspection depôts might be necessary at various centres but the Indian Stores Department should avoid holding stocks as far as possible. He did not think it would be any economy to centralise Public Works Department stores in each Province. A combined provincial store depôt for all departments would not be satisfactory, and he doubted whether it would be practicable. As Director-General of Transportation in France, witness had very large store depôts under him and combination with other Army Departments had been considered in order to save establishment but it had been dropped as impracticable.

Note submitted by the Hon'ble Colonel Sir S. D'A. Crookshank on the powers of local officers of the Public Works Department to purchase Stores on the institution of an Indian Stores Department.

The present powers of officers of the Public Works Department to purchase imported stores are laid down in Rule 13 of appendix 30 of the Public Works Department Code, Volume III (9th Edition).

Limits are laid down in respect of articles already in India at the time of order and when serious inconvenience to the public would be caused by ordering them from England or when economy could be effected by their purchase in India.

2. With the institution of Indian Stores Department, which would control and effect purchases not only in India but presumably also in England and other countries when the stores required are obtainable, the local officers will be in far closer touch with the purchasing agency than can possibly be the case while its headquarters are located in England. The institution of the department will further provide a check on prices in India and an agency for inspection where this is required. The result of this would be that local officers can be given greater powers of purchase locally as, should they feel that they are not being fairly treated by the trade they have the Stores Department to fall back on and know that without undue delay they can obtain the stores they require through that department.

3. I assume that the Stores Department will consist of a central office with branches in the principal purchasing centres of India, England, the Colonies and Foreign countries where purchases are effected. The purchasing officers will be in touch with the local markets and will keep the central agency informed of local prices so that the central agency can place contracts to the best advantage on receipt of indents from local officers.

4. Presuming, as we are justified in doing, that no delay will occur in the placing and compliance of indents it would generally be to the advantage of local officers to place their indents with the Stores Department. At the same time it is necessary to protect that Department from a mass of unimportant indents, and in order to do so it is desirable to lay down some restriction on the nature of indents that may be submitted to them. To effect this I will suggest that no indent of the total value of less than Rs. 1,000 for stores *obtainable in India*, whether of English or Indian manufacture, may ordinarily be submitted to the Stores Department.

5. It is next, in order to ensure that the Stores Department may be able to control prices in India, necessary to lay down a maximum limit up to which an indent for stores may be placed in India by local officers without reference to the Stores Department. Should the Stores Department be able to issue a periodical price list stating the prices at which the more commonly required Engineering stores are obtainable by them in India the necessity for the limit would to a great extent disappear, but I understand that considerable difficulty is anticipated in this matter—and that it may not be possible to do so to a satisfactory and business-like extent. If such a price list is issued then it would probably be sufficient to lay down that, provided the stores are purchaseable within the price list figure and of such quality as would be accepted by the Stores Department, then local officers may have almost unlimited powers. If the price list is not issued, or cannot be kept up to date, then it will be necessary to lay down a fairly low limit so as to protect the interests of the Stores Department and safeguard the local officers from misrepresentation. In this case, and in respect of stores not included in the price list a limit of say Rs. 5,000 would not, I think, be unreasonable.

It is of course understood that this limit will not apply to materials of local manufacture such as bricks, tiles, lime, which would not ordinarily be the concern of the Stores Department.

6. If these two principles be accepted the powers of local officers are limited as follows:—

(*i*) No indents for stores obtainable in India the total cost of which does not exceed Rs. 1,000 may ordinarily be submitted to the Stores Department.

(*ii*) Indents for stores the total cost of which exceeds Rs. 5,000 and which are not included in the price list of the Stores Department or the quotation for which exceeds the figure quoted in the price list must be submitted to the Stores Department.

7. Subject to the above and any other restrictions of a special nature that may be laid down it is now necessary to fix the general powers of purchase of local officers. The present powers of these officers to accept contracts are as follows:—

Superintending Engineers: Full powers.

Executive Engineers: local Governments or Chief Engineers may give these officers powers up to Rs. 1 lakh.

Sub-divisional officers: Superintending Engineers may give Sub-divisional Officers powers up to Rs. 25,000.

All the above powers are limited by the amount of the sanctioned estimates and the powers of the officer concerned to exceed that estimate.

It is undesirable to lay down numerous restrictions in regard to the powers of different officers and it would undoubtedly be convenient if their powers generally as regards acceptance of contracts could be made applicable to contracts for stores.

At the same time, in the Public Works Departments Irrigation and Buildings and Roads Branches, only a comparatively small proportion of the estimate would, as a general rule, be that of the value of the manufactured stores and articles under consideration in this connection, and in so far as the Government of India is concerned it will be for the local Governments to restrict the powers of the officers under them to such extent as they may consider necessary. The only definite power laid down by the Government of India is that of the Superitending Engineer, who is considered to be a responsible officer especially selected for appointment to that rank, and if he can be vested with full powers in respect of ordinary contracts he can *ipso facto* be trusted with extensive powers in respect of the purchase of stores. On the other hand to equalize the powers of purchase of stores to those of accepting contracts would probably have the effect of side tracking the Central Purchase Department to an extent which would minimize its scope of utility almost out of practical value altogether, and in the circumstances it seems desirable to impose a limit of indent of say Rs. 25,000 in excess of which the Central Agency must be consulted, and below

which, and down to Rs. 5,000, that office should be kept informed by copy of the order.

8. It will then not be necessary to lay down further restrictions in regard to the purchase of plant and machinery. In the case of the Public Works Department at any rate it is thought that the restrictions proposed in paragraphs 6 and 7 will suffice for all purposes. The Public Works Department Reorganization Committee however in paragraph 3 of their report proposed certain other restrictions, *viz.*,

(*a*) The article should be of a standard pattern.

(*b*) The firm from which it is obtained should be one approved by the Director-General of Stores, for the supply of the particular article required.

Restriction (*a*) would render any latitude given to officers of the Department of little value, but restriction (*b*) might perhaps be useful. It would however be for the India Stores Department to lay down the firms from which the purchase of plant and machinery is permissible and the conditions should be that the plant and machinery be purchased for preference from firms capable of and willing, if required, to erect it. In order to obviate audit objections in regard to minor purchases this restriction should not apply to any purchase costing less than say Rs. 5,000.

9. I have not dealt with the protection of Indian interests. I doubt whether it is necessary or advisable to lay down any special rules in order to protect these interests. Under the rules proposed local officers could obtain stores from any firm able to supply them according to specification and standard and within a reasonable limit of time. It is not considered proper to provide that the stores must be in India at the time of purchase as there is no particular object in this restriction. Of course if stores of suitable quality and otherwise are available in India at the time of indent the fact would be given prominence and if possible preferential consideration. The protection of Indian interests would, I presume, mainly be matter for the Stores Department itself who would in drawing up running contract, and dealing with the larger purchases taks into account the desirability of dealing with Indian firms and thereby encouraging Indian industrial and manufacturing enterprise in the interests of the country. It seems out of place to lay down further restrictions on local officers who effect, generally speaking, comparatively small purchases, and they may be left to purchase stores, irrespective of country of origin, within their powers. It should be distinctly understood that any indent over Rs. 1,000 *may always* be submitted to the Stores Department while indents under that figure may, when it is considered desirable for any special reason, be submitted and all indents for articles not obtainable in India *must* be submitted to the Stores Deparment, *i.e.*, direct purchase from firms outside India should be prohibited.

10. There is one other point, *viz.*, the power of Public Works Department officers to execute contracts for complete works including the supply of all materials required. The Public Works Department Reorganization Committee in paragraph 30 of their report recommended that Contractors should be permitted to supply all materials required for the execution of their contracts the Engineer-in-charge specifying the quality of brand, and proper proportion given, when possible to Indian manufactured articles. It is most desirable in the interests of the development of firms of reliable contractors that this procedure should be introduced, and the recommendation is strongly supported.

11. In regard to Public Works made over to Local Bodies for construction or maintenance, the Local Bodies should have the same facilities for dealing with the Stores Department as are laid down for officers of the Public Works Department. The policy of the Government of India is to encourage the transfer of Public Works to Local Bodies while at the same time it is eminently desirable that there should be no deterioration in the standard of work. The grant of facilities to Local Bodies to deal with the Stores Department will be of assistance in maintaining the standard.

12. It is, of course, of the utmost importance that the Indian Stores Department should be designed and organized to fit in very closely with the Public Works Department, and its attached specialist services, so as to ensure co-operation and combination to induce commercial competition and combat monopolization. Not only in this respect but also in specialization and standardization will the new Departmet fill a very marked want in the engineering services in this country.

India will welcome its formation and greatly benefit by its functions, and there is no reason why the big engineering firms of the Empire should resent its introduction as their line of action is to adapt themselves to its organization, to develop their concerns in relation to its activities.

Brigadier-General L. R. Kenyon, C.B., R.A., Director-General of Ordnance, Army Headquarters.

Written Statement.

As responsible for Inspection of War Material for the Army, I beg to offer the following remarks on the points in the questionnaire concerning Inspection (paras. 8-12).

Inspection must, I hold, be by the Consuming Department, i.e., the Army, and certainly not by the Department responsible for the Industrial Development of the country, though the Inspectors should be made to realize that it is one of their duties to assist this latter.

That Inspection should be separate from manufacture and supply has been an axiom for War Material for a long time. The last time there were what were known popularly as "Ordnance Scandals" in England was about in 1885; and after that time, there were several Commissions and Committees (Lord Hartington's, Lord Morley's, Sir James Stephen's) dealing with Army, Ordnance (including inspection) matters, etc. The Woolwich Inspection Department arose as an independent organization out of this and there have never since been any general or serious cases of the Army or Navy being supplied with defective or shoddy stores. The method has been so successful that people are apt to take the results as a matter of course, but they are not so, by any means.

The above principle of separate "Consumer's" inspection has been maintained throughout and reiterated from time to time. The most recent utterance is by the Mackinon-Wood Committee, March 1919, on Woolwich which says "the inspection Department should not be under or administered by the head of a supply subdepartment. The immediate control of inspection should be quite independent of the immediate control of both supply and manufacture."

I may say that I have only been charged with inspection responsibilities for a comparatively small proportion of my service, *viz.*, about 3 years in charge of British Munitions Inspection in United States of America during the war; for the rest of my time I have seen it from outside. I know it can be overdone and over meticulous and even obstructive, but any duty may be badly done. I attach an extract from a instruction I issued to my staff in America which I think indicates the line that inspection should take in helping manufacture and in India Inspectors should undoubtedly do all they can by instruction and reasonable discretion to encourage and help local manufacture. But in India, the principle, "Quality first" requires to be upheld.

Really good manufacturers do not cavil at good inspection; in many ways they welcome it as a final check on their manufacturing inspection—it is the inferior ones that complain. American manufacturers told me—and others—over and over again that British

Inspection in America had been fair and reasonable, though strict, and had done an immense amount towards raising the quality of material and workmanship throughout the country. The American manufacturers were quite clear and candid about this.

The Inspection Department must be a strong one—otherwise it may on the other hand, be overridden by a supply department and coerced into accepting indifferent stores, or on the other hand, from not understanding their job they may be over rigid in inspection and moreover cannot tell the manufacturer definitely and authoritatively what he will accept and what he will not.

The American Government made the great mistake in their own work of putting junior officers as inspectors under District Supply Officers; those were coerced in some cases and had no head or central chief inspection to support them. The results were at times disastrous and American manufacturers also complained that the Inspectors could not give them authoritative information. They made no disguise of the fact that they preferred British inspection.

In the Buffale District, at the request of the American Aeroplane Authorities, Joint Anglo-American Inspection Department was run under the British Inspector. The American Inspectors welcomed it as it gave them a stronger position and no bad stuff could pass—the Joint Inspection could not be coerced; the firm was an indifferent one and output was low; the Washington Authorities then started their own inspection and in 2 weeks they killed 6 pilots with defective aeroplanes and then the United States Authorities all got so scared that they would pass nothing at all. The planes obtained under British Inspection had never failed.

In the above, I am having in mind stores which are peculiar to military service, Artillery weapons, ammunition, rifles, machine guns, etc., for these specialized and centralized inspection is necessary—it need not necessarily be carried out by military men. For articles of civilian as much as military use *e.g.*, boots, clothes, etc., the matter is somewhat different.

Extract from general instructions issued by Director of Inspection of Munitions in United States of America.

The following general principles should be carefully borne in mind by all engaged in Inspection Work.

Their first duty is to ensure that the materials that pass through their hands are serviceable. Examiners are only permitted to pass material or articles which are within the specification and the tolerances allowed.

All cases of departure from the specifications or drawings are to be reported to the Inspector.

Inspectors are to be guided generally by the specifications and drawings but must use their own discretion in accepting articles which are within the spirit but not the letter of the design, keeping in mind the one essential "serviceability."

In cases of doubt they should refer to the Head Office for decisions.

It is not desired to enlarge further on this first duty here.

The second important duty which is apt to be overlooked is the relation between the Inspection staff and the manufacturer.

The Inspection Staff should do all in their power to assist the manufacturer and thus increase and expedite output. To this end, whilst undue intimacy with the manufacturer is to be avoided, good relations must be maintained in order that each may help the other in carrying out his duties.

Much is accomplished by mutual goodwill, and the main object the production of good work quickly is the same for both the inspector and manufacturer.

Anything like obstruction or withholding information which might be of use is a serious offence.

Information as to prices and methods adopted by certain firms should only be communicated to other firms when the leave of the firm concerned has been previously obtained. Experience gained in one firm may, as a rule, be utilized without stating the name of the firm from which the information was obtained.

Subordinates in the Inspection Department should draw the attention of the Assistant Inspector to any point in which they consider manufacture can be assisted.

Brigadier General L. R. KENYON, called and examined.

The Ordnance Factories obtained their requirements by indents which were sent home by sections throughout the year. For purchases to be made locally the Superintendents of the Factories called for tenders which were sent to the Director of Ordnance Factories for selection and acceptance. The present system worked efficiently but a central agency, puchasing on a large scale and devoting its whole attention to purchasing, might be an improvement and he would be quite prepared to give the Indian Stores Department a fair trial in the supply of all non-lethal stores. Superintendents of Factories would forward their demands to the local purchasing officers of the Indian Stores Department who would obtain offers and submit a schedule of tenders to the Superintendents before acceptance. This was essential not only because Superintendents must know what expenditure was to be incurred but also because Superintendents might quite reasonably object to particular suppliers.

From consultation with ordnance factory officers witness thought that the stores department might make a beginning with purchases for ordnance factories by undertaking supply of the following articles:—

lead, antimonial lead, tin, common timbers, cotton waste (for cleaning, not for cordite) oils, paints, caps, fabrics or textiles, ropes.

These must, however, all be supplied strictly in accordance with specification (not to sample). It was important that a high standard should be set at the outset; as, from much experience in such matters, he knew that it would be very difficult to work it up afterwards. Also any attempt to get inferior articles through would get the new department a bad name, which was to be deprecated.

The Director-General of Ordnance would have to retain a small nucleus Army Inspectorate at, say, Cawnpore, to issue patterns and specifications, etc., and to act as an umpire in case of any dispute over the quality of completed articles between the arsenal or factory officers and the Inspectors of the Indian Stores Department. For raw materials he thought that the passing by Inspectors of the Indian Stores Department would be accepted as in the case of supplies now received from the Director-General of Stores, India Office. It would be preferable to issue patterns and specifications from a central office as required rather than to distribute sets to all branches of the Indian Stores Department and to attempt to keep these up-to-date.

Given a properly organised Stores Department in India witness considered that whatever agency might be retained in London should be a branch of the department in India.

It would be very sound in principle to give firms small running orders for shells, etc., in peace time in order that their workmen might be trained in such accurate work. The difficulty was however that peace time requirements were so small and if these orders were taken away from the ordnance factories it would be necessary for railways and firms to give the ordnance factories work in exchange to keep them going.

Colonel G. S. Ogg, C.I.E., Director of Ordnance Inspection, Army Headquarters, called and examined.

Witness was not asked to submit a Written Statement.

The pre-war duties of the Director of Ordnance Inspection were confined to the inspection of the outturn of Ordnance Factories. During the war inspection of shells made in railways' and firms' workshops had been organised with the assistance of Railway and Public Works Department officers who were trained at Cossipore. When outside shell manufacture was discontinued the inspection of practically all general stores for arsenals fell upon his Inspectors.

There was no reason why inspection of non-lethal items, such as transport carts and ammunition boxes, by Inspectors of a Civil Department should not be accepted but it would be advisable for the Inspectors to undergo a spell of training in an Ordnance Factory.

It would be a most excellent idea to give out small orders for ordnance requirements to firms in peace time. The orders would, however, be so small that he feared that firms would not find them profitable.

In no circumstances should the final decision as to the acceptance or rejection of supplies rest with Viewers. It would be quite impracticable to check a Viewer's work by inspection after supplies had passed into store.

The Viewers at present employed in his Inspectorate were soldiers and were paid Rs. 200 to Rs. 250 per mensem. He would not expect to obtain suitable Anglo-Indians for less than Rs. 300.

At Simla, Tuesday 27th April 1920.

PRESENT:

SIR FRANCIS COUCHMAN, K.B.E., F.I.C.E. (*President*).

A. W. DODS, Esq.
Lieutenant-Colonel C. C. H. HOGG, C.M.G., R.E.
Brigadier-General H. A. K. JENNINGS, C.I.E.
Rai Bahadur LALA MILKI RAM.

J. C. HIGHET, Esq. (*Secretary*).

Sir G. S. HART, K.B.E. C.I.E., Inspector General of Forests, called and examined.

Witness was not asked to submit a Written Statement.

The timber in the forests was disposed of by the Forest Department both through contractors and departmentally. Contractors were, either given a lease of a certain area on the basis of royalty on the timber they extracted, or purchased certain marked standing trees by auction or tender. In the latter case the purchasers often did not take the trouble to inspect the trees offered. Departmental working was gaining in favour. It paid Government better and was more satisfactory in many ways. The policy of contractors who took leases, was naturally to get all the profit possible within the period of their lease and their methods did not improve the forests. Departmental working would increase as more staff was obtained. A method of co-operative working between substantial firms and the Forest Department, which it was hoped would prove practicable and acceptable, was under consideration.

He thought that satisfaction and economy would result from centralising all sleeper purchases in India under an officer selected either from the Forest Department or from Railways. A Forest officer would probably be better able to develop supplies but otherwise there was no advantage in having a forest officer, rather than a railway officer, at the head of the sleeper purchasing organisation.

At present the teak trade in Burma was almost entirely in the hands of the large timber companies. The Burma Government supplied special quality direct to the Admiralty but the rest of the teak extracted by Government was auctioned in Rangoon with, he believed, the result that the sales of the better quality timber were often controlled by the timber firms. He considered it most desirable that a Government saw mill to convert the teak extracted by Government should be established in Burma. The timber companies would always control the greater proportion of the trade and their objections to a Government saw mill were not maintainable. Personally he thought that the utilisation branch of the Burma Forest Service should be able to undertake to buy on behalf of Government Departments and Railways in India, especially if a Government saw mill was established. This, however, was a matter for the Burma Government to decide. He had no hesitation in recommending the constitution of some agency for the centralised purchase of Government teak requirements. The difficulty at present would be to find the right man as the Forest Department was very short of staff. Any one with experience of timber purchasing in any part of the world would probably be able to do the buying all right but someone with local experience would be preferable. Possibly a retiring forest officer might be induced to take up the job.

With the development of departmental working and of utilisation circles the Forest Department will require considerable quantities of special plant and machinery of types not obtainable from the United Kingdom. A Forest officer had lately been on deputation to America and as a result the Forest Department now knew what firms were able to meet their requirements and should therefore be permitted to purchase direct. There was nothing to be gained by passing such demands through the Director-General of Stores, India Office.

On the whole he considered that the existing stores rules were unnecessarily restrictive. Thus a new timber boat of a very simple type was urgently required for use in the Andamans. A suitable craft could be built in Calcutta but because it would be a sea-going vessel, and over a certain length, the design had according to rule, to be referred to the Consulting Naval Architect to the India Office and the delay which must therefore ensue, meant a loss of revenue to Government.

Lieutenant-Colonel H. M. ALEXANDER, D.S.O., O.B.E., I.A., Controller (Textiles) and Military Assistant (Clothing) Indian Munitions Board.

Written Statement.

I forward herewith my replies to the questionnaire of the Stores Purchase Committee, together with two notes and certain other papers as appendices. These papers have been read by the Deputy Controller of Textiles, who is the expert in technical textile matters, and he has expressed his general agreement with the replies. I would suggest that if the Committee desire to examine me verbally on my replies they should call also Mr. Target, Deputy Controller of Textiles, who would be able to furnish technical information better than myself.

In replying to the questions I propose to deal only with the purchase, storage and inspection of such supplies as are now arranged for by the Controller of Textiles, Indian Munitions Board, namely, woollen and cotton piecegoods, ready-made articles of these textiles, and supplies of jute fabrics.

Question 1. Yes, but I think that the agency should be decentralised to a considerable extent to purchasing officers in the big commercial centres and consuming officers (*e.g.*, Director of Equipment and Ordnance Stores, Inspector-General of Police, or any head of a Department under a Local Government) should also have delegated to them powers to make purchases up to certain financial limits, which should be determined according to the bulk of the stores required by them. The question of whether expert local purchasing agencies under Provincial Governments would then be necessary or desirable for textiles, would be dependent on the financial limits prescribed for consumig officers. In the larger Provinces they might be considerable, but I think that the purchasing officers of the Central Agency could probably arrange satisfactorily the bulk of the purchases. The standardization of cloths for uniforms would greatly facilitate the operations of the Central Agency and its purchasing officers.

Reasons. The operations of the Indian Munitions Board have made it quite clear that much economy can be obtained by centralising purchase of the main lines of textile supplies. The collection of information as to markets by a central agency places that agency in a position to buy much more cheaply than could a number of purchasers scattered all over India, as also does the magnitude of the orders placed. It is essential, however, that the central agency should be in close touch with the market, and I would advocate that the purchasing agents in the big commercial centres should fulfil the dual function of making purchases and of furnishing regular information as to the fluctuation of prices to the central agency, which would make the bigger contracts.

I feel sure that, had this been done in the past, the economy, which undoubtedly has resulted from the centralised purchase of textiles, would have been greatly enhanced.

As regards textiles, I do not think that any particular advantage would be gained by the central agency being located at Calcutta as recommended by the industrial Commission.

The main centres for textile purchases, except jute which requires special arrangements, are Bombay and Cawnpore, and I think it would be more advantageous for the central agency to be in close touch with the consuming departments for whom supply would be arranged, and this touch could best be obtained by locating the agency at the headquarters of the Government of India rather than at Calcutta.

As regards the proposed delegation of authority to make purchases within certain financial limits to consuming officers, I feel that such delegation would obviate much trouble which has occurred in the past. For example, if a Department requires, say, a running contract for 500 paulins a month, such a contract can best be arranged by the central agency, but if a department, which does not ordinarily require paulins, should for some special reason want 500 paulins, it would be more convenient and expeditious to allow them to make their own arrangements, and the loss which might result by their paying a slightly higher price, would be more than compensated for by the more expeditious delivery which would doubtless be made. In the past numerous orders for small quantities of certain items have been received hap-hazard by the Indian Munitions Board, involving much correspondence with regard to specifications, patterns, etc., and much delay in supply, altogether out of proportion to the advantage of obtaining the goods possibly at a somewhat lower price.

Question 2. I do not think that any special arrangements would be required for particular departments of the Government of India. All departments, who agree or are compelled to obtain their supplies through the central agency, should conform to the rules laid down for the conduct of that agency, which would include the periodical submission at regular intervals of forecast estimates of the requirements of each department to enable the central agency to arrange purchase at the most favourable time of the market.

Question 3. The textile stores which should not be purchased by the Central Agency or its purchasing officers in the commercial centres are those required in small quantities, or for which no specification exists. That is to say, the Central Agency should confine itself to the purchase of standard "lines." This provision would probably result in discouraging the continuance of the very wasteful practice of insisting on special shades of cloth and other specialities in uniforms.

Question 4. The advantages would depend on the bulk of the stores required. I think it would be distinctly advantageous for such bodies to make their local purchases through the central stores agency, if such purchases are of sufficient magnitude to warrant it. But I do not advocate the central stores agency being treated as a retail issuing store for any hap-hazard requirements. Any organizations making use of the central purchasing agency should contribute towards its maintenance.

Question 5. Yes, I think that it would clearly be a very economical measure for Local Governments to obtain their textile supplies through the central stores department. The measures of decentralization would be as suggested in reply to question 1.

As regards textiles there would be no object in decentralising purchase to officers located in stations which are not textile centres merely because those stations happen to be located in the area of the Local Government for whom the purchases are to be made.

Question 6. It will be seen from the reply to questions 1 and 5, that I do not generally favour the creation of special expert local agencies for the textiles purchases of Local Governments.

Question 7. Yes, the Controller of Textiles calls for tenders for supplies of all textile stores, and subject to the standing of the tendering firms and to his being satisfied that they can fulfil their agreement satisfactorily, accepts the lowest offer. Tender forms are sent to all firms whose names are upon the Register of Approved Contractors. Advertising for tenders has not been resorted to in the past, and might be tried. It might result in finding other suitable firms, but would undoubtedly cause much additional correspondence, as tenders would doubtless be received from all sorts of small and unreliable firms. Except for the possibility of suitable firms being overlooked I think that the present system of calling for tenders is satisfactory.

Question 8. I do not think that the introduction of simultaneous tendering in India and England for important textile contracts would be feasible on account of the rapid fluctuations of the market. By the time offers were received from England the prices quoted by the tenderers in India would be out of date, and if, to obviate this, tenderers were asked to quote for acceptance, say, within 3 weeks, their prices would undoubtedly be raised as insurance against a rising market, and should

the market go the other way, and the Indian tenders prove lower than the English ones, Government would be involved in heavy losses. But I think that the central purchasing agency should be in close touch with the English market prices, and, when these, taking into consideration the rate of exchange, are below those ruling in India, should place their orders with the Director-General of Stores, subject, of course, to the Government policy as regards making India self-supporting.

Question 9. As regards textiles, I am strongly in favour of the policy of the inspection being dictated and controlled by the department responsible for the industrial development of the country, and of the inspection organization being under the same administrative control as the purchasing organization, the Controller General of Stores, or whatever officer is to be at the head of the whole business, being the arbiter between the purchasing and inspecting officers in the event of a dispute. The consuming department would at their discretion employ experts who would have the right of criticism, and in the event of stores being passed by the Inspectors and thereafter held to be unsuitable by the experts of the consuming department, it would be necessary for the Controller General and the Head of the consuming department to consider cases on their merits. I do not think that it would be advisable for Government to insist on departments which have special responsibility for the suitability of stores, *e.g.*, the Military Department, unreservedly accepting stores passed by the Inspection Branch under the Controller General, if they hold that such stores are unsuitable. I do not mean that the textile expert under the consuming department should have the right of rejection of stores passed by the Inspection Branch, but that they should have the right of criticism, and their criticisms should be dealt with by the Head of the Department in consultation with the Controller General of Stores. Under existing rules textile supplies from England are inspected at Home and the Director of Army Clothing Factories is obliged to accept them, but under the pre-war system he had a textile expert and that officer's criticisms of the suitability of stores sent out from Home were considered by the Quartermaster General on the recommendation of the Director of Army Clothing Factories. As regards many other classes of stores used by the Military Department, I have no doubt that they would insist on controlling the inspection, but in the case of textiles the Army Department having worked out their specification in consultation with the Chief Inspecting Officer, there seems no reason why inspection should not remain with the latter. This is what is being done at present, and the Director of Equipment and Ordnance Stores, who is the main consumer of textile supplies purchased by the Indian Munitions Board for the Army Department, informs me that he is quite satisfied with it.

Question 10. Yes, see answer to question No. 9.

Question 11. No, not as regards textiles.

Question 12. No, not as regards textiles.

Question 13. Inspection should be decentralized in exactly the same way as purchase, that is to say, that in the main purchasing centres there should be an inspection section. At present the textile inspection sections are at Bombay and Cawnpore only. But the Army Clothing Factories at Alipore and Madras have what is called a "receipt and inspection" section, which is under the Chief Inspector of Clothing. Deliveries by contractors of material and ready-made garments, which it would be inconvenient to make at Cawnpore and Bombay are made to these sections, and inspected by the officer-in-charge, who is not, however, a textile expert. It would be for consideration whether it will be necessary to have an inspection section of textiles at Calcutta and Madras. It will certainly be necessary to have a jute inspection section at Calcutta, and this section could probably deal satisfactorily with all textile deliveries in Calcutta. With regard to Madras the textile supplies made there are almost exclusively from Messrs. Binny & Co., whose supplies have always been so good that expert inspection has been unnecessary. As regards supplies for the Army Clothing Department, I do not think an inspection section in Madras is necessary, but if supply of textiles to all government departments is undertaken it probably will be.

Supplies ordered by the Central Agency from home might well be despatched direct to the address of the indenting officer, the inspection arrangements under the Director-General of Stores, India Office, being made use of.

The inspection section, Bombay, would as now deal only with supplies manufactured in Bombay, or manufactured elsewhere in India and delivered in Bombay.

The inspecting officers should, as now, whenever possible inspect on the premises of the mills whence the stores after being passed should be despatched direct to indentors.

Question 14. The last part of Rule 3 (*a*) would require modification.

No financial limit should be imposed on the central agency as regards purchases under Rule 3 (*a*). The indenting officer would be responsible that he had funds at his disposal to pay for the stores demanded.

The Note to Rule 3 should be deleted. The figure Rs. 750 in Rule 5 is much too small to be made applicable to the central purchasing agency.

I would recommend that instead of mentioning a figure it be noted that if for any of the reasons specified in Rule 5 it is desired by purchasing officers under the central agency to purchase in India stores which under rule should be obtained from the India Office the Controller-General's consent must be obtained. As all purchases by the central agency will, if my proposals are accepted, be on a large scale, such references would be desirable, and should not, if the stores rules are workable, be frequent.

The rule might stand as regards purchases by consuming officers under their financial powers.

Rules 8 and 9. All demands for stores from the Director-General of Stores, India Office, should be prepared by the central agency to whom indenting officers should notify at fixed dates their forecasted requirements. The central agency should scrutinize the demands and eliminate any items which according to their information should under rule be obtained in India. Frequently indenting officers would include items hitherto demanded from England, which the central agency would know could be obtained in India. Rules 8 and 9 would have to be re-drafted.

Rule 13 would have to be re-drafted to include many more officers and the figures would have to be amended.

Question 15. I do not advocate the purchase of imported European textile stores through the established Indian branches of British manufacturing firms, but would prefer that such purchases be made through an agency at Home as is now done. I cannot see any advantage in purchasing through Indian branches of British firms, and the probability is that to do so would involve increased expenditure. European firms, which manufacture textiles of the descriptions required in India, should, however, be encouraged to establish manufacture in India in accordance with the general policy of making India self-supporting. When such manufacture has been established, the firm should be considered for contracts together with existing Indian firms.

Question 16. Yes, with a view to ensuring that every advantage is taken of the industrial development of India and that no stores are demanded from home which can be obtained of equal quality and at no greater expense in India.

Question 17. The scrutinizing department, which should be under the purchasing officer at headquarters, should be furnished with regular market returns of prices by the purchasing officers in the commercial centres and by the Director-General of Stores in England, or whatever officer the committee recommends should perform in the future the functions now allocated to him. List should be compiled of all the usual lines of textile supplies, and the current market prices should be filled in at fixed intervals, say fortnighly, by the officers mentioned above

and submitted to the chief purchasing officer at headquarters.

Question 18. As regards textiles manufactured in England, I think that all classes of these should be obtained through the Director-General of Stores, but should it be found in the future that America or Japan, or any other country, can supply what is required of equal quality and more cheaply, some other agency would be necessary: possibly the best arrangement would be to employ some English firm of repute in the country as purchasing agents, in which case special inspection arrangements would have to be considered. Hitherto such cases have not arisen, and such stores have only been purchased after importation into India by the trade which, of course, involves government paying the Indian trade's profit.

Question 19. If it be finally decided to establish a central purchasing agency, which will procure all textiles for all Government departments, I think that central stock depôts under the Controller General of Stores will be required, because purchases on a very large scale will be made against forecast estimates at the most favourable moments, and it may often be impossible for the consuming departments to accept all the supplies for which they estimated at once. Such depôts should be in the same centres as the purchasing and inspection depôts. Consuming departments should, however, be responsible for accommodating all stores actually demanded by them. For instance, should a department notify the central purchasing agency that they will require 100,000 yards of khaki drill, say, monthly, they should be responsible for accepting that quantity monthly, but it would not be reasonable for Government to insist on their accepting, say, six months' supply in advance merely because the central agency found it convenient in view of the market trend to purchase that quantity six months in advance, and to meet such cases, which would no doubt be frequent, stock depots would be essential.

The holding of stocks by private firms seems to be a matter for the firm's own discretion.

Question 20. As regards textiles; at Bombay, Cawnpore and Calcutta and possibly eventually at Madras also, for Indian stores. For imported stores at Bombay only.

Question 21. Cost of clothing stores purchased abroad and in India during the years 1910-1911 to 1915-16.

Year.*	Imported (*a*).	Local (*b* and *c*).	The figures for (*b*) and (*c*) cannot be given separately.
1910-11 . . .	1,206,000	897,000	
1911-12 . . .	596,000	976,000	
1912-13 . . .	831,000	1,235,000	
1913-14 . . .	1,149,000	1,588,000	
1914-15 . . .	1,933,000	6,754,000	
1915-16 . . .	2,096,000	17,332,000	
TOTAL .	7,811,000	28,782,000	

* The figures from 1916-1917 and onwards are being compiled and will be furnished later.

Question 22 (*a*). Records are kept in my office of all prices paid for stores, showing the dates of the contracts and the contractor's names. These are referred to whenever orders for similar stores are received.

(*b*) A register of contractors is kept showing the contracts placed with each firm, and in the remarks column any comments on the way the contracts have been carried out. Firms, which have proved unsatisfactory, are warned, and if there is anything specific against any firm its name is removed from the list of government contractors.

Question 23. I think an inter-change of information regarding prices, capacity and performances of contracting firms between the central agency and the purchasing officers at commercial centres would be feasible and useful. see no particular difficulty about it.

Question 24. Not concerned.

Question 25. I am not quite clear as to the meaning of this question. If the legitimate sphere of private enterprise means private enterprise in industrial development, I see no reason why the formation of a central agency should interfere with it. If it means private enterprise in obtaining business, there is no doubt that the central agency would interfere as it would also interfere with what are considered vested interests by firms who have hitherto held government contracts for supply of stores to such bodies. I should not, however, be in favour of allowing consideration of such vested interests to interfere with the obvious advantages to Government of undertaking such supplies.

Question 26. This is a question of paramount importance which I do not think has been sufficiently realized. It is essential that the purchasing and inspecting officers and their staff should not only be men with high technical qualifications, but that they should be above reproach and of sufficient standing to carry the necessary weight with the firms with which they will have to deal. Such men are extremely difficult to find at the present time, and in my opinion when found should not be allowed to leave Government service, if they can possibly be retained. The Commercial Adviser to the Munitions Board in the disposal of surplus textile stores, who was consulted by me on this subject, was very strongly of opinion that the matter of a few hundred of rupees one way or the other should not be considered by Government (it would not be considered by any private firm) when the question of obtaining a suitable technical man was under discussion. His argument, with which I entirely agree, was that if you have a man who has the necessary qualification and with whose work you are fully satisfied, keep him. He will be very difficult to replace, and although you may get a cheaper man, it will be a plunge in the dark, and he may prove entirely unsuitable. I am of opinion that the financial responsibility and the amount of government money with which such officers have to deal are so large that their salaries should not be considered in the same light at all as those of ordinary government officials. They should be, within reason, whatever salary is necessary to obtain the right man.

The recruitment of the officers and staff of the purchasing and inspections should be, as far as possible, from men about whom Government has some previous knowledge, and not by advertisement, or by calling for applications.

With regard to organization, that worked out for the offices of the Controller of Textiles and the Assistant Controllers of Textiles Munitions Depôts, and Surplus Stores, are proving satisfactory, and should be adopted for the new offices, if created. A pamphlet* showing the system in the Controller of Textiles' office is attached.

Question 27. I do not feel competent to express an opinion as to the method of meeting the cost of the organization. This is more a financial matter.

Question 28. The measures for auditing the purchase of stores are controlled by the Finance Department (Controller of War Accounts) and the Controller of Textiles has no further financial responsibilities beyond that of obtaining suitable stores at the lowest rates possible. The bills are paid by the Controller of War Accounts. The budget provision for each order being endorsed by the indenting officers on the order before passing it to the Controller of Textiles, and reported to the Controller of War Accounts before the purchases are made. In this connection I think there is much room for improvement. The indenting officer when endorsing the budget provision does not know what the stores are going to cost, the purchasing officer when placing the order does not know what the budget provision amounts to, or what other stores have to be found from it, and all financial control is, therefore, really exercised by the Controller of War Accounts. I should prefer that the purchasing agency should be informed of the budget allotment for textile purchases of each in-

* Not printed.

denting officer, and that it should be responsible for watching the expenditure against the budget in relation to the forecast estimate received from the indenting officers. The purchasing agency should report the cost of all purchases made on the indenting officers' behalf so that the latter can see the rate at which he is spending against his budget and so can either insure that he does not exceed it, or if he finds he must do so can ask in good time for a grant in aid. I am of opinion that administrative officers have not sufficient control over finance not only in respect of purchase but in respect of organizations under them. It is difficult to be economical if you have no idea of what you are spending or what you are allowed to spend. The recent order that all intended expenditure must be submitted to the Controller of War Accounts before it is incurred removes all responsibility in the matter from the shoulders of the purchasing officer, which is not in my opinion sound. The Controller of War Accounts should have no power to criticise unless the budget is exceeded, any criticism which he may make in anticipation thereof is in my opinion superfluous and outside his province. It involves unnecessary delay and unnecessary clerical labour.

Question 29. I do not think that a more efficient audit on purchases would result from the creation of a central stores department, but this is a question for the Finance Department.

Question 30. I think such interchanges as are suggested in this question would be very valuable as well as very popular.

NOTE ON JUTE PURCHASES.

It is the opinion of many competent judges that special arrangements are necessary for the purchase of jute fabrics on account of the jute market being practically controlled by the Jute Association, Calcutta, and that a system of open tenders is unsound. The system now in force is the employment of a firm of high standing as purchasing agents on a commission basis. The contract in force between the Indian Munitions Board and Messrs. Birkmyre Brothers is placed below.* It costs Government about Rs. 10,000 a month on an average, and its revision is under consideration. Messrs. Birkmyres have recently offered to accept 1¼ per cent. commission all round on purchases made instead of the 3 per cent. and 2 per cent. now charged. They have also refunded the difference between 2 per cent. and 1¼ per cent. on one large order as a voluntary concession. The advantage of this method of purchasing jute fabrics are:—

(1) Highly expert advice is available.
(2) There is less risk of prices being put up against Government by the Jute Association.

The disadvantages are:—

(1) The policy is inconsistent with that for purchases of other Government stores.
(2) It gives a virtual monopoly to one firm.
(3) The officer responsible to Government is in the hands of the Agents and has no control over prices paid.
(4) The principal consuming officers, *viz.*, Director of Equipment and Ordnance Stores and Controller of Contracts, object to it.
(5) It is expensive as compared with a Government purchasing office.

It is argued that jute purchases *must* be made by an expert, and that an expert buyer could not be obtained at a salary such as Government would be prepared to pay, also that there would not be full time work for such an officer.

I feel some diffidence with my limited knowledge of the matter in opposing the existing arrangement which is backed by many officers far more knowledgeable than myself, but I confess to a preference for a consistent purchasing policy for textile goods, and would prefer to have a purchasing officer under the Controller General of Stores, whose office would be located in Calcutta and who would purchase all textiles there.

NOTE ON THE PURCHASE OF BOOTS AND OTHER FOOTWEAR.

The present arrangements for the purchase and inspection of boots and other footwear for the Army are very unsatisfactory. Several proposals to alter them have been made, but have been held over pending the recommendations of the Stores Purchasing Committee.

Contracts for boots, shoes, grindery, repairing materials, etc., are placed by the Military Assistant (Clothing), Indian Munitions Board. In his office there is none with any knowledge whatever of the subject. Sir Henry Ledgard, Honorary Adviser to Government on boot supplies, advises the Military Assistant (Clothing) when called upon and in some cases the aid of the Chief Inspector of Army Boots, Cawnpore, is also invoked. Sir Henry Ledgard will be leaving India in March, and it is not the legitimate function of the Chief Inspector to advise the purchasing officer. In some cases purchases are made through the Chief Inspector which is wholly unsound. I am strongly of opinion that the purchase of boots and their accessories not only for the Army but for all Government Departments should be undertaken by an officer with expert leather knowledge under the Controller General of Stores, and that the inspection should be a part of the leather inspection and not as now of the Clothing inspection. Formerly the boot contracts were placed by the Controller of Textiles an even worse arrangement.

* Not printed.

Lieutenant-Colonel H. M. ALEXANDER, called and examined.

His chief object in recommending that a Central Textile Purchasing Branch should be represented in the principal textile manufacturing centres was to secure for the head textile purchasing officer regular and up-to-date information regarding the conditions prevailing and anticipated in the textile market, which was subject to substantial fluctuations, in order that the head textile purchasing officer could so regulate his calls for tenders against the forecast-estimates which would be furnished to him by the various consumers that the greatest economy to Government would be likely to result. These local officers would also be useful for making any large supplementary purchases which had not been foreseeable when the forecast-estimates were prepared and for making enquiries and ascertaining sources of supply of new items not hitherto purchased. Small supplementary purchases should be left to the consumers within fixed financial limits. He thought that one officer for Bombay, one for Cawnpore, and one for Calcutta and Madras would be sufficient. Suitable men with a knowledge of textile business could probably be obtained for about Rs. 1,000 and they should be eligible for appointment to the inspection side in which the technical qualifications required would be higher and the salaries therefore greater.

The head textile purchasing officer should be an expert, or, if not, he should have an expert adviser at headquarters with him. He suggested Rs. 2,000 as salary for the head purchasing officer and Rs. 2,000 to Rs. 2,500 for the Head Inspector of textiles who should also be located at headquarters and would relieve the Director of Ordnance Inspection and the Chief Inspector of Clothing of a considerable amount of their present work.

The Head Inspector of Textiles would take over from the Director of Ordnance Inspection and the Chief Inspector of Clothing the supervision of all textiles inspection work. The Chief Inspector of Clothing would be left only with inspection of garments made up by the Army Clothing Department in its factories and by its contractors.

From actual experience as Controller of Textiles, he could say that purchase by a civil Department with inspection by the Army would never work smoothly. It was essential that purchase and inspection should be distinct but under the one administrative control. All purchases would be made to standards previously approved and the Army authorities should have the right of criticising but not of rejecting supplies. In his opinion, the cotton manufacturers in India had not yet reached a stage at which their standard products could be accepted without inspection.

The system at present followed was to send an invitation to tender to approved firms only, dealing direct with manufacturers as far as feasible. Some manufacturers, however, were not disposed to deal direct. Textiles for supply to the Ordnance were usually purchased to a specification. For the Army Clothing Department, samples were usually asked for which were examined and reported on by Inspectors. He agreed that it might be beneficial to give publicity in India to the main textile requirements of Government; but for the reasons given in his written reply to question 7 of the questionnaire he would not go so far as to advocate advertising for tenders from anybody for everything. He would leave it to the Provincial Directors of Industries to bring to the notice of qualified manufacturers in their respective provinces, who were not already on the list of approved suppliers, the possibility of becoming suppliers to Government.

The preparation of specifications for all ordinary textile requirements was now in hand. Some materials and articles had already been standardised for the Army and witness considered that civil departments using similar materials and articles should be persuaded to accept the same standards. He handed in the following tentative list of materials and articles which, he considered, should be standardised for all requirements either civil or military or both:—

Blankets, woollen.
" barrack.
" hospital.
" horse.
" mule.
Bags, kit.
" ration.
Buttons, leather.
" metal.
" bone and pearl.
" cotton.
Brushes.
Canvas, cotton.
" flax.
" jute.

Woollen piece-goods, i.e.

Greatcoat, cloth.
Flannels.
Melton, cloth.
Serge, etc.

Cotton piece-goods, i.e.

Drills, grey, bleached and coloured.
Bedford cord for breeches.
Pugri cloth, bleached and coloured.
Twill, grey, bleached and coloured.
Longcloth.
Nainsook.
Dosooti, grey, bleached and coloured.
Dungaree, coloured.
Holland, brown.
Sheeting.

Hospital equipment, i.e.

Sheets.
Pillow cases and pillows.
Counterpanes.
Mattresses.

Medical Stores, i.e

Cotton bandages.
" woollen.

Woollen knitted goods, i.e.

Cardigan Jackets.
Socks.
Jerseys.
Drawers.
Gloves and mittens.
Balaclava caps.
Cap comforters.
Tents.
Durries.
Fringes for pugries.
Jhools, various.
Kullahs.
Newars and tapes.
Puttics, woollen.
" cotton.

It was not pretended that the above list was exhaustive as his experience had been mainly of Army requirements and there might conceivably be many other items peculiar to civil requirements which could be standardised with advantage. His branch, which at present was buying textiles for the Army only, except jute, flax, hemp and cotton canvas articles which were being bought and all Government Departments, was familiar with the capabilities of India as regards manufacture of piece-goods, and was therefore in a position to suggest standard specifications where suitable supplies could be procured of indigenous manufacture. The policy of standardisation would of course have to be applied also to textiles of home manufacture. This could be done through the Director-General of Stores, India Office, who would consult home manufacturers.

Witness thought that it would be to the advantage of Government to develop clothing factories in two or three centres in India for making uniforms in standard sizes for all departments. These factories would form a very useful reserve in war.

So far as textile purchasing was concerned, there was no benefit in the headquarters being located in a manufacturing centre. It was only important that the head purchaser and head Inspector of textiles should be at the headquarters of the Central Stores Department. There were advantages in the supplying agency being in close touch with the consuming departments and for this reason, the headquarters of the Stores Department would, he thought, be best located with Government of India.

He called the attention of the Committee particularly to the advisability of considering official arrangements for the purchase of—

(*i*) Jute, hemp, flax and cotton canvas goods.
(*ii*) Boots.

He advocated consulting the President of the Jute Association, Calcutta, with regard to (*i*) with a view to deciding whether the present system of purchase through the agency of a Calcutta Jute firm was suitable as a permanent arrangement; or whether purchase by a Government officer was not preferable.

With regard to (*ii*) he thought that boots, grindery and repairing materials should be purchased by a leather branch under the Stores Department and not by the Controller of Textiles as heretofore or by the officer controlling the Army Clothing Department as now.

At Simla, Wednesday, 28th April 1920.

PRESENT:

Sir FRANCIS COUCHMAN, K.B.E., M.I.C.E. (*President*).

A. W. Dods, Esq.
Lieutenant-Colonel C. C. H. Hogg, C.M.G., R.E.
Brigadier-General H. A. K. Jennings, C.I.E.
Rai Bahadur Lala Milki Ram.

J. C. Highet, Esq. (*Secretary*).

D. L. McPherson, Esq., Controller (Munitions Manufacture), Indian Munitions Board.

Written Statement.

Question 1. Yes, with provincial branches attached to Directors of Industries and under their administrative control only. My reasons are set forth in the draft scheme submitted, an extract of which has been printed with the questionnaire.

Question 2. Yes; for the Army Department, I consider it will be necessary to have:—

(*a*) as a temporary measure, liaison officers selected from the various supply branches forming a section of the Controller General's staff for Army supplies only placed under;

(*b*) a permanent liaison officer directly responsible to the Controller General of Stores that all necessary details to enable purchase and inspection to take place are supplied with indents, and to obtain such when not given. Please see paragraph 11 of my draft scheme and separate note on this subject placed below.

With regard to other Departments of Government named in this question, the only special arrangements needed will, I think, be connected with inspection—see answer to Question 11 below.

Question 3. No—the question says "a" central agency, not "the."

Question 4. I consider it will be advantageous for all non-commercial bodies, who require to make purchases in India, to be forced to come to the Central Stores Agency; otherwise, there will be competitive buying, stores which are refused by one will possibly be purchased by another, in addition to the multifarious evils which have been known to exist in the past, and for other reasons cited in my draft scheme.

Yes, I consider all bodies served by the Agency should contribute towards its maintenance.

Question 5. I consider that a central Department should be the *only* Agency, and also the most suitable for Local Governments. The measure of decentralisation suggested is shown in the draft scheme submitted by me.

Question 6. I do not favour the creation of local Agencies. The Industrial Commission's Report gives very good reasons against this, which I agree with. If such are created, it will be found that inefficient development of industries will take place in provinces removed from ports, and doubtless, the converse will also arise, namely, that there will only be 4 or 5 local Agencies of any value, *viz.*, Bengal, Bombay, Madras, Karachi, and, possibly Rangoon; the obtaining of supplies in the remainder being chiefly dependant on middlemen, objections against which are already sufficiently known to need comment.

Question 7. Yes, and I am not altogether in favour of the system, but to an extent, it is necessary. I do not think hard-and-fast rules should be laid down that tenders should be called for in all cases. It should, I think, be left to the discretion of the purchasing officer as to whether tenders are to be called for in all cases or not.

Again, purchasing officers should have a staff of inspectors who would, when necessary, inspect stocks of supplies tendered for by firms, to verify that such articles are actually in stock at time of tender. Under the present system, it is known that most purchasing officers receive tenders from firms who, if successful in obtaining the contract, at once proceed to buy. I also think that there is too great a tendency for the lowest tender generally to be looked upon as the most favourable.

Question 8. Providing it becomes necessary, I see no reason why the establishment of a Central Stores Department should not render it possible for simultaneous tendering to take place in England and in India, if a pre-arranged date is worked to and demands are only made by periodic indent. It will be found, I think, however, that in course of time firms in England will open branches in India; such branches will be up-to-date with home prices, and therefore, be in a position to tender against firms in India.

Question 9. I consider that the *policy* of inspection should be dictated by the Department responsible for the industrial development of the country, but in very close consultation with the requirements of the consuming Departments. Otherwise, the consumers will not become aware of suitable substitutes or what the country can really produce.

Moreover, drawings, samples, and specifications should be agreed to by both the inspection and consuming Departments before submission to the Department responsible for industrial development.

Question 10. The answer to this is given in my draft scheme.

Question 11. I do not consider this necessary as, under the Inspector General of Stores proposed in my draft scheme, there will have to be in many cases experts who have specialised in the various branches of the work to be inspected; and these can be located where the greatest supplies are obtained or at centres convenient thereto.

For reasons too numerous to mention, inspection must, I think, in future be arranged according to types of stores, and that enlarged, where possible, into centres of supply, and not according to classes of consumers as appears to be the trend. If Messrs. Armstrong, Whitworth and Company, for instance, erect locomotive workshops in the Bombay Presidency, there would be required one or more inspectors having special knowledge of railway locomotive inspection work, whose duties would be those of inspecting the whole of the outturn from these workshops for all railways in India or even for export, if such took place. These officers would, however, be under the Inspector General of Stores for all India, though doing specialists' work.

Similarly with the Army Department; many of the stores to be inspected will be similar in type—and hence possible of standardization—for more than one Department of Government. These, and many other circumstances mentioned in the separate note placed below, call, I think, for all ordnance factory outturn to be

classified entirely apart from all other Army supplies. On this principle and as inspection must follow production, the outturn from the Calcutta group of factories should, I consider, come under one Inspectorate located in or near Calcutta and in close touch with both the Director of Ordnance Factories and the Director of Industries, and all other stores for the Army being purchased or manufactured in Bengal (outside the Ordnance Factories) should be inspected by the Chief (Provincial) Inspector of Stores shown in my draft scheme.

I show in the note below how Army personnel may be absorbed where necessary.

Question 12. Yes, such as coal, oil, chemical products, etc., etc.

Question 13. The inspection of all stores should, in my opinion, be undertaken by a central organization, decentralised where necessary.

Question 14. I am not in a position nor have I the necessary information to make suggestions regarding tangible alterations which may be necessary in the Stores Rules as printed in Appendix II of the questionnaire. But, the following points appear to be relevant:—

In paragraph 2 (*b*), I consider that for some years a clause may be inserted to the effect that the price of Indian manufactured stores shall not exceed 10 per cent. over the price at which similar stores may be imported in the latter case, including freight, insurance and other charges.

In paragraph 3 (*a*), I am of the opinion that branches of firms in India should be given the opportunity to guarantee that imported stores shall be delivered *within* the time at which similar stores can be manufactured and delivered in India, penalties being imposed if necessary in the case of failure to keep to this guarantee.

Something similar could, I think, be inserted in Rule 5. In Rule 7 and wherever such occurs, I consider that the Controller General of Stores in India should be given free discretionary powers to obtain imports either through the Stores Department of the India Office or by any other means which he cares to adopt, bearing always in mind the desirability of safeguarding the interests of British manufacturers and trade.

Question 15. Whatever conditions are imposed, I think these should be somewhat tight. It will be necessary to discourage the importation of supplies by branches of British firms in order to encourage the establishment in India of British firm's manufactures. While admitting that many advantages to consumers are secured by the availability in India of representative experts of British firms, it must be remembered that these very representatives have not come to India solely in the interests of consumers. At the same time, their enterprise should in no way be discouraged, but they should be given every encouragement to go further and to establish the manufacture of their products in India.

The holding of stocks in India by these firms (*vide* sub-paragraph (*a*) of the question) should be made entirely subordinate to considerations regarding sub-paragraph (*b*), *viz.*, the establishing of the firm's manufactures in India.

Question 16. Yes, most emphatically, and, in fact, all indents should go entirely through the Controller General of Stores in India.

Question 17. I am not satisfied that the prices of articles should be considered of greater importance than questions connected with their production in India; but where this is not possible, something in the nature of the point mentioned in answer to Question 8 may be instituted together with a telegraphic trade return regarding a few essential articles of supply, particularly raw materials, by the India Office to the Controller General of Stores in India.

Question 18. The answer to this question is given in my draft scheme in which I consider that, no matter what classes of stores may be required, the Controller General should be given free discretion to make whatever arrangements he considers necessary for obtaining such.

Question 19.—Yes, but I would limit these to two only, *viz.*, one in the Bombay Presidency and one in Bengal. These Depôts should, I consider, be constituted *only* for the holding of stocks of imported stores for Government Departments, and such stores as are not ordinarily purchasable in India through the efforts of already established commercial importers. A separate note* on this subject detailing my reasons and many points connected with the subject has already been submitted to the Committee, and it will be seen that my chief reasons for this suggestion are so that:—

(*a*) a war reserve of essential non-indigenous stores should always be in existence in India, and

(*b*) some form of control should be established over the vast stores balances now maintained throughout India by decentralised stock holders in the various Departments of Government, particularly the Army, Marine, P. W. D. and Railways.

This also answers sub-paragraph (*a*) in the question, and as regards sub-paragraph (*b*), I do not think the holding of stocks by private firms will be materially affected for the reason that trade in India, apart from the requirements of Departments of Government, is already a large incentive to private firms to hold stocks apart from the fact that the proposal for Government stock depôts only covers stores which are not ordinarily imported by commercial concerns, or those which the Controller General of Stores may consider should be held in stock.

Please see also suggestion (enclosed†) made by Mr. Williams, Deputy Controller (Munitions Manufacture), Indian Munitions Board, in this connection.

Question 20. Please see Question 19 above. I am not in favour of Government maintaining stocks in central depôts for stores produced or purchased in India, except where such may be necessary by Departments for domestic consumption, and in any case, I would limit such stocks to a maximum of three months' requirements only.

Question 21. Nil.

Question 22. (*a*) My branch can furnish figures of the price of stores purchased for the Army and other Departments of Government during the last three years.

(*b*) A register of engineering manufacturing firms dealt with, showing equipment employees and remarks regarding nature of the work undertaken is maintained in the various provinces, as well as at headquarters.

Question 23. Yes, I consider it would be feasible for a Central Agency to collect and disseminate the information mentioned; particularly should this be done in the case of failures and incorrect dealings by contracting firms.

Question 24. Nil.

Question 25. No, it will be the duty of Directors of Industries to put private enterprise in touch with the requirements of Company-owned railways and local and quasi-public bodies through the information obtained by the Purchase and Inspection Departments. There are, to my mind, already too many channels through which private enterprise deals with individual officers of the above-named bodies, and I think a reduction in these is very desirable.

Question 26. Yes, sufficient advantage has not, I think, been taken of the market at home from which young men with knowledge and training in stores purchasing may be recruited. On the Railways, for example, it is exceptional, even if it has ever been done, to appoint an officer of the Stores Department covenanted from England; yet, such could be obtained.

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* Reproduced below.
† Printed separately.

I consider that the recruitment of youths born and educated in India should be encouraged, but they should in all cases serve an apprenticeship, and that their final appointment to the Stores Department should only be subject to their showing marked business acumen, education and general ability. I am not satisfied that the salaries proposed in the Industrial Commission's Report are sufficiently attractive to the right class of man, particularly if, as I consider, a large percentage of appointments should be made from men who have had home training. There should be an entire absence of temptation for illicit satisfaction.

Question 27. This could be done or an annual charge levied based on actual cost of the Agency *pro rata* with number or value of indents dealt with for the various Departments.

Question 28. Nil. Audit is chiefly carried out by the War Accounts branch, but is also personal by the officers dealing with the placing of indents.

Question 29. Yes, particularly if, as is proposed in my draft scheme, audit and disbursing officers are posted to the staffs of the Directors of Industries.

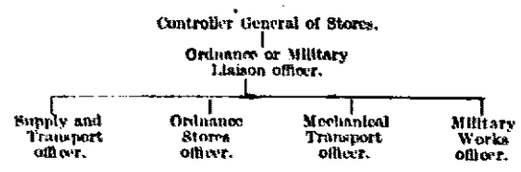
Question 30. I consider it will be desirable to arrange for interchanges of personnel between the Home and Indian Stores Departments at periods of about five years, which includes the local purchasing Departments.

Note regarding special arrangements which may be necessary for the Army Department in connection with the Stores Purchase Committee's questionaire. Question 2.

Supply.—In order that supplies may be undertaken by the Stores Agency, it must be (*a*) given full and accurate details of the Army's requirements, and (*b*) complete in arrangements regarding inspection. Considering the first of these, I would propose that certain whole-time officers drawn from the Supply branches of the Army be attached to the staff of the Controller General of Stores in a purely advisory or technical manner, so that familiarity with details of stores may be imported on the one hand to the executive officers of the Stores Agency, and on the other hand, so that the pooling of indents and standardization of methods of indent, may be inaugurated in the Supply branches of the Army Department. In other words, that the Stores Agency should co-opt liaison officers for the first two or three years at its commencement, who will be representatives where necessary of the present Supply branches of the Army.

It will be seen from the draft scheme submitted by me and printed with the questionnaire, that I have proposed the attachment of one military liaison officer to the staff of the Controller General of Stores. In this proposal, the additional officers suggested are temporarily posted under the liaison officer proposed as a permanent measure. Thus in course of time, the number of military officers will be reduced to a minimum of one or two. This is graphically shown below :—

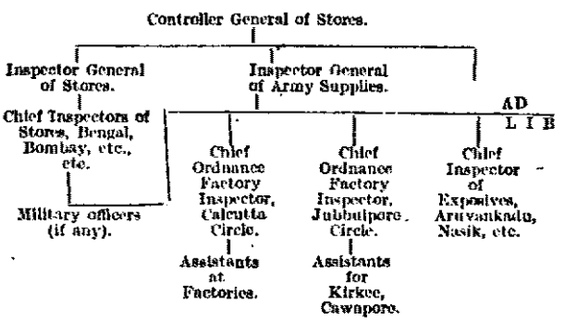
Table I.



2. *Inspection.*—In connection with (*b*), *i.e.*, inspection, I would propose, firstly, divorcing the inspection of Ordnance Factory outturn from the remainder of stores classed as "Ordnance Stores," and secondly, the inclusion of this remainder with all other classes of stores required by the Army which will be obtained in India.

Turning again to the draft scheme submitted by me, the organization I suggest is that of an Inspector General of Army Supplies (to replace the present Director of Ordnance Inspection) contemporaneous with the Inspector General of Stores in the draft scheme, under the administrative control of the Controller General of Stores Immediately under this officer will be an organization entirely responsible for the inspection of all Ordnance Factory outturn, and he will also bear the responsibility for correctness of supplies inspected on behalf of the Army in other parts of India by the main Inspectorate whether by military officers therein or otherwise. This is graphically shown below :—

Table II.



3. In considering the above, it may be as well to note that supplies to the Army come generally under three main heads :—

(*a*) Stores which are, or can be, supplied by manufacture in the Ordnance Factories,

(*b*) Stores which are, or can be, purchased or manufactured (outside the Ordnance Factories) in India, and

(*c*) Stores which have to be imported.

These are at present arranged for by the Supply Branches of the Army Department, the head of each of which is, broadly speaking, a "storekeeper" (a term of convenience, (with Store Depots under him in convenient centres (such as Arsenals, Supply and Transport Depôts, etc.). His functions now include those of obtaining as well as stocking, but in future the former will be done for him. In order, however, that the Stores Agency may be given full and accurate details of these "Storekeepers'" requirements, it will be necessary for the Army to be more precise and accurate than it is at present, both as regards requirements as well as consumption. Assuming this to be impossible and that the "Storekeepers" will have more time to devote to these matters, I would suggest that indents should be presented periodically to the Liaison officers mentioned above, who will deal with these in the first instance in relation to correctness of detail, *i.e.*, specification, etc., and to obtain such for the Stores Agency when not given. The Agency through these officers will dictate what details require to be furnished to permit of purchase, etc.—The "Storekeepers" cannot do this.

The "Store Depôts" will remain as at present under the entire control of the "Storekeepers" and the responsibility of the Stores Agency for actual supplies to the Army ceases when purchases have been inspected and delivered at the depôts named by the "Storekeepers." A reference to the above named categories of stores will show that the Stores Agency will have practically no concern with (*a*) and that the details of requirements under categories (*b*) and (*c*) only will be of importance.

4. The normal requirements of the Army in these categories admit of detailed specifications being drawn up and the sealing of patterns, descriptions, samples, etc. There must necessarily remain other items of a special nature, particularly during War, but the number of such is relatively small, and in most cases, some description of sample is usually available. There is also a constant succession of new "marks" or types of stores arriving from home, adding greatly to the difficulties of the above mentioned Army "Storekeepers" in India,

There are also the vexed questions of war reserves in peace times, of forecasts of the Army's requirements during peace and war, repairs to equipment in Arsenals (which should, I consider, come under the ægis of the Director General of Ordnance and not the Director, Equipment and Ordnance Stores as at present), and many other questions of a like nature connected with surplus stocks, alterations to and the "scrapping" of patterns of stores and the sealing of new ones. At the same time with the responsibility for the actual obtaining of stores by the "Storekeepers" removed from their shoulders, their training and experience will permit of better service to the Army being secured by their being given time to more correctly formulate indents and to gauge consumption.

In as much as inspection can now be carried out either by separate organizations or by representatives of the present "Storekeepers" in their Depôts, obviously full and accurate details of requirements can be furnished. Therefore, the Army can, in course of time, indicate what it requires and the Stores Agency can be given full opportunity of obtaining these in the best market. This end will, I believe, be achieved by the measures suggested above, and familiarity with requirements will gradually dictate the reduction in the number of Liaison officers required.

5. *The proposal regarding Inspection* is of a controversial nature, but a diversity of opinions is unavoidable. The importance of Inspection and its results has not, I consider, been sufficiently realised in the past. The present Army Inspectorate is merely an expansion of that which existed in 1914. Defects in any system are usually least discernible to those who control or are within it. Its soundness or otherwise often is most discernible to those who are outside and have to depend on the system for their own results or progress. I am not in any way prejudiced, but I cannot too strongly labour the point, that, in spite of the good results achieved during the war, India as represented by the whole body of manufacturers—I speak chiefly of engineering—will demand a radical change in Inspectorate details and personnel, from those now in existence, if they are ever to be called upon again to assist in making War supplies firstly, and secondly, if they are to undertake supplies at all under category (*b*) which they will be asked to.

Therefore, in considering the proposal, both as regards the de-classification of stores in conformity with the nature of supplies to be made, and the organization suggested, I would remark that the following outstanding points are relevant and may be studied:—

(*a*) Supplies to the Army are vital and permit of no alteration on the field, and as the consequences of failure to provide correctly are likely to be fatal —even in the case of non-lethal or non-ordnance factory supplies—the responsibility for final acceptance is heavy and should, I think, rest with an Army representative.

(*b*) In order to create standards of items common to more than one Department of Government —and this is absolutely essential in future— inspection cannot be arranged according to classes of consumers, but according to types of store.

(*c*) An officer having special training in the use of lethal munitions in the field, and hence technically competent to finally pass such for the service and to point out faults or defects in design, interchangeability, etc., of parts, and so on, should not be expected to inspect a tin opener; yet this is so to-day and is one of many like examples.

(*d*) For the sake of economy and to carry out the industrial development and education of India on which the Government of India has now embarked, inspection by technical experts during production must be inaugurated and, in many cases, this will be found to be sufficient and to dispense with final passing by or on behalf of the consumer, particularly in the case of general stores and such as come under category (*b*) above.

(*e*) At present, Ordnance Inspectors usually apply the same rigid standards of inspection in the case of non-essential stores as they do for lethal munitions. Little or no discretionary power is given, and being generally too occupied or non-conversant with manufacturing and raw material difficulties, they are indirectly responsible for financial loss to both Government and manufacturers. Their training suits them chiefly for the inspection of specialised final production as is given by the Ordnance Factories, *i.e.*, category (*a*).

(*f*) The present system whereby the Director of Ordnance, India, undertakes the inspection of all ordnance stores (and now I understand certain Supply and Transport requirements) has probably created the inelastic organization of placing Chief Inspectors where least accessible in time of war. Admitting that the system postulates for inspection by classes of production, at the same time if a transport cart is being made in Pindi or in Madras, details have to be obtained from, and the responsibility for inspection rests with, an officer stationed in Jubbulpore. Delay is unavoidable and has been in many cases during the Great War extremely serious.

(*g*) Too much importance is placed on economy in inspection and the principle of expecting stores to be despatched from source of production to Inspection Depôts must be abolished as far as possible. The cost of this method of inspection so keenly insisted upon by Ordnance Inspectors has not been shown on the debit side of the cost of inspection during the war, and if figures were obtained, I know that this will reach no inconsiderable amount.

(*h*) A large number of existing specifications of Army stores require considerable modification with a view to greater economy in cost of mechanical production being obtained. It might even be necessary for this to be done by a small committee of expert engineers. Many designs are mechanically inefficient and appear to have been drawn up by officers who are only in a position to judge of the article at work.

(*i*) Both in peace and war, it is essential that samples, drawings and specifications, etc., should not only be readily available in the centre of production, but these must be ample instead of very much in defect as at present.

(*j*) Food and fodder will not be undertaken by the Stores Agency.

6. The above points are, I think, the most important of many which have come to my personal knowledge in 4½ years of undertaking supplies to the Army, and the time for radical changes in the present system as well as complete arrangements for the future has arrived. The proposed organization in paragraph 2 is admittedly an entire departure from the present, but is based chiefly on the obvious necessity for a war reserve of (*i*) details of requirements, (*ii*) specifications, samples, etc., (*iii*) a training ground for Inspectors, (*iv*) quick decisions, (*v*) elasticity, (*vi*) centralised data of standards or types and other such details, (*vii*) domestic as well as final inspection, where necessary, and (*viii*) accessibility to all concerned when and where most needed, and so on.

The present system is essentially one of extreme decentralization by classes of stores, and, broadly speaking

does *not* permit of the above named details of a war reserve to be built up; yet, a peace time organization must be based on that which is necessary during war.

7. It seems improbable that the Ordnance Factories will be controlled by the Industries Department, but, in any event, the class of work undertaken will not normally be attempted outside these Factories during peace times, except possibly in a few instances as a matter of policy; in which case details would be furnished by the Factories through the Inspector concerned.

Now the whole of the details connected with this class of work only would be with one Inspectorate in Calcutta for the whole group of the Calcutta Factories. On the arrival of a war, in the event of a necessity arising for the mobilisation of outside resources to undertake portions of this class of work, the eight war reserves shown above at once come into operation, with the added advantage that the Chief Ordnance Factory Inspector concerned will already find a provincial Chief Inspector of Stores in touch with the very resources which will be called into being to assist in supplying Ordnance Factory outturn, dealing with somewhat similar civil supplies and certainly organized with similar rigid standards of inspection.

To take the case of a transport cart already mentioned. If the Jubbulpore Factory can meet peace time requirements and needs assistance during war, the Industries Department will decide what resources are to be tapped. Full details will then be passed to the local (civil) Inspector and no further responsibility will rest with the Chief Inspector at Jubbulpore regarding any but those carts being produced in the Jubbulpore Factory. As regards the tin opener also mentioned, no Ordnance Factory outturn Inspector will know or care that such an item of ordnance stores exists.

8. Again, the proposed organization admittedly depends on the decision that the inspection of Ordnance Factory outturn shall be divorced from other classes of ordnance stores and that the remainder be included with other Army supplies. This is only made possible, however, by the fact that in the future a Civil Inspectorate (composed chiefly of officers having engineering qualifications) will come into existence. This Inspectorate will have no concern with Ordnance Factory output and as the stores under category (*b*) are distinct from category (*a*), the inspection should undoubtedly follow the same principle, if economy and elasticity (to quote two advantages only) are to be secured.

No organization exists at present whereby the one Army "Storekeeper" is made conversant with similar types of stores consumed by another, each branch being more or less an independent unit. Numerous specifications exist, for example, of such a common article as a bucket, but officially, the Supply and Transport Directorate does not know the ordnance bucket. In future, one prominent policy of the Industries Department will undoubtedly be to meet demands as far as possible in India. As demands will be centralised to an extent, so must types of stores and hence the inspection of such. Otherwise, the same multiplicity of types and extravagant diversity of consumption must continue, and also the removal of the defects which will be apparent on an examination of the outstanding points shown in sub-paragraphs (*b*) to (*i*) of paragraph 5 will not be effected.

Inspectors and inspection details must be located where production centres exist or are to be created, if these are to be made full use of. In fact to my mind, this is as important as is the inspection of stores according to types instead of according to classes of consumers.

9. Lastly, the lot of an Inspector is one full of difficulties and must be experienced to be realised. Not only must the status be pitched on a high level, but the patience and tact demanded, together with the integrity and general knowledge of working conditions which is required in the ideal Inspector, must be recognised. Therefore, if the greatest benefit is to be secured both to the country and the Army, a properly organised "Service" should I think, be created in which the terms of employment, advancement, etc., are sufficiently attractive to the right class of man, particularly those with engineering qualifications.

I do not suggest that the organizations I have proposed for both supply and inspection are in any way complete, but I consider, from past experience of actual working conditions, that they are based on the only principles on which the defects of the present system can be remedied and conformity with the recommendations of the Industrial Commission be obtained.

Note regarding a proposal for the establishment of Government Stores Depôts in the Calcutta and Bombay areas to deal with imported stores.

In view of the approaching examination by an Expert Committee of the question of creating a stores purchasing organization in India, I would like to put forward a proposal which may warrant some consideration. It may, at least, assist the Committee in matters connected with the duties of the proposed Controller General of Stores.

2. *The proposal in detail.*—The proposal is as follows:—

(*a*) to establish in India two large Stores Depôts in the Calcutta and Bombay areas, into which all stores being imported shall be received, stored, and issued, for the use of all Departments of Government and for semi-Government bodies who wish to partake of the benefits and to pay their share of the upkeep.

(*b*) presuming that all Government annual indents will, in future, be dealt with in India by the Controller General of Stores, that officer in forwarding his "collected" indent (or indents in the case of divided classification) should show thereon only two consignees in India—in normal cases—in addition to the financial allocations to the indenting departments, namely, the officers in charge of these two Depôts;

(*c*) that, by experience in working, by collecting from surplus stores now existing, and by making the necessary allowances in the home indent, a "war reserve" of not less than six months' requirements at full consumption of all stores which must be imported, shall be built up and maintained in these two depôts; and

(*d*) to receive into and retain in the depôts, stores for geographically situated consignees all over India covering their estimated requirements for one year, but, who shall be permitted only to draw on these stocks by periodic indent—say, quarterly.

In other words briefly, the proposal is to, firstly, create a war reserve of all imported stores which are vital to the needs of the country and cannot, for years to come, be manufactured in India, and, secondly, by "controlling" the receipt and issue of such to all Departments of Government, to reduce gradually the enormous annual stores balances now held by all stores branches, thus effecting a considerable saving in public funds in order to justify the capital expenditure which will be evolved: apart from the curtailment of expenditure on the necessary expansion which must always go on in all centralised stores depôts throughout India as Departments expand in conformity with the development of the country in all directions. The essential points connected with and prompting this proposal may now be considered.

3. In pre-war days, Departments of Government such as Railways, the Royal Indian Marine, the Ordnance, Arsenals, Departments of the Army, the Public Works Department, etc., sent large annual indents at varying periods throughout the year to the Director General

of Stores, India Office. They were complied with as time permitted and the stores were despatched to the consignees in India named in the indents. These consignees were distributed all over India including large centres such as, Calcutta, Bombay, etc.

It will be realised that the work entailed in England in marking consignments is very considerable, whether done by the staff of the Director General of Stores or by supplying contractors. It is, in fact, extraordinary that confusion has not been caused by consignments being incorrectly marked and going astray after receipt in India. Cases do arise, however, and stores have been known to have been "lost" for some time.

4. Again, on account of the large number of consignees to be dealt with, the notation and clerical labour involved in advising departmental heads in India, or the consignees direct, in the office of the Director General of Stores, as well as, the paper-work done in this connection by the Shipping Companies and port authorities both in England and India is intricate very detailed, and extremely heavy. The reduction in this work will be almost proportionate to a reduction in the number of consignees in India.

5. On arrival of imported stores at the various ports in India, probably due to congestion at the docks or want of storage or other facilities, full wagon-loads are, I believe, the exception and not the rule for despatches of imported stores up-country and, were it possible of computation, the loss in railway ton-mileage in a year would probably be found to be considerable.

Consignments often being only portions of an indent, it is not possible to make up full wagon-loads, the natural tendency being to get rid of the consignments as soon as possible, and this is, in fact, done.

6. Each Department of Government preparing home indents has one or more large Depôts into which most of the stores are received and issued to departmental officers. In fact, the indents are in many cases prepared by the officers in charge of these depôts and "pooled" in the administrative office.

Taking the case of State Railways, there are large Stores Depôts in Lahore, Lucknow, and Kanchrapara, near Calcutta, each catering for the requirements of their respective Railways. A large portion of the items in the indents sent to the Railway Board per annum by these Railways is for quantities of the same item or of the same class. The Stores Controller preparing the indent, to avoid running short before his next supply arrives, must necessarily allow some margin as a factor of safety, in addition to a similar allowance already made in some cases by departmental heads, who create these portions of the indent.

I say reservedly that this may seldom be the case, but it is done. At all events, it is known that there are few Departments of Government—even after five years of war—who are to-day without lists of surplus stores available for sale.

I do not suggest that these surplus lists have come into existence as a result of an unnecessarily large allowance for the factor of safety mentioned above, as a change in plans, design, or policy after indent assists in these. But there is no doubt that this has contributed largely to the creation of these surpluses, and doubtless, will always do so in spite of conscientious efforts by Stores officers to avoid such arising. The important point to know is that the majority of the items in the surplus lists are of imported stores that these lists do exist.

7. Again, numbers of the items are for the same class of article, such having become surplus with the administration concerned, and it is conceivable that, where the provision was made for an engineering branch of the organization, other Directorates will also have similar items on their surplus lists.

There is no suggestion that the creation of surplus stores has been altogether unavoidable, but it will be seen that, of each administration and each centralised store depôt of each administration creates annually by whatever means a surplus of stores, the sum of money involved thereby throughout India cannot but be considerable.

8. Summarising the above considerations, we have:—

Summary of considerations.

(*a*) Indents being forwarded throughout the year by various Departments of Government to the Director General of Stores, India Office, in many cases for exactly similar stores; but in all cases for consignees throughout India;

(*b*) Considerable work entailed in England in the correct marking, despatch, recording, and notification to consignee, with the India Office contractors, Consulting Engineers, Railways, Port authorities, and Shipping Companies, etc.;

(*c*) The effect on ton-mileage and vehicle-mileage both in India *and* in England by the spasdomic and necessarily indefinite despatch to and arrival of consignments at ports, together with the want of Port facilities in India to cope with the volume of work entailed at short notice;

(*d*) Due partly to inability to obtain timely advice of probable arrival of stores from England, partly to the necessity for the maintenance of reserves and a necessary allowance for the factor of safety, and to many other causes which need not be named, there are always in existence throughout the country large quantities of surplus stores available with the various Directorates; and

(*e*) Quantities of the *same item* of stores being indented for, obtained and held in stock in various parts of India against probable demands, at the same time, doubtless, becoming surplus with one administration and being in defect in another, the latter making local efforts to replenish, in ignorance of a possible surplus existing with a neighbouring Directorate with which it is not in touch.

In connection with (*e*), it may be noted that it is only within the last few years that the three States Railway Controllers of Stores have applied to one another for assistance when stocks ran short; and even then, it may be safely asserted that very little assistance has been given by one to the other in the case of stores in constant demand, on account of the natural desire not to run short themselves. This, multiplied by an unknown quantity of similar "caution," etc., in the case of entirely separate Departments, will indicate that anything but a satisfactory state of affairs in this connection may be said to exist.

9. In view of the formation in the near future of an Imperial Stores purchasing Department, I consider that Government should go on further and endeavour to avoid the disabilities referred to above by means of the same organization. It will be seen that the proposal legislates for stores on arrival to be received into the Depôts in Calcutta and Bombay and maintained therein on behalf of the Stores officers throughout India, who will be notified of the arrival but will be permitted to send forward indents periodically only—say, monthly or quarterly, or even half-yearly in the case of certain stores.

The Controller General of Stores in India will know at any given time exactly what is coming and when it may be expected. The Director General of Stores, India Office, in the whole of the organization which now has to perform the multifarious duties connected with despatch to different consignees, etc., will have only two consignees to deal with, to whom all shipping documents, invoices and other advices will be sent, and with whom all correspondence connected with the stores regarding loss or delay, etc., can be carried on.

The officers in charge of these Depôts will be able to a large extent to conserve stocks, and as will undoubtedly arise, a Stores officer belonging to one Department, who may happen to be in difficulties, will be saved the necessity of local purchase at exorbitant rates by being supplied with stores possibly intended for an entirely different Stores officer, but who happens to be in a better position at the time. In other words, the consumption of imported Government stores will be more or less controlled and regulated throughout India. Stores officers will be saved the necessity (after one or two years' working) of allowing for a reserve, or factor of safety, and alternatively, officers in charge of the Depôts in Bombay and Calcutta will be able in time to very accurately gauge the requirements of all Government consumers in certain classes of stores and, will know where a reduction in indenting and economy in expenditure can be effected.

10. No interference with or shortage of supplies to Stores officers will be entailed while the scheme is under creation, and the control so obtained will naturally be very gradually effected. In any one year, the total demanded of any one item by all Departments could have an allowance added by the officers in charge of these two Depôts, which, after experience, could be cut down to an irreducible minimum, thus reducing the enormous stores balances and surplus stock now known to exist, and in any case by this means concentrating such in two places and recording information of such, instead of all over India and without any centralised record, as is the case at present.

Even for normal working, the maxima required to meet the needs of Departments of Government could be the minima stocks required to be held in these Depôts, and *ipso facto*, in any case, an appreciable "War Reserve" will have been created which until the country is in a position itself to create that, is surely almost sufficient justification for the adoption of some proposal such as this which will give that result.

11. During the last few years, large sums of money have been spent by Government on extensions to Central Stores Depôts and on increasing the staffs at these on account of the growth of their branches, whose requirements for a year have to be maintained in these Depôts. If such central Depôts as are proposed were established, however, it will be seen that few extensions by Directorates will be required, and in fact that economy in space and staff will be effected and these will become available for other purposes.

12. The details of these effects, however, it is impossible to enter into without fuller knowledge and enquiry, but the important point which I wish to emphasize is that, if the matter were gone into in detail, I am of opinion that the centralisation of imported English stores to all Departments of Government would result in a considerable saving in initial expenditure, in revenue, maintenance charges, in ton and vehicle-mileage both from the Docks to the Stores Depôts and from there to the consignees throughout India, as full wagon loads could be made up at the Depôts.

13. It may be contended that the Bombay area is already sufficiently congested, and that such a Depôt would tend to increase the evil. It should be remembered, however, that in no case can ships bringing stores be brought alongside the Depôt. Hence, unloading into wagon is necessary. If, therefore, the whole of the goods arriving in Bombay against indents are for one consignee in that area, wagons can be filled to their full capacity in nearly every case at the ships' side and, it is immaterial in a sense whether these wagons travel one mile or ten miles to the Depôt, so long as wagons are fully loaded and ton-mileage is thus economised.

Again, such wagons (under-loaded) now have to go from the Docks to all parts of India and are not available for days or perhaps weeks for re-loading, except when return loads from their first destinations are obtained.

The important considerations therefore are, that a ship shall be unloaded expeditiously, its contents of imported stores for Government shall fully load wagons brought alongside, as these will all be for one consignee, and such wagons shall make a short trip only before unloading.

In Bombay, therefore, such a Depôt could be conveniently situated outside the city and away from congestion, so long as a link to the lines feeding the Docks is provided. Besides, if, the Great Indian Peninsula and Bombay, Baroda and Central India Railways come into the scheme, congestion would be relieved rather than aggravated, as, their present terminal Stores Depôt would be required to maintain only part-year stocks instead of annual, releasing space for other purposes.

14. I am aware that the question of the wisdom or otherwise of holding stocks has been considered on previous occasions, and for reasons with which I am not conversant, has been turned down. But this proposal is not to hold stocks in the ordinarily accepted meaning of the term. No purchases at all will be made by the officers in charge of these Depôts, either for stock, or against demands. They will have no dealings with either the market or actual consumers in this connection. Their functions will be chiefly those of custodians of Government imported stores.

15. Again, minor considerations which may be mentioned are, that the, decentralised unloading, stacking, and recording all over India of a year's requirements involves a considerably larger expenditure of public funds than would be spent on similar work done in two centralised Depôts.

Nor can the questions of double-handling which may be brought up against such a scheme be considered the reason that, whereas at present Stores officers are unaware of what is coming to them from the Docks or when, thus necessitating stores being taken into stock and re-issued to various consignees, they will be made fully aware of what is coming, what the cases contain and when such may be expected, permitting of immediate forwarding without unloading to the branches of the Directorate concerned. Again, even if in some cases double-handling does occur, the cost of such will be entirely negligible as compared with the present large expenditure and I might almost say, waste, which takes place in other directions.

16. Lastly, one of the chief desires of the new Industries Department will undoubtedly be to standardise items being consumed as far as possible. No better means could be invented of concentrated examination of items with this end in view, and frequent visits to these Depôts by the Directors of Industries or the expert advisers attached to their staff will afford considerable assistance to these officers in their many duties in connection with the development of the industries in their province.

The cost of maintenance of these Depôts need not necessarily be charged to Imperial revenues, as the various Departments of Government, for whom stores are held, could be debited *pro rata* with the value of these stores or of the indents sent in annually.

The war caught India in a hopelessly depleted condition as regards stores which are important and vital to its needs and which must necessarily be imported for many years to come. I do not suggest that this proposal is a solution of the many problems connected with these considerations, but I am convinced that some such organization will have to be created if the present enormous expenditure of imported stores is to be in any way controlled and if, thereby, a saving in public funds is to be effected.

Suggestions by Mr. C. A. Williams, Deputy Controller (Munitions Manufacture), Indian Munitions Board, Delhi, in connection with the establishment of Stores Depôts in Bombay and Calcutta referred to in the answer to question 19 given by Mr. D. L. McPherson, Controller (Munitions Manufacture).

With reference to Mr. McPherson's note on the organization of a Stores Purchasing Agency, the suggestion was

I—Articles in Depôt Equipment List which are not usually purchased in India but which might be purchased by Indian Stores Department.

Depôt Equipment List No.	
191	Naphthaline.
294	Sodii Carbonas, commercial.
310	Sulphur Sublimatum.
804-A	Saw, brass back, 5" blade.
998	Oxygen Cylinder with valve and key.
1017-B	Batteries, dry cell.
1031	Centrifugal case for rectifying thermometers.
1073	Finger Stalls in boxes of 12.
1087-A	Lamps, Electric, hand (torches).
1148	Sheeting, perforated zinc, 24" × 9".
1379	Gauze, Copper wire, No. 20 mesh.
1390-B	Lamp, blow pipe, for glass blowing.
1412 to 1415	Stoves Primus, spare parts and repair outfits.
1434	Balance, Spring, Avery's, 30 lbs.
1450	Bowls, E. I., 10 inches.
1457	Corks, phial, pint, quart and wide mouth.
1458	Cups, feeding, China.
1459	,, ,, E. I.
1468	Etna, with feeding cups and stove.
1470 to 1480	Funnels of sizes.
	Composition, E. I. and glass.
1481 to 1486	Galipots of sizes.
1490 to 1498	Jars of sizes.
1501	Knives, clasp, 3½ inch blade.
1563	Pots, decoction, E. I.
1564 to 1568	Pots, delf, with covers of sizes.
1584	Spoons, desert, nickel silver.
1584-A	,, tea ,, ,,
1594	Tin openers.
1595 to 1597-A	Trays, dressing, E. I. of sizes.
1603	Pack thread, 1 oz. balls.
1613	Weights and Scales, druggists, ¼ oz. to 4 lbs.
1614	Weights and Scales, copper ½ oz. to 2 lbs.
1615	Weights and Scales, brass, ¼ oz. to 4 oz.
1616	Weights and Scales, pillar grain and drachms.
1618	Weights spare, grains and drachms.
1635 to 1637	Jars, stone with covers and clamps of sizes.
1639	Jars, earthenware, 8 oz.
1652	Tubes specimen, flat bottomed 1½" × ½" with corks.

In addition there are numerous articles regularly purchased locally *but not in Depôt Equipment List* which might be purchased by an Indian Stores Department—*e.g.*, Coal, Kerosine Oil, Lubricating Oil, Cotton waste, Straw, Lime, Sand, packing cases, etc.

II—Articles in Depôt Equipment List which are usually purchased in India and which might be purchased through Indian Stores Department.

Depôt Equipment List No.	
211	Oleum Sesami.
306	Spirit Rectified.
833	Scissors shop 7".
834	,, ,, 6".
952	Mirrors nasal 3" (bazar article).
956	Needles, packing.
1009	Bandages, triangular, pictorial.
1010	,, ,, compressed.
1012	,, flannel 3" × 4 yds.
1013	,, ,, 6" × 7 yds.
1014	,, loose wove, 2½" × 6 yds., compressed.
1015	Bandages, loose wove, 2½" × 6 yds., not compressed.
1017-A	Bandages gauze, 3" × 6 yds., compressed.
1076	Gowns, Cotton, Operation.
1149	Pad cases for splints.
1192	Tape, Measures, chest.
1218	Bandages, dosooti, 2½" × 6 yds.
1222	,, putti cloth, 4" × 6 yds.
1225	Cloth putti, with selvedge edge, 4" wide.
1229-A	Gimlets, Carpenters, 4".
1245	Tape, Suture, ¼ inch.
1250	Tubing, Flexible steel.
1251	Twine for sutures.
1435	Basins, pus, aluminium.
1446	Bottles, water, tinned copper with cup and strap.
1449	Boxes, tin, for dressings 20" × 13" × 12".
1452	Brushes, nail, in tin cases.
1453	Cases tin for bougies.
1455	,, ,, ,, Catheters.
1461	Corkscrews, common.
1462	Corkscrews, folding.
1455-A	Cloth loose wove, for bandages.
1455-B	Cloth sheeting.
1469	Filtering Stand.
1469-B	Flannel for bandages.
1469-A	Flannel, coarse.
1505	Leather, white and red.
1509 to 1514	Measures, metal of sizes.
1554	Pins, safety, of 3 sizes, in boxes of 30.
1562	Pots, infusion, tin.
1571-A	Sandbags, 3 sizes.
1571-B	Screw drivers, 3" blades.
1573	Silk, green, for Eye shades.
1578	Spatula, bolus, 8".
1579	,, ,, 5".
1580	,, spreading, 4".
1587	Stopper looseners, wood.
1588	Straps, Cotton with buckles.
1591	Tape, broad.
1592	,, narrow.
1631	Candles, Carriage.
1632	Cloth dosooti for bandages.

Lieutenant Colonel H. ROSS, O.B.E., M.B., F.R.C.S.I., I.M.S., Assistant Director General, Indian Medical Service.

Written Statement.

In answering the questions included in the Questionnaire I propose replying to such only as apply in the case of the Government Medical Stores Department.

Question 1. As will be seen from the attached note * forwarded by the Director-General, Indian Medical Service, to the Indian Munitions Board, a system of centralized purchase of medical stores already exists in the case of the Government Medical Stores Department.

I strongly advocate the continuance of this system, which has proved, in practice, to work smoothly and efficiently.

In dealing with medical stores a considerable technical knowledge of the various drugs, instruments and appliances handled is essential.

The Government Medical Store Depôts at Bombay, Madras, Lahore, Calcutta, and Rangoon are each in charge of Medical Officers who have had long experience in handling the classes of stores dealt with.

A Medical Store-keeper in time acquires an expert knowledge as to quality which is not possessed by any one unacquainted with this specialised work.

In the case of medical stores the variety of articles handled is very considerable and quality is all-important.

Roughly 2000, or with the component parts of instruments and appliances, etc., about 4,000 articles are includ-

* Printed above.

ed in the Equipment List of Medical Store Depôts (a copy of which is placed below). *

Inspection of this Equipment List, the revision of which is frequently necessary as science advances, reveals the very wide range of articles coming under the heading medical stores, and it is necessary in the case of most articles purchased in India to have samples carefully tested before placing orders.

During the great war owing to the difficulty of obtaining Stores from England considerable purchases had to be made in India and it has unfortunately, up to now, frequently been our experience in dealing with firms in India that the difference between samples submitted and actual supplies subsequently delivered, is liable to be considerable.

On the institution of the Indian Munitions Board, Sir Thomas Holland, after a scrutiny of the Medical Store Depôt Equipment List, decided that the Munitions Board should not include among its activities the purchase of medical stores, his reason for this decision presumably being that he considered such purchasing should be effected only by specially trained experts.

After careful consideration, I am of opinion that, so far as the purchase of medical stores in India is concerned, the probability is that this will be best effected by the continuance of our present system of centralized purchase by Medical Store-keepers, carried out as it is under the direct supervision of the Store Section of the Office of the Director-General, Indian Medical Service.

During the war a considerable advance was made in the manufacture at Medical Store Depots of drugs from raw materials indigenous to the country which were formerly imported, and I place below a list which indicates what has been done which may prove of interest.

In pursuance of the policy of Government, attempts have been made by the Medical Stores Department to encourage private enterprise by placing orders for surgical instruments made in India.

The result has, in practically all cases, been most disappointing as the quality of the articles supplied prove to be very inferior.

Many of our requirements are manufactured at the Surgical Instrument Factory established at the Government Store Depôt, Bombay, and owing to this Factory being under our direct supervision and control the quality of surgical instruments and appliances manufactured has always been found most satisfactory.

I very much doubt if it will be possible for many years to come to obtain equally good supplies in the open market in India through the medium of any other purchasing Department, *i.e.*, unless such purchases are made from British Firms of established reputation who have started factories or agencies in India or from Indian Firms whose manufacture is carried out under highly trained expert supervision and whose supplies have, by experience, been shown to be up to approved of samples.

Question 2. I consider that, if a central purchasing agency is formed for the various Departments of the Government of India, it will not be necessary to include the purchase of medical stores among the functions of that agency for the reasons stated in answer to question 1.

Question 3. Medical stores should continue to be purchased under the present system.

Question 4. (*a*) (*b*) (*c*). It would be advantageous if such purchases were made through a central agency, as such central agency, owing to its very large purchases, would naturally be able to place orders at lower rates than could be obtained by (*a*) (*b*) or (*c*) independently.

When such bodies obtain the concession of obtaining supplies through the medium of a central agency, it appears reasonable that they should contribute towards its maintenance preferably by a percentage charge on the actual cost of supplies.

This system of percentage charges is in force in the Medical Store Department, and the profits therefrom go towards the administration and maintenance of the Department.

* Not reproduced.

Question 5. In the case of medical stores the central purchasing agency, which we have, now supplies all local Governments.

I do not advocate decentralization in actual *purchasing*, as it would mean various comparatively small purchasing agencies instead of collective purchase by one single large agency.

On the other hand, I would favour *distribution* through the medium of local provincial Depôts, such Depôts obtaining their supplies from the central agency.

Question 6. Replied to under question 5.

Question 7. The system of calling for tenders now in force in the Medical Stores Department is as follows :—articles of local sypply required are, in most cases, obtained by yearly contract, tenders being invited from Agents, Contractors and Tradesmen by means of advertisements in Newspapers, Government Gazettes, etc.

In cases in which tendered rates or samples are not considered favourable, requirements are purchased either out of contract in the local market or through other Government Medical Store Depôts where local rates are found to be more favourable. After tenders have been opened under the procedure prescribed in Army Regulations India, Volume III, they are entered by each Medical Store-keeper in a comparative statement of tenders which is despatched to the Office of the Director-General, Indian Medical Service, with the Medical Store-keeper's recommendations.

Annual contracts are sanctioned by the Director-General, Indian Medical Service, after the quotations of the various contractors have been carefully considered.

Only those rates most advantageous, with due regard to the quality of the articles required, are accepted.

The purchase of local articles out of contract is also sanctioned by the Director-General, Indian Medical Service.

This system is not satisfactory, as too great an interval elapses between calling for tenders and the actual allotment of contracts. Owing to the limited financial powers now possessed by Medical Store-keepers for the purchase of local articles many articles required in trivial quantities are included in the schedules.

To obviate the disadvantages of the present system the Director-General, Indian Medical Service, has recommended the grant of contractual powers to Medical Store-keepers up to a limit of Rs. 1,000 per annum in the case of any one article.

If this is sanctioned, it will be possible to place orders when the market is most favourable.

Question 8. In the case of medical stores, not until ample stocks are held by firms of repute in India, and even then I cannot see any advantage to be derived in the case of imported stores except from the fact that demands would be more rapidly complied with when orders were placed with firms in India than if, either direct with firms in England, or as at present, through the medium of the India Office.

Question 9. In the case of medical stores for the reasons noted under question (1) I am of opinion that the supplying Department (in this case the Medical Stores Department) should be responsible for the quality and patterns of the stores it deals with.

For this work to be efficiently dealt with by the Industries Department a special staff of experts would be necessary, the employment of which appears superfluous in view of the fact that a special staff is already in existence in the case of the Medical Stores Department.

Question 10. Not necessary in the case of medical stores.

Question 11. Yes. The Medical Stores Department may be considered to possess a special inspecting organization.

Question 12. The great majority of articles which come under the head medical stores, require specialised inspection.

Question 13. In the case of medical stores, I do not favour the creation of local purchasing agencies

Question 14. The Stores Rules of 1913 appear satisfactory with the exception of Rule 13.

I am of opinion that the Financial powers of the Head of a centralized Purchasing Department should be considerably increased.

Question 15. The purchase of European Stores from established Indian Branches of British manufacturing firms should be encouraged in cases where such stores are actually held in India, but it would not be a sound policy to place orders with firms in India when it is necessary for these firms to import such stores *after* contracts have been placed with them.

(*a*) If firms were assured that, provided they held stocks in India, their quotations would be considered when orders for Government supplies were being placed, they would probably arrange to hold considerably larger stocks than at present.

(*b*) It is doubtful if British drug manufacturing firms or instrument makers would establish factories in India unless they were given a definite assurance that, provided their products compared favourably, both in quality and price, with similar products manufactured in England, all Government orders for the products in question would be placed in India.

Question 16. During the war our Home Indents were submitted to the Indian Munitions Board for scrutiny.

Valuable suggestions as to sources of supply in India were, on various occasions, made by the Munitions Board, which enabled us to place orders advantageously in India.

We would favour the continuance of this scrutiny as the suggestions offered will prove valuable in keeping us fully informed as to industrial developments and possible new sources of supply which otherwise we might possibly not be acquainted with.

Question 17. At the request of the Director-General, Indian Medical Service, Government have lately agreed that all Home Indents will be priced in his office. It has now been arranged with the Director-General of Stores, India Office, that this office should be furnished direct with copies of all invoices showing the latest Home rates of all medical stores.

We will thus be in a position to compare Indian with the latest Home rates in the case of all stores we require.

Question 18. Many articles which were, prior to the great war, imported are now being manufactured at Government Medical Store Depôts and orders for none of those should in future be placed with the Director-General of Stores.

The system now ruling of obtaining all imported medical stores which are not manufactured in India through the medium of the India Office, is the most satisfactory, but it should be possible to considerably reduce the period which often elapses between the placing of orders by us and the receipt of stores in compliance in India.

Question 19. In the Government Medical Stores Department such central stock depôts already exist.

(*a*) This depends on the extent to which the circle of supply of each depôt expands under any new scheme.

(*b*) This depends on what is decided on question No. 15.

Question 20. Yes, as at present in the case of Government Medical Stores.

Our depôts stock Indian as well as imported stores.

Question 21. Total amount expended each year by the Medical Stores Department on:—

For the year.	(*a*) Stores purchased abroad.	(*b*) Imported stores purchased in India.	(*c*) Indian Stores.
	Rs.	Rs.	Rs.
1910-11 . . .	12,93,705	Not available	
1911-12 . . .	15,69,180	7,478	2,68,022
1912-13 . . .	14,39,700	7,654	2,60,303
1913-14 . . .	14,16,090	....	3,38,532
1914-15 . . .	14,17,500	9,63,819 *	
1915-16 . . .	15,67,665 (ordinary), 3,57,240 (war.)	11,70,405 *	
1916-17 . . .	27,40,575 (ordinary), 32,75,190 (war.)	42,86,032 *	
1917-18 . . .	17,59,580 (ordinary), 48,05,685 (war.)	48,31,206 *	
1918-19 . . .	17,24,280 (ordinary), 33,21,705 (war.)	47,79,786 *	

* These figures represent the total annual expenditure in India on both imported stores purchased in India and stores produced in India. Separate figures under these two heads are not available.

Question 22. (*a*) (1) In the case of local stores we maintain a comparative statement of accepted tenders.

(2) In the case of imported stores a record is kept of all rates by means of a register posted up in this office from Home Invoices received from the India Office.

(*b*) A record is kept at each Medical Store Depôt showing stocks held (including equipment).

The comparative statement of annual contracts provides a record of local supplies purchased and the names of firms dealt with.

Question 23. Yes: we have been working on these lines for some time. Information furnished to this office by other departments, Munitions Board, Department of Commerce and Industry, etc., is transmitted to all Medical Store-keepers to enable them to effect purchase of their requirements of local stores to the best advantage.

Again, when any Medical Store-keeper ascertains a reliable source of supply he intimates the fact to this office which informs all other Medical Store-keepers.

Question 24. Does not apply in the case of the Medical Stores Department.

Question 25. No: provided private firms, who have proved reliable and given an opportunity of tendering to such central agency for supplies.

Question 26. Does not apply in the case of the Government Medical Stores Department.

Question 27. This question has already been noted on under question (4).

Question 28. All purchases effected by the Government Medical Stores Department are audited in the office of the Senior Controller of Military Supply Accounts.

Question 29. The audit system as shown in the reply to question (28) is considered efficient.

Question 30. I consider that the occasional deputation of selected purchasing officers in India to the Stores Branch of the India Office would be of advantage, but do not think the same applies in the case of the deputation to India of purchasing officers from the India Office as the latter would necessarily be completely ignorant of local conditions.

NOTE.—*From the Director-General, Indian Medical Service, to the Indian Munitions Board.*

Centralised purchase in India of Medical Store.

There are four Medical store depôts in India and one in Burma, *viz.*, at Calcutta, Lahore Cantonment, Madras, Bombay, and Rangoon. To meet the requirements of all Military and Civil Government institutions in India Medical Stores are purchased and distributed by these Depôts.

2. Stores required by the Medical Stores Department are obtained from three sources:—

(1) England.
(2) Civil Departments in India.
(3) Contractors and Tradesmen in India.

Many of our requirements are now manufactured in, and obtained from the laboratories of the Medical Store Depots at Lahore Cantonment, Madras, and Bombay from raw materials either imported or indigenous.

(1) *From England.*

Annual indents for stores required to be imported from Home are prepared by Medical Store-keepers. Requirements are calculated on the basis that depôts should hold a stock of non-perishable articles on a three-years' and perishable articles on an eighteen-months' established proportion. The established proportion is worked out on the total expenditure of the previous three years and 18 months respectively at each depot. On receipt from Medical Store-keepers, their indents are conslidated in this office and despatched to the Director-General of Stores early in each financial year, for direct supply to each Medical Store Depôt. Supplementary indents on the India Office are also submitted from time to time, as required. Up to now Medical Store-keepers have priced their demands from the latest Home invoices available. These invoices are circulated from depôt to depôt as they are received from the Senior Controller of Military Supply Accounts.

With a view to obtaining more accurate pricing and avoiding delay, arrangements are now being made to have duplicate copies of all Home Invoices sent direct to the Office of the Director General, Indian Medical Service, by the India Office. When this procedure is adopted, all pricing of Home indents, both annual and supplementary, will be carried out in the office of the Director-General, Indian Medical Service, instead of at Medical Store Depôts as at present.

In arriving at the actual quantities required from Home, surplus stocks which are available at depôts are taken into consideration, and surpluses are transferred from one depôt to another, thus avoiding any overloading of stocks.

(2) *From Civil Departments in India.*

Such drugs as Quinine, Opium, Morphia, confiscated Cocaine, etc., are obtained from Government Civil Departments in India.

(3) *From Contractors and Tradesmen in India.*

Articles of local supply required are, in most cases, obtained by yearly contract, tenders being invited from Agents, Contractors and Tradesmen by means of advertisements in newspapers, Government Gazettes, etc.

In cases in which tendered rates or samples are not considered favourable, requirements are purchased either out of contract in the local market or through other Government Medical Store Depôts where local rates are found to be more favourable. After tenders are opened under the procedure prescribed in Army Regulations India, Volume III, they are entered by each Medical Store-keeper in a comparative statement of tenders which is despatched to this office with his recommendations. Annual contracts are sanctioned by this office after the quotations of the various contractors have been carefully considered. Only those rates most advantageous, with due regard to the quality of the articles required, are accepted. The comparative statement is then returned to the Medical Store-keeper concerned, with the Director-General's order endorsed thereon. The purchase of local articles, out of contract, is also sanctioned by this office. Medical Store-keepers at present are not empowered to conclude contracts, nor have they any financial powers for the purchase of local articles. The Medical Services Committee, however, have recently suggested to Government that Medical Store-keepers should be granted contractual powers up to a limit of Rs. 1,000 per annum in the case of any one article.

In view of the great difficulty experienced in obtaining stores from Home owing to the great war, and with a view to relieving demands on Home resources as much as possible, also to economise in freight, the Government of India as a war measure, temporarily increased the financial power of the Director-General, Indian Medical Service, and those of Medical Store-keepers in order to assist in the provision locally, either by purchase or manufacture of imported Medical Stores required to replenish stock.

Under this arrangement considerable purchases have been made in this country.

List showing articles now being manufactured in the Government Medical Store Depôts, which were, previous to the war, imported.

Acid Sulphuric normal solution.
Absolute alcohol.
Aloes preparations.
Amylum, B. P. (Starch).
Anti-fly spray.
Argenti Nitras.
Argenti Nitras induratus.
Benedict's solution.
Belladonna preparations.
Borated talc powder.
Calcium Carbonate precipitated, B. P.
Calcium Chloride.
Calcium Phosphate.
Calcium Sulphide solution.
Citric Acid and Citrates.
Collodium.
Collodium Flexile.
Creta Preparata, B. P.
Digitalis preparations.
Electuary Cough (veterinary).
Extract. Belladonna Siccum.
Extract. Cascara Sagrada Liquidum.
Extract. Cascara Sagrada Siccum.
Extract. Colocynth Co. (dry extract).
Extract. Glycyrrhiza Liquidum.
Extract. Hyoscyamus.
Extract. Nux Vomica Siccum.
Extract of Vitamina.
Extract. Opii Siccum.
Ferri Sulphas.
French Chalk.
Fly oil (veterinary).
Glucose.
Iodine powder.
Keratin's solution.
Liquor Bismuth et Ammon. Citrate.
Lysol.
Magnesii Carbonas Levis, B. P.
Mannite.
Nux Vomica Preparations.
Oleic Acid.
Oleum Anethi.
Oleum Anisi.
Oleum Caryophylli.
Oleum Cedri.
Oleum Chaulmogræ.
Oleum Crotonis.
Oleum Myristica.
Oleum Santali.
Oleum Theobromatis.
Oxymel Scillæ.
Paper litmus.
Potassium Carbonate, B. P.
Pyroxylinum.
Rectified Alcohol.
Sinclair's glue.
Sapo Mollis, B. P.
Sodium Carbonas, B. P.
Sodium Chloride chemically pure.
Sodii Nitris.
Sodii Phosphas.
Sodii Sulphas.
Syrupus Ferri Phosphatis Co.
Talc.
Talc purificatum.
Tannic Acid.
Thymol, B. P.
Tinctura Colchici Cormus.
Various Mercurial B. P. preparations.

At Simla, Friday, 30th April 1920.

PRESENT:

Sir FRANCIS COUCHMAN, K.B.E., M.I.C.E. (*President*).

A. W. DODS, Esq.
Brig.-Genl. H. A. K. JENNINGS, C.I.E.
Lt.-Col. C. C. H. HOGG, C.M.G., R.E.
Rai Bahadur Lala MILKIRAM.

J. C. HIGHET, Esq. (*Secretary*).

Major General Sir G. F. MACMUNN, K.C.B., K.C.S.I., D.S.O., Quartermaster General in India, Army Headquarters, Simla, called and examined.

Prior to the formation of the Indian Munitions Board, there was no centralised organisation for the purchase of Army stores. Arsenals obtained supplies either from the Ordnance Factories or by local purchase or by indent on the India Office. Stores purchased locally were nominally inspected by the Chief Ordnance Officers themselves.

His own view was that the Quartermaster General should not have to do any actual purchasing. His duty should be to ensure that the Army always had a sufficient working stock. He would welcome a Central Agency which could be regarded as a large firm capable of supplying everything and would relieve the Army and Government Departments of the worry and trouble of dealing with a large number of different firms. If such an agency was not established or was established but dealt only with a limited number of commodities, it would be necessary for the Quartermaster General to expand his Contract Branch which at present only deals with food, oil and paints. For the present, very little purchasing of other stores was being done on account of the large stocks in hand which, it was hoped, would suffice until the recommendations of the Army in India Committee and the Stores Purchase Committee had been considered and the future supply procedure decided upon.

He would be prepared to entrust the supply of stores for the Army to an Indian Stores Department and its Inspectors to the greatest possible extent. When the matter came to be considered in detail, a few special stores might be found for which the Army might wish to reserve the power of purchase; but the more the Indian Stores Department could do for the Army the better. Nothing of course must hamper the Commander-in-Chief's right to buy stores on an emergency, when for any reasons the army might otherwise be without essential stores.

The specifications would have to be framed in the first instance in consultation with the consumers. The Army would be open to, and would, welcome suggestions from Inspectors of the Indian Stores Department which might facilitate and cheapen production without loss of efficiency. It would be necessary however for the Army to maintain a small expert inspectorate of its own to deal with any disputes which might arise between its technical officers and the Indian Stores Department. This inspectorate would advise whether from an army point of view the complaints were well founded and when a settlement could not be arrived at otherwise the matter would have to be referred to the Government of India.

There was no objection to home indents for Army requirements being scrutinised by an Indian Stores Department so as to eliminate items which could be obtained from indigenous sources; but this scrutiny should be made on a copy of the indents after transmission. This would usually give a year for the full discussion of suitability of the Indian made articles before another indent was transmitted. There must be no attempt to rush the Army into accepting articles of which the suitability had not been fully proved.

The Army had now to be maintained within a fixed grant and so could not afford to contribute towards encouragement of industries in India by paying more than necessary for its stores. If such a course was considered desirable, it should be regarded as part of the development policy of the Government of India and the extra expenditure should be met from a separate grant.

From experience in the late war, witness considered it important that the Government should have a pre-conceived stage at which all the national resources would be taken under complete control. He recommended that there should be a small branch of the Department of Industries for studying expansion for war. Any scheme which would enable private firms to keep in touch with munition manufacture in peace was well worth considering. He could see no objection to any surplus capacity of ordnance factories being employed to meet the requirements of other Government Departments in peace time.

The Hon'ble MR. G. R. CLARKE, O.B.E., I.C.S., Director General of Posts and Telegraphs, and W. SUTHERLAND, Esq., V.D., M.I.E.E., Offg. Chief Engineer, Telegraphs, called and examined.

The Posts and Telegraphs Department would be prepared to make the fullest use practicable of any Central Purchasing Agency which might be established in India, though it was doubtful whether any such agency would be of very much assistance except perhaps in the supply of textiles. The supply of uniforms was particularly troublesome. The annual requirements could be forecasted accurately and it would be an enormous help if some arrangement could be made for the central supply and distribution of uniforms. Three standard sizes would probably suffice.

The Department should continue to purchase and inspect its own technical stores.

The powers to purchase imported stores in India should be increased as follows:—

	Rs.
Director General of Posts and Telegraphs	10,000
Directors of Telegraph Engineering and Postmaster-Generals.	1,000
Superintendents	150

Plant, machinery and general stores which had to be imported should normally be obtained by indent on the Director General of Stores, India Office, as at present; but purchase from branches or accredited agents in India of manufacturing firms should be permissible.

The costing system followed in the Telegraph Workshops had never been examined by any one outside of the Department; but according to the Superintendent of the Workshops the costing was very carefully made and showed very considerable savings as compared with the cost of similar work placed with private firms. The workshops were cramped and the Department was anxious to

do away with the foundry, so that the workshops might be expanded, but so far though orders were placed with private firms for castings no private firms had quoted a rate which compared favourably with the cost of production in the foundry. An enquiry into the system of casting would be welcomed.

At Simla, Saturday, 1st May 1920.

PRESENT:

Sir FRANCIS COUCHMAN, K.B.E., M.I.C.E. (*President*).

A. W. DODS, Esq.
Lt.-Col. C. C. H. HOGG, C.M.G., R.E.
Brig.-Genl. H. A. K. JENNINGS, C.I.E.
Rai Bahadur Lala MILKIRAM.
T. RYAN, Esq., C.I.E.

J. C. HIGHET, Esq. (*Secretary*).

The Hon'ble Major General SIR A. H. BINGLEY, K.C.I.E., C.B., Secretary to the Government of India, Army Department, called and examined.

The only two Departments with whose purchase of stores witness was in any way directly concerned were the Medical Stores Department and the Marine Department, and the requirements of both were so very specialised that, certainly as regards medical stores and on the whole as regards the Marine Department he doubted whether a central stores agency would be of any material practical advantage to either. There might be a few indigenous stores of a non-technical character which could conceivably be purchased better by a central stores department. The chief difficulty as regards the Marine Department was that it had to supply vessels of the Royal Navy, who had their own standards and specifications and were very exacting and almost invariably criticised the quality of any stores of Indian origin supplied even if these were of quality which would be accepted without question by the Royal Indian Marine. In the hope of obviating these complaints it was proposed that the Marine Storekeeper, Bombay, should be an officer lent by the Admiralty. The Royal Navy were unlikely to accept as final the inspection and passing of naval stores by Inspectors of an Indian Stores Department.

He was fully in agreement with the suggestion that any central stores department in India should begin in a small way confining its activities to certain commodities in general and extensive use. In this case it might be advantageous for the Marine Department to employ the central agency for the purchase of any of these prescribed commodities which it might require.

He agreed that it was very sound in principle that a central agency should scrutinise all indents going out of India to ensure that no orders went out of India unnecessarily, but the transmission of indents must not be delayed on this account. The scrutiny should be made on copies of indents which had gone forward with a view to prevention in following years. The scrutiny would in fact be an annual review of industrial development in India.

The Director, Royal Indian Marine, had power to purchase imported stores in India to a limited extent, but it was found that the prices paid for purchases so made were generally excessive in comparison with the prices for similar supplies from the Director General of Stores, India Office. Witness did not consider that any advantage would result from encouraging firms in India to hold stocks of imported stores in the prospect of obtaining Government custom. He thought firms would only increase their stock of such items as would be turned over quickly.

The most useful form of central stores agency for India would be one which was able to advise departmental purchasing officers of sources of indigenous supply.

As regards the Army in general, witness stated that the Quartermaster General might be regarded as the purveyor in retail and an agency which would relieve him of the wholesale buying would be very welcome. Such an agency would also, at the request of the appropriate branch of Army Headquarters, buy in India for Armies overseas.

With the present restricted grant the Army could not afford to run Ordnance Factories on any but the most economical lines, i.e., it was necessary to give them as much work as possible in peace time. It would be sound to give private firms a chance of retaining acquaintance with war requirements in peace time so that rapid expansion of capacity might be feasible in emergencies; but the difficulty of keeping Army expenditure within Budget limits made this impracticable if it entailed a restriction of the output of Government factories and consequently running them at a loss.

Air Commodore T. I. WEBB-BOWEN, C.B., D.S.O., Royal Air Force, Simla, called and examined.

Royal Air Force Stores were divided into two classes (*i*) technical and (*ii*) "Q" stores such as camp and barrack equipment, food, etc., in fact anything that was not part of an aeroplane or its engine. Technical stores were obtained by indent on the Air Ministry in London through the Director General of Stores, India Office. There was practically nothing in these indents which could be made in India at present. "Q" stores were obtained entirely through the Quartermaster General.

Requirement of indigenous stores was very small. Timber was the chief item and so long as a competent timber Inspector was available the Royal Air Force would not require to have an Inspector of their own.

Building and aerodromes were regarded as fixtures and were therefore constructed and maintained by the Military Works Services.

There seemed to be no direction in which a central purchasing agency could assist the Royal Air Force except for "Q" stores which were a Quartermaster General's supply.

At Simla, Tuesday, 4th May 1920.

PRESENT:

Sir FRANCIS COUCHMAN, K.B.E., M.I.C.E. (*President*).

A. W. DODS, Esq.
Lt.-Col. C. C. H. HOGG, C.M.G., R.E.
Brig.-Genl. H. A. K. JENNINGS, C.I.E.
Rai Bahadur Lala MILKIRAM.
T. RYAN, Esq., C.I.E.

J. C. HIGHET, Esq. (*Secretary*).

Colonel W. D. WAGHORN, C.B., President, Railway Board and E. A. S. BELL, Esq., C.I.E., F.C.H., Member, Railway Board, called and examined.

The existing system of purchasing by railways was generally quite satisfactory and it seemed very doubtful whether a central purchasing agency would result in any increase in efficiency or economy.

They did not think that railways at present sent home orders for much which was obtainable of indigenous manufacture and of satisfactory quality. There was a real need, however, for a bureau of information which would exercise an intelligent scrutiny over home indents, and from which purchasing officers could obtain information regarding indigenous sources of supply.

So far as railways were concerned they thought that a central agency should be only advisory until reliable statistics had been collected, and a case for the centralised purchase of particular items made out and accepted by railways.

Teak timber was the only item which suggested itself at present for which centralised purchase might be an improvement over the present system of independent, and at times competitive, buying by railways.

The system recently introduced for eliminating competition between railways in sleeper purchasing, by alloting specific areas of supply to certain railways and by one railway only making purchase in each area had not yet had a fair chance owing to the shortage in supply which had prevailed; but it gave every hope of proving satisfactory. No further centralisation of sleeper purchase seemed well-advised, unless at the same time the development of sources of supply would thereby be ensured.

Uniforms were issued by railways to their employees at fixed intervals and railways had sufficient experience to know what quality of material it was most economical to use for the length of service required. Certain railways had found it cheaper to make purchases of clothing materials themselves than through the Indian Munitions Board.

The prices of such items as iron and steel and cement which were manufactured in India were governed by factors which were independent of the cost of production, and it seemed unlikely under present conditions that a central agency would be able to secure any advantage in price.

There would be no advantage, but probably considerable inconvenience, if technical purchases, such as wagons, rails, etc., peculiar to railways and at present centralised as far as practicable by the Railway Board were transferred to another agency.

They agreed that the Superintendent of Local Manufactures and Test House, Calcutta, and the Metallurgical Inspector, Jamshedpur, who when originally appointed had been under the control of the Railway Board would with their staff now come more appropriately under the administrative control of an Indian Stores Department.

Until the inspection branch of an Indian Stores Department had given satisfactory proof of its reliability railways would probably insist on the right of re-inspection by their own technical officers on delivery.

Under the existing contracts no company-worked railway could be compelled to conform to any procedure for the purchase of stores which might be prescribed for the State-worked railways. There would probably be considerable opposition from company-worked railways to any revision of the terms of contract which would require this.

Railways had to maintain their work-shops for repair work and it is only reasonable that they should employ any capacity that was available in slack periods to make standard articles for stock.

Lieutenant-Colonel W. M. COLDSTREAM, R.E., Offg: Surveyor General of India, called and examined.

The central agency could not be of very much assistance to the Survey of India for making purchases. It might, however, be able to supply useful advice regarding possible sources of supply in India.

The Mathematical Instrument Office was best under the Surveyor General. The Survey Department had the most expert observers and improvements in instruments emanated as a rule from the users and not from the makers. In any case it would be necessary for the Survey Department to have an instrument depôt of its own.

The work done in the workshops of the Mathematical Instrument office was chiefly repairs. Some of this might possibly be done outside but it would not be so convenient and from his experience the work would not be so well done.

At Simla, Saturday, 8th May 1920.

PRESENT:

Sir FRANCIS COUCHMAN, K.B.E., M.I.C.E. (*President*).

A. W. DODS, Esq.
Lt.-Col. C. C. H. HOGG, C.M.G., R.E.
Brig.-Genl. H. A. K. JENNINGS, C.I.E.
Rai Bahadur Lala MILKIRAM.
T. RYAN, Esq., C.I.E.

J. C. HIGHET, Esq. (*Secretary*).

K. C. ROY, Esq., Representative of the Associated Press of India, Simla.

Written Statement.

The questions which the Committee are dealing with are highly technical and are intended only for experts and I feel very great hesitation in accepting the invitation to appear as a witness. At the same time I cannot help feeling that there are one or two political and administrative aspects of the question which I should like to place before the Committee. I am also anxious that the recommendations which the Committee may make should be in harmony with the spirit of the Reforms Act of 1919.

In view of the passing of the Reforms Act recommendations made by the Industries Commission (para. 197) are out of date. When the Industries Commission made their recommendations there was no proposal for a dual form of Government. Their recommendations were based on the assumption of the continuance of the existing system of Government. Now that the industries in the provinces have been declared a transferred subject under the Act, the recommendations of the Stores Purchase Committee should be so framed as not to vitiate in any way the provisions of the Reforms Act.

I now come to the definite questions which are before the Committee.

Home Control. Till now our substantial supply of stores has come from the foreign countries under the Stores Rule of 1913 and supply has been managed and controlled by the Stores Department of the India Office. During recent years there has been an insistent demand in India for a change as evidenced in the proceedings of the Imperial Legislative Council, that the administration of the Stores Department at Whitehall should be transferred to the control of an official of the Government of India. This was a question which was fully examined by the Crew Committee (para. 29 of the Report) and they recommended the appointment of a High Commissioner for India. This was accepted by the Joint Committee of Parliament (Clause 35 of the Act) and has been embodied in the Reforms Act. Both these Committees, I take it, assumed that the control of the Stores Department should be handed over to the High Commissioner for India in London. In order to make the High Commissionership a reality I am strongly of opinion that the purchase of stores—which is an agency work—should be transferred to his control. The stores will then come under the complete control of the Government of India and the Stores Department in London will come into direct touch with the Central Agency which has been recommended by the Industries Commission and which has met with general approval in this country.

Central Government. I advocate the formation of a central agency for the purchase of the stores for the Central Government. The agency should be under the administration of a Director General who will rank as an ex-officio Secretary to the Commerce and Industry Department with right of access to the Viceroy. He will place his orders for European stores with the High Commissioner, and the stores staff transferred from India Office will execute the indents under the supervision of the High Commissioner or his staff.

The question of Army supplies requires special consideration and I understand that it is now under examination by the Esher Committee and I feel confident that a proper organisation for the army supplies will be recommended. I cannot help feeling that if the proposed central agency is entrusted with purchases of both civil and military stores it will prove economical if not extra efficient in the long run. If, however, a special department of military supply is considered necessary on grounds of high policy the two departments should be in a position to co-operate with each other and to arrange for joint purchases.

I am of opinion that all civil departments including State Owned Railways should make their purchases through the central agency. Local bodies and Company Owned Railways should not be compelled to make their purchases through the agency but they should be encouraged to do so whenever possible: when they make their purchases through the central agency they should be required to pay contributions towards the maintenance of the central organisation, such contribution may take the form of a percentage on charges on orders placed.

It is essential that the central agency should maintain a highly trained staff of Inspectors. The central agency will also lay down the rules for purchase of stores by the provincial governments.

Provincial Governments. As regards the purchase of stores in the provinces I suggest that it should be scheduled as a transferred subject in the same way as the development of industries and I desire to invite the attention of the Committee to page 41 of Volume III of Joint Committee's Report on the Government of India Bill. The provinces should be allowed—under a definite set of rules to be framed by the Government of India—to make their own purchase in the best possible way, and full ministerial responsibility may be recognised. I do not anticipate any difficulty with regard to the purchase of stores for the reserved departments. The Stores Department will only execute orders and will have no power to curtail the indents.

The Director General controlling the central agency will rank as one of the Imperial Inspectors General in the same way as the Sanitary Commissioner or the Director General of the Indian Medical Service, and will act as coordinating and advising authority to Provincial Governments. The Provincial Director of Industries will also be head of stores purchase department and will be assisted by a Local purchasing officer. The stores will be inspected and surveyed by the inspecting staff of the central agency on the invitation of the provincial head. Test Houses should be entirely Imperial.

I trust that the Committee will accept this as my written statement and examine on the points and also on cognate questions within the Committees' purview.

Mr. K. C. Roy, called and examined.

Witness stated that India owed a large debt of gratitude for the way in which the supply of stores had been managed by the Stores Department of the India Office. The time had, however, now come when the control in stores matters should be transferred to India. The forward move suggested was therefore no reflection on the India Office. As at present proposed, the Stores Department in England would be transferred to the charge of a High Commissioner for India (when appointed) and would therefore constitutionally come under the control of the Government of India. The functions of the High Commissioner were, however, to be settled by the Secretary of State. Under the Government of India Act the Secretary of State's responsibility to Parliament in stores matters remained, and the Secretary of State would therefore still be legally competent to lay down the fundamental policy to be followed by the Government of India. It had frequently been alleged that the policy of purchase of stores imposed upon the Government of India had been framed deliberately to benefit the trade of Great Britain at the expense of India. But there would be no room for such allegation in future if the Secretary of State, while retaining his legal power to dictate policy, refrained by convention and in practice from interfering with the Government of India in matters affecting the purchase of stores. Witness therefore urged that the Government of India should press most strongly for this concession and that the formulation of the new rules for the purchase of stores must be a matter entirely for the Government of India.

The appointment of a High Commissioner for India in London was a necessary initial step towards Dominion status. At first his work would be entirely confined to agency business and the bulk of this would be in connection with the supply of stores. Being only an agent of the Government of India he would have no authority to dictate policy.

The Stores Department in London must be divorced from the control of the Secretary of State and policy and agency should no longer be confided to the same authority. A reduction of its status to that of a branch controlled directly by the Stores Department in India would be incompatible with the appointment of a High Commissioner in London. In witness' opinion the head of the Stores Department in London should rank as a Deputy to the head of the Stores Department in India. All important correspondence would be conducted through the High Commissioner and all ordinary correspondence regarding indents and their compliance would pass between the two departments direct. It was not necessary to attempt to lay down any hard and fast rules governing the relationship between the two departments, as this would settle itself best by convention and custom. It might be advantageous to have an occasional interchange of officers between the two departments.

As regards the purchase of imported stores in India, witness was very decidedly of the opinion that nothing would be gained by encouraging firms of importers in India; on the contrary such a course would give rise to many complicated difficulties and be fraught with real dangers. To introduce the practice of purchasing imported goods entirely in India would open the door to grave abuses. A cry for purchase in the cheapest market, irrespective of the country of origin and without proper regard to the durability of the articles purchased, would certainly follow. It was therefore most desirable to make a cautious beginning and witness urged that all purchases of imported stores in any bulk should continue to be made through the Stores Department in London where a very much wider field of competition existed. At the same time the head of the Stores Department in India must be allowed a great deal of latitude in deciding how purchases should be made. Personally witness would advocate purchase of imported stores in India only when the price was more favourable as compared with the exactly similar supplies obtained through the Stores Department in London. This might occasionally happen in the case of standard articles particularly those liable to breakage in transit. All things being equal he would purchase through the Stores Department in London. Witness hoped that the central agency would reduce their home indents *pari passu* with the growth of manufacture of articles in India. Already Sir Thomas Holland had shown how much could be done in India in this direction.

He would welcome British firms to India as manufacturers though not as selling agents provided they afforded employment to Indian labour, worked on rupee capital, and gave Indians an opportunity of accepting partnership. These conditions were essential so that the Europeans connected with such firms would have a stake in the country and would on their departure leave behind them something of benefit to India.

Witness considered that the eventual aim should be to allow Provincial Governments all freedom possible in the purchase of indigenous articles. For imported articles Provincial Governments should be required to consult the central agency. In the matter of purchase Provincial Governments would always have to be guided by broad fundamental rules promulgated by the Government of India principally to prevent objectionable inter-provincial competition, but all petty interference should be avoided. His experience on the Central Communication Board made it clear that, if provincial stores organisations were set up, no purchases should be made outside their own province without consulting the organisation in the province in which it was desired to make purchase.

As a start it would be quite desirable if Provincial Governments were required to make their purchase of prescribed indigenous stores through branches, controlled by a central agency but which would conform to the wishes of a Provincial Government desiring particular purchases to be made within its own province, it being understood that if no such wish were expressed the central agency would be expected to purchase in the most economical market. The Committees of Public Accounts, which were to be formed under the Reforms Act, could be trusted to see that the tax-payers' money was spent properly and not wasted on the inexpedient purchase within their own province of articles which could be obtained as conveniently and more cheaply from other provinces. Witness also advocated that all provincial purchases be treated as transferred and all central purchases as reserved subjects.

In conclusion, witness reiterated his aversion to the introduction of what he termed "spurious trading," namely the purchase of all Government stores from agents, or representatives of firms in India. So far as the actual purchase and supply of stores ordered was concerned, the Stores Department of the India Office had proved its efficiency and there should be no violent divergence from the present practice until the working of the Stores Department under a High Commissioner had been given a fair trial.

The Stores Department in India should commence on as small a scale as practicable and with well-paid staff. The scale of salaries suggested in the Industrial Commission's Report seemed to him very inadequate and incompatible with the responsibilities entrusted to the staff.

In the recruitment of Staff for the Stores Department in India equal opportunities should be given to Indians and Europeans.

At Simla, Friday, 21st May 1920.

PRESENT:

Sir FRANCIS COUCHMAN, K.B.E., M.I.C.E. (*President*).

A. W. Dobbs, Esq.
Lt.-Col. C. C. H. Hogg, C.M.G., R.E.
Brig.-Genl. H. A. K. Jennings, C.I.E.
Lalji Naranji, Esq.
T. Ryan, Esq., C.I.E.

J. C. Highet, Esq. (*Secretary*).

The Hon'ble Rao Bahadur B. N. Sarma, Elected Member of the Imperial Legislative Council.

Written Statement.

Question 1.—Yes.

Reasons.

(*i*) To carry out the Reform proposals.
(*ii*) To promote economy and efficiency.
(*iii*) To encourage the growth of industries in India.
(*iv*) To enable the Government to make payments in India.
(*v*) To improve the currency position to reduce the Secretary of State's requirements and the sale of council bills.
(*vi*) To enable the Government of India and the Indian Legislature to have a real and effective voice in guiding the industrial and commercial policy of India.
(*vii*) Because the stores rules would be unworkable under the new conditions.

The Reform scheme postulates the Secretary of State's surrendering by a convention, to the Government of India and the Indian Legislature, the determination of the fiscal policy of the Indian Empire, subject to the safeguarding of imperial interests in pursuance of a policy governing all parts of the British Empire alike. If the Government of India and the Legislature agree, the Secretary of State is not to interfere, subject to the conditions noted above. If an agency under the direct control of the Government of India is not to be created, no convention can grow up, the Reform scheme will be illusory and the Government of India, the Legislature and the Committee of Public Accounts cannot discharge their functions.

Assuming that the fiscal policy would be left to India's determination as stated above, whether the policy be one of free trade, fair trade or protection, an agency in India would be needed.

Free Trade. It must be left to India to purchase in the cheapest market, and in a ready market, other things being equal; and the people of India must be in a position to know that that is being done. Part of the Reform policy is to obviate criticism based on suspicion, however unreasonable it may be. Adaptibility would not be possible if the central agency be not in India. The United Kingdom does not want, and has not asked for, protection. The budget grants for railways had to lapse owing to several causes, one at least of which was the inadequate powers of the Government of India.

Fair Trade. The Government of India should have the power to negotiate and to retaliate; and it may have to do so sometimes with and against the Dominions. It may not be sound policy to drag in the Secretary of State, a Cabinet Minister, in such cases. Adaptability here again would be more often needed.

Protection. This may be partial in respect of countries or goods and may be varying from time to time. The store rules would be unworkable.

The reference and the questions assume the continuance for some time of a stores office in London as part of the India office or under the High Commissioner.

The branch in London should be directly under the control of the Government of India and deal only with such articles, as cannot be safely purchased after effective inspection in India except by their importing into India of an agency impracticable owing to financial reasons or other existing conditions. The Industrial Commission say in paragraph 197, page 129, that "only in the case of heavy machinery and constructional iron work is there likely to be any difficulty in coming to a decision. In these cases much depends on the designs and specifications, and very highly specialised experience is required to ensure satisfactory results. This has hitherto been obtained in London through the agency of the consulting engineers employed by the India Office," and they go on to add "and a similar technical agency will have to be created in India, if full advantage is to be taken of the increasing capacity of the country to turn out heavy work." It would thus be clear that in a very short time, the operation of the London branch, even if it should be continued,—for which there seems to be no adequate reason,—can be reduced to the narrowest possible limits. A reference to the India Office list, costing £87,240 roughly besides an additional sum of £20,000 to 30,000 and the machinery proposed for India costing about 8 to 10 lakhs (provisional estimates) would show that there would be an unnecessary duplication of machinery and the departmental experts in India, if they are worth their salt, should, in conjunction with the expert agency to be created, be equal to the task. If the country is to be self contained to meet an emergency, if key industries are to be started, if ordinance, etc., of a high type and standardized spare parts, etc., are to be made here, there is still less room for control from outside India. And an analysis of the latest figures available of the imports on private and Government accounts and the purchase on Government account in India would seem to show that in respect of a large number of them, absolutely no London agency is needed. Subject to provision for effective inspection, no other elaborate provisions seem to be necessary. An analysis of the figures relating to purchases in England on behalf of provincial Governments would show that the sum does not ordinarily exceed 80 lakhs for all the ten provinces and is generally less.

The nature of the articles used also would show that they may be largely purchased in India, and in any event, many of the elaborate rules and safeguards which are under contemplation with a view to assist the local Governments by fettering their discretion are absolutely unnecessary, and would be construed—and perhaps rightly—as interfering with the independence conferred by the Reform Act on ministers to promote industrial enterprise. A local Government wishes to enter into a contract with a local manufacturing firm to enable it to start or improve an industry new to the province but existing elsewhere in India. The proposed rules would certainly hamper freedom of action.

The central inspection should be ordinarily optional-except perhaps in limited cases so should the employment of the central agency for making purchases. But information of all such purchases should be given to the Inspector-General and the Inspector-General should be in a position to suggest, advise, and offer remarks which may be useful to the Government and Legislature in controlling the department.

No appreciable harm seems to result by ill-advised competition, and the possible economy in purchases may not be compensated by the cost incurred in the employment of a central or other agency and the delays inherent in such a system.

The rules especially relating to equal cost and the limitation of the powers of Government would be unworkable under the new conditions. The Controller-General should show special cause for placing indents on the London branch or for purchasing stores there for stocking in central depôts.

Question 3. Standardised goods and articles readily purchasable in the market, articles the manufacture of which Provincial Governments desire to encourage in their provinces by special terms when no large question of policy or safety intervene. Provincial agencies may well deal with such cases.

Question 4. Yes. But it should be optional with the bodies concerned, provided that efficient inspection, when necessary, is forthcoming. Yes.

Question 5. Yes. Sometimes.

Question 6. May utilise them, but through the central agency.

Question 8. Yes. The tenders in England may be cabled to the Government of India on which action may be taken by that body.

Question 9. In inspection the last word must rest with the consuming departments, especially when the safety of the public or the efficiency of the army is concerned. Obstruction to favour a particular country would be suitably provided for.

Question 10. Yes ; in the case of central purchases.

Question 13. Local inspection again should be provided but in the case of such articles as require inspection by highly technical agency, which cannot be provided locally, except at prohibitive cost, inspection by the central agency should be insisted on.

Question 14. Yes. Specially those relating to cost, where the Government and the Legislature or the minister resolves upon encouraging Indian manufacture of the article. The question of cost would depend largely on the service to be provided for and how far efficiency would be impaired. The rules should be made by the Government of India and be subject to alteration by that body from time to time, subject as already stated to control by the Secretary of State when common imperial policy requires it. The limits of the purchasing power by Governments leave no large discretion and are meant for a bygone age.

Question 15. No special facilities should be provided except when preference is resolved upon, for purchases through Indian branches of British manufacturing firms. India should have the option of utilising the resources of the whole manufacturing world—

(*a*) would improve especially in the case of some articles, spare parts, standardised, etc.

(*b*) would impede.

Question 16 Yes.

Question 17. The High Commissioner, the London branch and the local Directors of Industries should do it as part of their duty.

Question 18. The point has been discussed partly in the note already.

Question 19. Yes ; in respect of imported articles ; but only when delay matters, and private firms cannot be relied on.

Question 20. In Provincial capitals and centres of consumption.

V. General.

Question 23. Feasible ; but purchasing officers would certainly supplement such information by their own.

Question 24. No.

Question 25. No.

Question 27. Yes.

The Hon'ble Rao Bahadur B. N. Sarma, called and examined.

Witness quoted figures from statistics of the sea-borne trade of India to show what a small proportion stores imported into India on Government account bore to the amounts of the same general classes imported on private account. The general deduction which he made from this comparison was that the retention of an agency in London for the purchase of stores of ordinary types for Government could only be justified if the particular quality required could not be obtained in India. He recognised that, at any rate until a Stores Department in India had been completely organised and possibly always, a branch in London would be necessary for the supply of a few articles in respect of which special expert advice and technical inspection during the manufacturing stages were essential ; but his opinion was that the establishment in London could be reduced very considerably and this was all the more necessary because with the growth of manufacture in India a very large establishment would be required here and a duplicate machinery for purchase in the United Kingdom was an extravagance which must be avoided.

India must be able to purchase in the best market in which the right quality was obtainable and provided a free-trade policy was completely adopted, price would be the main factor to be considered in deciding where to purchase. It might however be the policy of Government to encourage certain key-industries in India by some form of protection, and for the products of these price would not then be the sole or principal criterion. Witness quoted ordnance as an example. India might be helpless in time of war if she were dependent on other countries for ordnance supplies. Manufacture had therefore to be established in India either by a Government agency or through private firms which would probably be the less expensive method. It would be necessary for Government to enter into contracts with such firms for long periods at prices which might be higher than if orders had been placed with firms in other countries.

If Government embarked on a preference policy, then branches in India of British manufacturing firms would have to be encouraged but in any case even at some loss, other things being equal, he would always give preference to British manufacturing firms established in India on a rupee basis as against foreign firms though in his opinion the general idea of encouraging British manufacturing firms to establish distributing branches in India was absolutely unnecessary with a free-trade policy and might even affect adversely the establishment of manufactures in India.

Witness urged that the future policy of India should be to insist on all payments for goods sold or purchased being made in India. The obligation to pay should be in India and not with the Secretary of State in London. The practice at present was for the Secretary of State to draw large sums of money in advance from India to meet his sterling obligations but there was a very strong feeling in India that the Secretary of State's requirements should be restricted to interest charges, pension charges and such like and that it should not be permissible for him to draw advances from India for trade requirements. In 1918-19 Government had bought imported stores to the value of 19 crores. Payments out of India should be confined to articles of which inspection in India was impracticable or when delivery and payment in the United Kingdom are insisted on. All other articles should be paid for in India on delivery. The practical effect of the present procedure was that the Secretary of State intercepted in London gold which was due to India and paid India for it in token coins. An examination of figures for several years showed that the effect of this was to impose an indirect tax upon the exporters of goods from India due to the difference between the token rate and the bullion rate on the basis that gold is the ultimate international standard of value. It was the normal practice of all countries to make and receive their own payments and witness could see no reason why India should be made an excep-

tion. London would continue to be the clearing house of the world and all bills would be adjusted in the London market.

He would not make it a rule that all purchases must be made in India but one of the conditions of the contracts relating to purchases made out of India should be that payment would be made into the Government Bank in India to the credit of the supplier. This alone would in his opinion be a great inducement to British manufacturing firms to establish branch factories in India with rupee capital and in conjunction with Indians. Given co-operation between Indians and Britishers, capital would be more readily forthcoming in several localities than for concerns of which the management was wholly Indian as the Indian public in some provinces had greater confidence in British ability to manage businesses properly. He was very keen that British manufacturing firms or capitalists should be induced to start manufactures in India in co-operation with Indians. He was afraid that encouragement of mere importing branches of manufacturers might retard the development in this direction. In the past British manufacturers and merchants had been the greatest opponents to Government assistance to Indian enterprise. Their interference had caused Lord Morley to prohibit the Madras Government from proceeding with certain measures proposed about 1909 for the purpose of promoting indigenous industries. Rightly or wrongly the prejudice existed that any increase in British importing agents in India would tend to retard the growth of manufacture in India. If British manufacturers could be induced to take up manufacture in India, witness would draw no distinction between Indian, British or British-Indian concerns so long as rupee capital was employed and the concerns were effectually thrown open to Indian capital. The main thing was to encourage manufacture in India. In his opinion, the general purchase of imported stores through merchants or middlemen in India would not tend to encourage industries in India.

From the point of view of encouraging Indian industries, the method of purchase of stores which had to be imported was of secondary importance. The primary object of an Indian Stores Department must be to prevent demands from going out of India which could be satisfied from indigenous sources. It was for this reason that he urged that the policy of the Stores Rules of 1913 must be reversed so that the Director General of Stores in India would have to explain why any purchase had been made out of India.

Whether protection was necessary and if so what form it should take were questions which could only be decided by considering the case of each particular industry on its own merits. It would be futile to attempt to encourage by protection an industry to which the natural conditions were unsuited. However, India was a continent rather than a country and there seemed to be hardly anything which could not be grown or manufactured in some part or other. If no other method was available, he would be prepared to encourage an industry by placing Government orders at a higher price than need be paid elsewhere The temporary extra expense to the tax-payer would be justified by the expectation of future benefits. He understood that this had been the policy in America and in England also before the latter adopted free-trade.

Witness attached no importance to the fear which had been expressed that competition between provincial Governments in the purchase of their stores independently would adversely affect prices. This might seem sound in theory. He had however made an examination of the volume of purchases by Provincial Governments from 1870 to 1919. In 1913-14, the aggregate amount for all local Governments was about Rs. 80 *lakhs*. It had never exceeded this and had generally been much less. This was so small compared with the total value of imported and indigenous manufactures that the competition between the Provinces must be of very little account. He therefore advocated that Provincial Governments should be allowed to exercise their discretion in their own way. He felt sure that ordinarily they would employ the Stores Department as being a Government agency but on occasions Provincial Governments might prefer to invite tenders of their own to avoid the indefinite delays which might attend dealings with the Central Stores Department and they should certainly be permitted to do so. If it was found that inter-provincial or inter-departmental competition in buying did have a bad effect on prices of any particular articles, then there would not be any objection to centralised purchases of these being insisted upon. It was impossible to frame general rules to cover a position dependent on the conditions of trade which were constantly changing and it was therefore unnecessary to start off with elaborate provisions regarding the relationship of the Central Stores Department to Provincial Governments. It would be best to allow this to develop itself naturally.

He presumed that the advise of a central Stores Department would only be available to Provincial Governments in regard to either purchase or inspection, though they would not be bound to follow the advice given. Whenever such advice seemed to have wrongly rejected, the Committees of Public Accounts which would be formed in every province would, he anticipated, take up the matter strongly and safeguard the expenditure of public money to the best advantage. He did not want to see the discretion of Provincial Governments restricted and hampered by elaborate rules at the outset. He thought that it would prove useful for the Central Stores Department to be represented in the various Provinces. He had himself contemplated that Provincial Governments would have some organisation of their own for the purchase of stores attached to the Director of Industries and that the Central Stores Department would by mutual arrangement make use of these Provincial purchasing agencies. The Directors of Industries had so many duties to perform that they could not be expected to arrange purchases. In the purchase of stores, their duty would be advisory.

The agency, which it would be necessary to maintain for the purchase and inspection of stores in the United Kingdom should be a branch of the Stores Department in India and must be controlled from India—whether through a High Commissioner or some other officer was a matter of secondary importance. The Secretary of State should have nothing to do with the control of purchases by the Government of India except in matters of policy affecting the British Empire as a whole. He pictured a High Commissioner in London—so far as stores matters were concerned—as merely an agent of the Director General of Stores in India. This seemed unavoidable as otherwise there would be two departments separate though working in co-ordination with co-equal powers and friction would certainly arise. In view of the status of the High Commissioner who may be entrusted with other important duties, the control should be exercised at any rate for some time, in the name of and through the department concerned. Where there is a difference of opinion between the Director General in India and the High Commissioner the department should settle it, though in substance, it may be that the Director General's voice would prevail.

As regards recruitment, in the engagement of experts, there was no question of Indian or non-Indian. The qualifications required must be specified and the best experts obtained. If it were merely a matter of training up an establishment, he would give preference to Indians but at the beginning he thought that the best experts for the inspection side would have to be Europeans. Indians were peculiarly well fitted for bargaining but even on the purchase side it might be necessary in particular cases to employ Europeans. Each case must be considered on its own merits.

Mr. A. C. COUBROUGH.

Memoranda of witnesses not examined orally by the Committee.

A. C. COUBROUGH, Esq., of Messrs. Mather and Platt, Calcutta.

I beg to submit herewith a note expressing my views on certain matters which are at present before your Committee.

I much regret that I will not have an opportunity of giving verbal evidence, but shall be glad to answer in writing, to the best of my ability, any questions which your Committee may care to address to me regarding the contents of this note or other matters.

Reference to earlier notes.

I assume that my notes in the Indian Munitions Board files on the control of Manufactures dated 21st July 1918, the work of the Munitions Manufacture Branch dated 12th August 1918, on the Organization of the Munitions Manufacture Branch dated 25th September 1918 on the Re-organization of the Purchasing Branches of the Indian Munitions Board dated 7th December 1918 and a note dated 5th March 1919 on the Secretary of State's Despatch, Stores No. 5 of 1918, are in the hands of the Stores Committee.

I would like this note to be taken as amplifying the views expressed in these earlier notes as well as that submitted for the use of the Indian Industrial Commission on the Establishment required to control the purchase of Engineering plant, materials and stores after the war.

In these earlier notes an attempt has been made to outline the general problems to be dealt with by a Stores Department and to roughly indicate the organization necessary to deal with them. In the present note I wish to confine my remarks to a few particular points which appear to me to require special emphasis.

Previous criticism of the Stores Rules.

A large item in the work of a Stores Department will be the purchase of Engineering plant and materials. It is in regard to the purchase of such plant and materials that most of the discussion on the suitability or otherwise of the existing Stores Rules has centred. For 10 years and more this discussion has been going on and at intervals modifications have been made to the Rules generally after years of discussions on some particular point.

The trend of all such modifications has been to give wider discretion in the matter of the source of supply to officers of the Government of India purchasing material in conformity to the Rules.

In other words the various discussions on these Rules have clearly shown that the concensus of opinion among officers of the Government of India responsible for purchasing engineering plant and materials was that the control of purchases was too much in the hands of the India Office. That the Rules have not been more drastically altered at any earlier date is no doubt due to the fact that Government officers hesitate to assume responsibilities which they can comfortably avoid even at the expense of efficiency and economy.

The Report of the Indian Industrial Commission has made it clear that the Government of India must support its officers in their general desire for greater efficiency and must set up an organization which will increase purchasing efficiency while not unduly loading particular officers with financial or other responsibility.

Influence of the Stores Committee's Report.

The recommendations of the Stores Committee may have an influence on the work of the Industrial Commission of a more far-reaching character than the Terms of Reference might lead one to assume. Control of purchase is the essence of effective management. It is the want of such control which has held back, to a degree, I believe, insufficiently realized, the industrial expansion of India. The Government of India has in the past framed budgets for expenditure on engineering plant and materials, and has levied taxes accordingly. It has never yet set up an organization competent to handle efficiently the purchasing of such plant and materials and has been content to shelve responsibility by relying on the work carried out by the Stores Department of the India Office.

The Indian Industrial Commission has recommended the establishment of an Indian Department of Stores. I am not concerned, for the moment at any rate, with the division of the organization into an Imperial Department and Provincial agencies. The Stores Committee is called upon to enquire into the measures required to enable the departments of the Government of India and Local Governments to obtain their requirements as far as possible in India.

Does the Government of India intend to control purchases?

The crucial question to be decided is: Does the Government of India intend to take the *control of purchases* into its own hands or does it not? India loses a most vital opportunity of making a real step towards self-government if the Government of India does not support the recommendation clearly implied in the Report of the Industrial Commission that the control of purchases should be in the hands of the authorities in India.

If so, it should do so without having to refer to the Secretary of State.

The Industrial Commission outlines the organization of a Department with a Controller-General of Stores at its head. This official is a Government of India official with his headquarters in Calcutta. He is to have as part of his organization a *Buying Agency* in London. Rules for the supply of articles for the Public Service will be drawn up by the Controller General of Stores or modifications to existing Rules will be so drawn up by him and submitted for sanction to the Government of India. Unless the Government of India has power to sanction these Rules *without reference to the Secretary of State* the office of Controller-General of Stores will be to a large extent a sinecure, economy will be false, efficiency will be doomed and progress will be indefinitely retarded.

The interests involved in the control of purchases.

It is in this important matter of control of purchases that the interests of India and of the authorities in the United Kingdom do not lie in the same direction. I purposely draw a distinction between the United Kingdom and the authorities in the United Kingdom. I do not wish to suggest that there is any conscious antagonism between the views of the India Office or other authorities and the views of the British public, but at the same time it is invariably difficult to convince the parties to a vested interest that the limiting of their powers is to the public good.

There is a very peculiar vested interest in the India Office which colours, in perhaps unexpected ways, the evidence which may be given before the present Stores Committee. The British public so far as concerns the supply of engineering plant and materials is the British manufacturer of such supplies.

Diffidence on the part of those capable of giving evidence.

It may seem curious, but it is nevertheless a fact for which I can personally vouch, that certain British manufacturers with firmly established branches in India while fully realizing that purchase in India would be to their advantage are not prepared to give evidence accordingly to the Stores Committee. The reason for the attitude is that a manufacturer is

inevitably an opportunist. He cannot afford to offend the susceptibilities of the India Office on the chance that action will be taken which will more than discount such offence. So he sits on the fence and keeps out of the arena of inter-Empire politics.

Complete control of purchases must be in the hands of the Government of India.

I am firmly convinced that it is in the interests not only of India itself but also of the manufacturer in Great Britain of engineering supplies that complete control of the purchase of such supplies should be in the hands of the Government of India, and I will try to state the grounds of this conviction as it applies to the two interests concerned.

The interest of the Government of India in establishing such control.

The interests of the Government of India lie in the direction of promoting efficiency in the purchases of stores not only those purchased to meet its own direct requirements, but also those purchased to meet the requirements of Local Governments, *quasi*-public bodies or in fact any consumer in India whether public or private.

The meaning of efficiency in purchasing.

The term "efficiency" as applied to the purchases of Stores must be read in its widest possible meaning. Efficient purchase must be economical prchase, and economical purchase does not necessarily mean buying an article at the lowest possible rate. It is a general failing of a large purchasing body spending public money, that powers of purchase are hedged round with so many regulations and restrictions that efficient or economical purchase is impossible. Efficient purchase must take into consideration much more than merely the price of an article or the lump sum for carrying out a certain contract.

The inefficiency of the present system.

It must take into consideration the effect of the purchase on the individual trader, on the various trades involved in the partiqular contract, and on the industrial progress of the country. In more democratic countries than India and those more highly developed industrially, the action of the Government in the matter of purchase of Stores has a comparatively small effect on the industrial situation in the country. In India the effect of the policy adopted by Government in the purchase of Stores on the Industrial situation of the country is very great. I do not think the statement can be seriously challenged that the system of purchase hitherto adopted has held back the natural development of Indian Industries to a very great extent. That system of purchase was formulated in accordance with the ideas of the Secretary of State on the advice of Departmental Officials in the India Office and Consulting Engineers in Westminster. With all the good will in the world the expert advisers of the Secretary of State in a matter of this description cannot understand the truly Indian point of view, and not understanding it cannot be expected to give the best advice in the interests of India.

The 'non-possumus' attitude of the India Office.

The Indian Official and the Government of India has for years been pleading "We want to buy in India," and the British manufacturer as far as he dare risk his reputation with the India Office has been saying "I wish to or am prepared to sell in India," and between them has stood a lordly Whitehall saying to India on the one hand "You are children,—you do not know what you want or what is good for you" and to the British manufacturer on the other "You know nothing about India and you don't know how to make a dynamo or any other piece of machinery to suit Indian conditions."

It may be news to the majority of members of the Stores Committee to learn that there is scarcely an electrical generator of motor supplied to private firms in India or even to *quasi*-public or public bodies that conforms to the India Office specification.

Private and Municipal purchases.

Are private purchasers in India blind to their own interests when they prefer to call for tenders in India from firms, British or Indian, established there? Are Government Officers lost to all sense of duty when they consult firms in India regarding the requirements of a Municipality which is empowered to meet its requirements without reference to the Secretary of State or to the Rules for the purchase of Articles for the Public Service?

If it is in the interest of private concerns and semi-public or public concerns to purchase in India, does it seem reasonable that it is not in the interest of the body representing the public as a whole to similarly conduct its purchases.

Reasons for private purchase in India. The meaning of "Service."

It does not require much consideration to arrive at the reasons why the private individual or firm prefers to purchase in India. They may be summed up in the word "Service." The purchase of engineering plant and materials does not or should not end with the delivery of such plant or materials at the makers works or even at the purchasers' premises. There is or should be a definite or implied obligation in engineering contracts on the part of the seller to ascertain that the goods supplied meet the purchasers' requirements in the best manner possible. Such an obligation cannot be fulfilled unless buyer and seller are in close personal contact. In many cases the conditions under which plant will operate cannot be fully realised until experience has been obtained. In many, if not most, cases the purchaser knows only what he wants done. The seller until he studies the actual conditions on the spot, knows only what his various types of plant are capable of performing. Service commences with the study on the part of the supplier of his customer's requirements and ends only when he has satisfied himself that what he has supplied is the most efficient article for the purpose.

(1) *Concrete example.*—The proprietor of a cotton mill wishes to produce a certain style of quality of cloth. He has little idea of what machinery is necessary to enable him to produce the desired article. He appeals to the manufacturer who has knowledge of the production of similar articles in other countries. The manufacturer studies the special conditions obtaining in India and in addition to making out an estimate of the cost of the necessary machinery gives his advice as to the layout of such machinery and the method of operating the same. Finally, in most cases he supervised the erection and starting up of the machinery and is continuously thereafter at the call of the purchaser for any advice as to improvements or additions which experience in working may prove desirable.

(2) *Concrete example.*—Similar circumstances arise in connection with say, the improvement of a Town water supply. The Sanitary Engineer to a Local Government takes the matter in hand. He prepares a scheme indicating the requirements of the Municipality. He then consults the manufacturer's representative and in conjunction with him prepares a report on the financial aspect of the scheme, the cost of the necessary machinery, the running costs of the installation, the revenue obtainable from the improved supply and, finally, the specification of the plant necessary to carry out the scheme in its finally approved form. Tenders are then called for which may or may not include complete erection and starting up on site by the manufacturer, but in all cases include, or should include, for supervision by the manufacturer of such erection and advice as to the best method of running and controlling the plant.

Proper service impossible under existing conditions.

Instances could be multiplied indefinitely showing how largely service enters into a contract for the supply of machinery to work under Indian conditions. I maintain that it is impossible to obtain such service under conditions such as those laid down in the existing rules for the supply of articles for the Public Service. It is in the interest of the

Continued.] Mr. A. C. COUBROUGH.

Government of India to obtain such service and it can only be obtaind by purchase in India.

The manufacturer is anxious to give service.

That it is in the interests of the manufacturer to give such service is equally true. The reasons underlying this statement are perhaps a little obscure in the case of the manufacturer with Works located in Great Britain. It may be argued that the manufacturer is only interested in the sale of his products and prefers to give delivery at his Works, relieving himself thereby of further responsibility. Many manufacturers would be quite prepared to subscribe to the correctness of this argument and obviously it appeals strongly to those firms who have never studied Indian conditions on the spot and have not established Branches in India. The British manufacturer is, however, proverbially narrow-minded. He has built up business on sound lines to meet Home conditions and has secured a large proportion of the trade of the Empire without modifying to any great extent the terms of business which suit Home conditions.

Branches established to do private business.

During recent years the more enterprising firms have sought to meet new conditions of World trade by establishing branches abroad, and it is the experience of these firms that it is in their interest to do business in the country of their customers. In connection with the supply of Engineering plant and materials this is particularly the case, manufacturers finding that unless their representatives were on the spot, there was little chance of securing orders. The prices of the firms quoting from Home may be lower and I should think almost invariably are, but the purchaser is prepared to pay a higher price to the manufacturer who personally looks after his interests and sells him service as well as machinery.

Existing stores rules, a stumbling block.

The Stores Rules have all along been a stumbling block to the enterprising British manufacturer. It does not in most cases pay the British manufacturer who has established a branch in India to take contracts placed by the India Office, and while such manufacturers are doing practically the whole of the private business in India, contracts placed by the India Office under the Stores Rules are going to firms who have no establishment in India and in some cases not even Agents. It would be rather illuminating evidence for the Stores Committee to obtain comparative figures, showing the amount of private business placed with firms not established in India and with those so established, and a similar comparison showing the amount of India Office business similarly placed. Figures in regard to electrical business should in particular be obtained. It would also be instructive to ascertain in how many instances British electrical firms with large establishments in India had turned down enquiries for the India Office, realising that it was not worth their while to tender.

Scope of work of the Imperial Department.

Having now attempted to demonstrate not only the necessity for a Stores Purchasing Department in India, but also the paramount necessity of endowing this Departmnt with adequate powers, I will now proceed to examine the scope of work of the Imperial Department which will, under a Controller-General in Calcutta, be responsible for the scheme of Government purchases throughout India.

Its novelty.

I pointed out in my note to the Industrial Commission that the proposed Indian Stores Department has no prototype. Its work will not only be new to India, but will embrace many features of novelty in comparing its functions with those of any other Stores Purchasing Organization.

Act as Consulting Engineers.

The Central Agency, Imperial Department, or whatever name it may be called, will require to act as Consulting Engineers as well as a purchasing organization, and in its capacity as Consulting Engineers will be found one of its most valuable functions. India suffers at present from a lack of Consulting Engineers. Consulting work is done almost entirely at present by the staff of private firms. It is true that the India Office employ Westminster Consulting Engineers to advise regarding the drawing up of specifications and the placing of contracts. It is also true that the Railways, both State and Company-owned, employ Consulting Engineers in a similar manner. It is doubtful, however, if it is generally realised how much preliminary work is done by private firms in a purely consulting capacity before Indents are ever framed for transmission to the Director-General of Stores or to the Home Boards of the various Railways Companies.

The present system is not a good one. It is satisfactory to the manufacturer only, in so far as he is able to rely on the fairmindedness of Government officials. The contractor who acts as Consulting Engineer as well as manufacturer realises that the possibility of not getting any return for a very costly preliminary work, is not a fair manufacturing risk and would welcome a more equitable system. The Government Official on the other hand is forced under present conditions to rely on information supplied by engineers in private service for the preparation of many of the elaborate schemes which are part of the work entrusted to him.

And removes the disadvantages of the present system.

The proposed Imperial Department of Stores would remove the present disadvantages both from the buyer's and seller's point of view. The Department should comprise a staff of Engineers competent to draft an engineering scheme of any magnitude. The services of these engineers would be available not only for purely Imperial work, but for the more varied and frequently more important schemes carried through by Municipalities under the supervision and control of Provincial Government engineers. Other public bodies, such as Railways or *quasi*-public bodies such as Port Trusts would also be able, under suitable terms, to make use of the services of the Imperial Engineers.

Responsible for terms and conditions of contracts.

The Imperial Department would also be responsible for the employment of equitable Terms and Conditions of Contract issued by Provincial or other Government Officers, and would endeavour to ensure that similar forms of contract were used throughout India for work of similar character.

Works in conjunction with the Institution of Engineers (India).

The Imperial Department would maintain close contact with the Council of the Institution of Engineers (India). It would consult that body on all matters relating to the supply of engineering plant and materials. It would also in all probability be represented in any Committee formed by the Institution of Engineers to carry out the works and recommendations of the Engineering Standards Association.

Must not be overloaded with details.

I am not in favour of the Imperial Department exercising a very detailed control over purchases made by Government officials on behalf of Local Governments. Care must be taken not to introduce too cumbrous a system which through mass of detail wallows in inefficiency. The Imperial Department should, in my opinion, burden itself in the first instance with as little actual purchasing work as possible. It will have quite sufficient opportunities of finding its feet when dealing with the purchase of engineering plant and materials required by the Government of India.

Makes running Contracts.

It will in course of time form running contracts with firms in India for a large variety of supplies in general use. Local Governments and others will be only too ready to make use of its services by obtaining permission to purchase under the terms or conditions of such running contracts as may be made from time to time.

Is responsible for inspection.

The work of inspection will inevitably form a part of the Imperial Department's activities. Consulting work

and inspection go hand in hand and I see no reason why the Imperial Department, which includes a purchasing branch, should not control the inspection not only of its own purchasing branch but of the purchasing agencies adopted by Local Governments. I would invite a reference to my earlier notes for more detailed views in regard to the important question of inspection.

Sir H. A. Farrington, Bart., Conservator of Forests, Bengal.

Question 1. Yes, to give expert advice on the quality and price of stores to be purchased for Government.

Question 2. None that I know of.

Question 3. No.

Question 4. I should think so.

Question 5. Yes, the measures of decentralisation being those suggested in paragraph 197 of Appendix I.

Question 6. No answer necessary in view of 1 above.

Question 7. No.

Question 8. Cannot say.

Question 9. A hard and fast rule either for the one or the other should not, I think, be laid down. Generally the inspections would be dictated by the consumer's department, but occasions will probably arise when the department responsible for the industrial development of the country will have to dictate.

Question 10. Yes.

Question 11. None that I know of.

Question 12. No.

Question 13. See 1, 6 and 10 above.

Question 14. Yes, all indents should be submitted to the Central Agency, which should decide whether the stores should be obtained through the Director-General of Stores or in India.

Question 15. Only in urgent cases or to meet unforeseen demands.

(*a*) Such stores as are available from their ordinary stock should be obtained from them.

(*b*) This will be determined by the quantity required and the comparative cost of production.

Question 16. Yes, in fact, as stated in 14 above, the Central Agency should decide whether indents are to be transmitted or not.

Question 17. No, but it is imperative that such information should be in the possession of the Central Agency.

Question 18. Sawmill machinery from America should be inspected and passed in the country of origin.

Question 19. Yes.

(*a*) Considerably, for Government departments would then find it necessary to hold stocks of stores which can be obtained from central stock depôts.

(*b*) Private firms would not require to hold stocks for Government in that case. For urgent and unforeseen demands Government should be prepared to buy in the open market like any private individual or firm, *i.e.*, to the best advantage.

Question 20. At Calcutta, Bombay, Madras, Lahore and Rangoon stock depôts should be maintained for imported stores only. Indian stores can be obtained, as necessity arises, by tender.

Question 21. See tabular statement below.

Year.	Value of Stores Produced in India.		
	Value of Imported Stores purchased in India.	From Government factories.	From private dealers.
	Rs.	Rs.	Rs.
1910-11	2,502	..	..
1911-12	..	..	..
1912-13	..	..	..
1913-14 . . .	1,341	..	..
1914-15	15,015	170	23,681
1915-16	8,206	301	13,600
1916-17	8,263	..	13,122
1917-18	5,642	..	17,730
1918-19	2,336	..	12,251

Question 22. No special records are maintained. The stores are purchased from recognised firms according to quality prices.

Question 23. Yes.

Questions 24 and 25. Not in a position to say.

Question 26. No.

Question 27. Yes.

Question 28. The Accountant-General, Bengal, sees that the powers of sanction and budget provision are not exceeded.

Question 29. I should think so.

Question 30. Yes.

Lieutenant-Colonel F. S. C. Thompson, O.B.E., M.B., I.M.S., Inspector-General of Prisons, Bengal.

The Jail Department is concerned with only a few of the questions and I therefore propose to make a general statement as it is easier to answer interrogatories in this way.

The Jail Department buys materials by—

(*a*) indent on England;

(*b*) local purchases by individual jails.

N.B.—Since the inception of the Munitions Board purchases have been made through it, for certain specified stores.

(*a*) I have no criticism to make about the purchases from England.

(*b*) Local purchase of raw materials for manufactures by individual jails is unsound, this local purchase should be confined to food products, *i.e.*, rice, pulses, etc., and to certain seeds as mustard and castor oil seeds which are utilized for manufacture into oils.

Raw materials, principally yarns, jute, iron, etc., should be bought by Central Agency for the province; in Bengal this provincial local agency should be in Calcutta.

The disadvantages of each jail buying its own raw materials are obvious, *viz.*:—

(1) Buying in bulk secures lower prices.

(2) Lessening of opportunities for illegal gratification.

The advantages of a local agency in Calcutta are that a better market ought to be possible, and the avoidance of many buyers.

The nature of the local agency calls for comment, whether this should be:—

(1) A reputable firm getting 1½, 2½ or 5 per cent on the value of their purchases—in the tea trade, I believe, it is 1½ per cent.—other trades a larger percentage is allowed.

One firm could buy all jail requirements easily, but if all Government purchases were given out in this way—certain firms could, buy their own specialities, *i.e.*, gunny bags from one, tea from another, etc., etc.

(2) The Head Office of the Jail Department forming a purchasing branch.

Continued.] Lieut.-Col. F. S. C. THOMPSON.

The Inspector-General is in touch with all jails and knows their requirements and he would supervise purchases generally.

(3) A Government agency buying for all departments of Government.

My experience of the Munitions Board has made me despair of the success of such a scheme, even granted all the handicaps under which they worked.

May I detail a few examples of the way goods have been got through the Munitions Board for the Jail Department:—

The Munitions Board ordered yarn from Messrs. A. John & Co., Cawnpore, which was delivered to the jail in April 1918; the quality of this yarn varied—some so bad that cloth made from it was inferior; owing to this the jail lost the Campbell Hospital contract for sheets. This contract they had for many years. Apart from the quality the price was high.

The police have made frequent complaints about the quality of putties and uniforms supplied to them, these are manufactured from yarn supplied by Munitions.

Lately the Controller of Clothing (Simla) has supplied through the Assistant Controller, Textile Stores, Bombay, khaki drill for the purpose of making up police uniforms; this drill on first washing lost its colour and the police have rejected uniforms made from it. This means a great loss to the Jail Department financially and disorganization of jail industries.

Why, as in many cases, materials are supplied from Bombay and distant centres to places near Calcutta I fail to understand as such materials are obtainable locally and more cheaply. In one instance Munitions Board price was Rs. 1-2 per lb. *plus* freight from Fatehgarh *plus* 5 per cent. Munitions Board charges *plus* loss of time, etc., when the same material could be had at Rs. 1-2 per lb. at the jail gates.

Again the Controller of Munitions, Bengal, after supplying yarn to the Midnapore Jail for the specific purpose of making into police uniforms gave the order for such uniforms to a local contractor instead of to the jail, Government orders being that the Police Department is to get such uniforms from the Jail Department.

The loss of time in supplying goods, furnishing prices, and submitting invoices for supplies all handicap jails in giving estimates and completing their returns—please see the following letter:—

Enough has perhaps been said to point out some of the difficulties by which the Jail Department is faced through having to get raw materials through a Government agency.

The points about Government purchasing agents are:—

(*a*) They are not commercial experts and so fail to supply what is really needed.

(*b*) Local buyers have preferences and a central agency fails to understand these.

(*c*) The local purchasing agency is not plastic enough, and rather inclined to be autocratic.

Under these circumstances I favour a firm being given the contract, or else the Head Office of the Jail Department being the local purchasing agency.

The orders given about the Munitions Board left it somewhat indefinite as to who was the inspecting agency, *i.e.*, the consumer or the purchaser.

I think both should inspect.

Certainly the consumer must have power to reject material, otherwise there are many possibilities of trouble.

Question 21. See tabular statement below.

Question 22. (*a*) No special records are kept about prices of stores.

(*b*) No written records.

Year.	Stores Purchased abroad, i.e., through Director-General of Stores, London.	Imported Stores purchased in India.	Indian Stores.
	Rs.	Rs.	Rs.
1910-11	46,685	2,14,552	4,05,389
1911-12	85,920	2,00,598	5,10,715
1912-13	1,15,385	2,41,031	4,32,328
1913-14	1,00,123	2,68,486	4,37,125
1914-15	1,32,020	3,11,502	5,25,647
1915-16	1,18,224	2,64,331	5,95,995
1916-17	70,001	5,19,840	5,04,302
1917-18	82,838	6,30,073	6,63,626
TOTAL .	31,288	9,8641	8,92,027

J. H. WIGGETT, ESQ., M.B.E., nominated by the Calcutta Trades Association.

Question 1. I am in favour of the formation of a central agency for purchases on account of the Government of India if, as I understand it, the principle to be followed is that departments shall obtain their requirements as far as possible in India. Such an agency should make for economy in purchase and enable the Controlling Authorities to scrutinise all indents with a view to the obtaining in India of all stores stocks of which are held by firms or the manufacture of which could be undertaken in the country. The members of the Association, which I represent, have long suffered by reason of the fact that the rules for the supply of articles for the public services have restricted the purchasing powers of indenting officers, and indeed in too many instances the rules themselves have been altogether ignored as is shown by the periodical lists of orders placed on the India Office. This has very greatly affected the legitimate expansion of commercial enterprise and Tradesmen would welcome the inauguration of a department with unlimited powers of local purchase. Trading firms would naturally be alert to meet the increased demands, which might reasonably be expected to result therefrom by holding much larger and more varied stocks.

Question 4. I am of opinion that it would not offer any advantage to local and *quasi*-public bodies and company-owned railways to make their local purchases through a central stores agency. These bodies, so far as stores procurable in India are concerned, have hitherto to a large extent made their purchases in India and in that respect no fault can be found with them. I do not think that by making their purchases through a central agency they would derive any advantage, for at present they buy most of their stores on tender and thus procure their requirements at the lowest market rates. If however, they themselves consider it would be advantageous then, and in such case I certainly think they should contribute towards the maintenance of the central organisation.

Question 9. I am of opinion that without exception the policy of inspection should be dictated by the consuming department.

Question 13. I think it will be necessary to create local inspection agencies particularly in regard to consuming departments whose requirements are often of a special character—such for instance as Railways and the Army.

Question 14. The creation of central or local agencies would certainly necessitate modifications in the Stores Rules of 1913—for instance the financial limits of purchase would, I take it, have to be withdrawn altogether.

Question 16. I certainly advocate the scrutiny by a central department in India of all Home indents to prevent as far as possible the ordering of stores which might wholly or in part be procurable in India.

Question 19. I do not advocate the formation of central stock depôts—such stocks as it might be deemed necessary to hold—should be by the consumer. The holding of stocks against possible demands would mean the locking up of a large sum of money, and on economic grounds there does not appear to be any reason why government should hold stocks when firms would be glad to hold it for them. In certain cases it might be necessary to hold stocks of articles of a special character not ordinarily obtainable in India, but otherwise the need does not appear to me to exist. Additional reasons are the rapidity with which certain articles deteriorate in India and the important factor of market fluctuations.

Question 26. The recruitment of the various staffs should in my opinion proceed on the principle that every Officer holding an important position must possess special practical and intimate knowledge of the various classes of purchases with which he is concerned. As far as possible, too, the selection of such Officers should be made from amongst men with previous experience in India, to ensure a knowledge of local conditions and prevent the purchase of unsuitable stores.

The Hon'ble Rai NAGENDRA NATH CHOUDHURY Bahadur, Chairman, North Sylhet, Local Board. Assam.

Speaking generally, I would like to press the desirability of decentralisation in purchases. By this, I mean :—

1. That the Local Governments should make direct purchases of all articles which are produced in their own Provinces.

2. That the Cenral Agency would supply the Local Governments the articles which are not produced in any of the Provinces.

In saying this, I beg to observe as follows :—

1stly.—The Local Governments will be in better touch with the local manufacturers and can get direct knowledge of and exercise supervision over productions periodically.

2ndly.—A direct purchase by the Central Agency is likely to inflate prices. A province purchasing its own requirements along with those for other provinces on the requisition of the Central Agency would get the benefit of wholesale prices.

3rdly.—The manufacturers will benefit by continued exertion for improvements in their articles and if other provinces snatch any order in a particular year, there will be competition either in the matter for keeping down prices or for improving the quality.

4thly.—In case one particular article is produced in more than one province, the Central Agency, on reference, will decide whether the Provincial purchases will be one or more for that particular commodity.

Lastly.—Unless the same article, as produced in different provinces, differs widely in quality or prices, the purchases so far as practicable, should be made within the Provinces. Slight variations in price or quality should not lead to purchases outside the Province.

I hope no further necessity will arise for my examination or cross-examination on the points touched in this Note.

H. W. Fox, Esq., nominated by the Chittagong Chamber of Commerce.

Question 1. I am of the opinion a central purchasing agency, such as described by the proposals of the Industrial Commission, is unnecessary for the following reasons :—

Expense, delay, and the possibility of the requirements of the consumer not being met in every particular.

Question 5. As a decentralisation measure I suggest that :—Assuming competent and responsible officers are in charge of each department, they should do their own purchasing controlled only by the general policy of the Government and finance.

Question 7. My experience of Government system of contracting is limited to coal and coke contracts for a number of years in Calcutta. I cannot criticise as I have kept no record of the peculiarities which resulted.

Question 9. I consider inspection should be conducted by the consumer (see answer to Question 5) assisted by independent Home experts for purchases made in England, and surveys by local experts if in India, if considered necessary and in disputed cases.

Question 15. I am of the opinion this concession should be allowed to all firms of repute.

The effect would possibly be to stimulate—

(*a*) The holding of larger stocks in India and or

(*b*) The establishment of local factories.

Question 17. I take it, the best advice can be obtained in every market, for every commodity, at the time of purchase, by arrangement.

Question 19. Under ordinary conditions, I am of the opinion central stock depôts accumulated by the Government of India are unnecessary—

(*a*) Departmental stocks would in consequence be more complete.

(*b*) The stocks kept by private firms are generally regulated to meet the demand.

Question 24. I consider the existing rules for shipbuilding require modification.

Rai Sahib Mono Mohan Lahiri, B.L., Pleader, District Court and Chairman, Tezpur Municipality.

Question 1. I advocate the formation of a central agency for the purchases on account of Government Departments with Provincial Branches. My reasons are :—

(*a*) A staff of experts would be required to inspect, test and select the stores and it would not be desirable on account of expense to have a staff of experts for each of the provincial agencies and consequently a central department with a staff of experts is a necessity.

(*b*) It will be easier for a central agency to collect and disseminate information about stores produced in India and abroad to the different provinces and to arrange easier terms on the ground of large purchases.

Question 2. If a central agency be formed it would be desirable that arrangements should be made for the inspection by the highly responsible Government Departments such as Army and Royal Indian Marine of their specialized stores.

Continued.] Rai Sahib Mono Mohan Lahiri.

Question 3. Stores of Indian manufacture and stores manufactured elsewhere but available in India should not be purchased by the central agency, except for the province where the central agency will be located. There need not be a separate local agency for this province. Such stores for other provinces should be purchased direct by their respective agencies.

Question 4. In my opinion it would not be advantageous; such an arrangement on the contrary would involve loss of time and money.

Question 5. A Central Stores Department, in my opinion would not be a suitable agency for the purchases of stores of Local Governments except the highly specialized ones, and stores required for the province in which the central department will be situate, the central body would inspect, test and recommend stores available in India and collect and disseminate information to the various local agencies and from time to time issue circulars giving therein the current prices, the place where and the firm from which the stores may be purchased. The provincial agencies would also give all information to the central agency about the local manufactures, which information the central agency would communicate to other local agencies.

Question 6. Stores required for the Departments of Government of India should be purchased through their respective local agencies.

Question 7. (Not answered.)

Question 8. This would be possible but would cause delay.

Question 9. The inspection of important stores of the Military and Royal Indian Marine Departments should be dictated by those Departments.

Question 10. The inspection should be carried by the central agency but if there be a suitable staff of experts in any provincial agency the inspection of local productions in that province should be carried out by the local agency.

Question 11. The Military and Royal Indian Marine Departments ought to have special inspection organizations of their own in regard to important stores.

Question 12. Not answered.

Question 13. I do not advocate the formation of independent local inspection agencies. All inspections should be carried out by the purchasing agencies having experts.

Question 14. Rule 13 of the Stores Rules of 1913 should be relaxed.

Question 15. The conditions under which purchases of European stores (whether in India or in the United Kingdom at the time of purchase) should be made are that their price and quality are not unfavourable as compared with those at which similar articles can be obtained C. I. F. from the manufacturers *plus* the customs duty and reasonable commission to be fixed by the central agency.

(*a*) These conditions ought not affect the holding of stocks in India.

(*b*) Competition is likely to lead to the establishment of agencies and manufacture in India by firms in the United Kingdom.

Question 16. Yes. This should be done by the central agency.

Question 17. The India Office should arrange to collect and disseminate information to the central agency about the current prices of stores in the United Kingdom, and the central agency in India should do the same regarding stores in India. If contracts are entered into after inviting tenders the difficulty about the fixing of prices is likely to be obviated to some extent.

Question 18. (Not answered.)

Questions 19 and 20. I do not advocate the formation of Central Stock Depôts by Government in India for stores that are available in India.

(*a*) The Government Departments would stock such stores as are required daily.

(*b*) If there be no Central Stock Depôt in India approved firms would stock such stores as are ordinarily required by the Government Departments.

A Central Stock Depôt means a large outlay, deterioration and misapplication of stores.

Question 21. (Not answered.)

Question 22. There is a list of prices of stores in Municipality which is often revised, but since the War it has been of very little use. Stores are now purchased on tenders.

Question 23. I think it would be feasible when the market becomes steady for a central agency to collect and disseminate to purchasing officers prompt and reliable information regarding the prices, capacity and performances of contracting firms.

Question 24. (Not answered.)

Question 25. I think it would to some extent.

Question 26. Business men and experts should be selected for these departments.

Question 27. Yes.

Question 28. None about the source from which bought.

Question 29. (Not answered.)

Question 30. In my opinion it would be very desirable.

N. O. Peters, Esq., I.S.O., Manager, Jorhat Railway.

Question 1. Yes, the first reason is, that a central agency would be more conversant with the price of goods and the markets. Second, they would also have a fuller knowledge of stocks available.

Question 2. There should be separate control agencies for large consuming Departments, *i.e.*, Army, Railways, Public Works Department, Post and Telegraphs and the Royal Indian Marine.

Question 3. There are many stores of small value which should be purchased locally, by the best means decided by the Heads of the Departments.

Question 4. This should be left to the discretion of the Company's Directors and to be optional as to the contribution towards the maintenance of the central organisation.

Question 5. Yes, central stores should be placed in the most commercial towns with railways communications of each Local Government.

Question 6. Yes, it will be desirable for Departments of the Government of India to obtain their requirements through reputed Local Agencies.

Question 7. Yes, I have experience of the existing system calling for tenders of the supply of stores and in my opinion it is quite satisfactory I have no criticism or suggestion to offer.

Question 8. No, I am doubtful if simultaneous tendering in India and Great Britain would be a successful measure, as tenders in India would invariably be higher in price.

Question 9. The inspection should be dictated by the consuming department for the suitability of stores purchased by a centralized inspection agency.

Question 10. The inspection should be carried out by a central agency independent of the consuming department.

Question 11. Yes, Medical, Public Works Department, Railways and Navigation Stores.

Question 12. Boiler plates, axles for Engines, passenger and goods vehicles.

Question 13. The most satisfactory method would be local inspection agency on behalf of each Government.

Question 14. The purchase of stores through central or local agency should necessitate no modification of the Store Rules of 1913.

Question 15. The purchase of European Stores, whether in India or the United Kingdom should be encouraged

from firms who hold large stocks and also firms manufacturing the same class of stores in India.

Question 16. Yes, certainly the stores should be scrutinized by centralized Departments in India of all indents before transmission to Director-General of Stores.

Question 17. The only method that can be adopted for information of the market value ruling at the time will be by having a system of testing the market daily by reliable agents of high moral character.

Question 18. Only stores very small and of a perishable nature should be procured directly by the consuming officer.

Question 19. Both holding of stocks by Government Departments and private firms should be adopted as rates would level up, care should be taken that stores should not be overstocked.

Question 20. Yes, I approve of central stock depôts which should be maintained for imported, as well as for Indian, stores. The central depôts to be situated in towns or cities to be decided by Committees of each Local Government.

Question 21. See table below.

Year.	Stores purchased abroad.	Imported Stores purchased in India.	Indian Stores
	Rs.	Rs	Rs.
1910-11 to 1918-19 . .	1,19,703	1,43,205	2,73,981

Question 22. (*a*) Priced Ledger and Receipt Return of Stores.

(*b*) *nil.*

Question 23. Yes, as an enquiry board, central agencies should be able to disseminate to purchasing officer, prompt and reliable information regarding prices, capacity and performances of firms.

Question 24. The present rules are not suitable to the future development of ship building, as the plates, angles and tees have to be imported by Government from Great Britain, which causes heavy delay before the arrival of materials, 1st, Government should open out factories for the smelting and rolling of plates, etc., in India, which could be done, 2nd, British and Indian firms should be subsidized at the start till the companies were in a prosperous condition, which firms should be under a board of inspecting officers, this would encourage private shipbuilding.

Question 25. The purchase of stores for company-owned Railways, local and *quasi*-public bodies should be left to their discretion and not controlled by Government central agency, as this interference would transfer the legitimate sphere of private enterprise.

Question 26. The recruitment and organisation of staff should be from men who have been in merchant service with business capacity and experience.

Question 27. The cost for the maintenance of central and local purchasing agencies should be met by a percentage charge.

Question 28. The rules for Government Railways are followed in auditing purchase of stores.

Question 29. In my opinion the existing rules admit of efficient audit on purchasing stores as far as the Railways are concerned.

Question 30. It will be desirable if arrangements could be made to the interchanges of personnel between the Home and Indian Stores Departments as they would gain the necessary business experience of both countries.

The Hon'ble Mr. F. A. LEETE, F.C.H., Chief Conservator of Forests, Burma.

Some time ago Mr. A. Rodger, I.F.S., Deputy Controller of Munitions, consulted me about the replies sent by him to the questionnaire. At the time I told him that I agreed with his answers, supporting the idea of a central purchasing and inspecting agency. Since then, however, having been asked to give evidence myself, I have studied the matter carefully with the result that I have come to very different conclusions. For the Forest Department in Burma I want nothing but a local agency in Burma.

The requirements (present and future) of the Forest Department may be classified as follows:—

(*a*) *Ordinary*, such as hardware for house, bridge and road construction, tools, marking hammers, measuring tapes, elephant gear and tents, uniforms; also hemp and wire ropes.

(*b*) *Special appliances* for research work.

(*c*) *Special appliances* for logging, saw-milling and wood manufacture, including railway plant.

Item (*b*) can be dismissed very simply. No Central Agency is required. The Chief Conservator of Forests, Burma, is empowered to purchase anywhere in the world, and no special limitation of this power is called for.

Item (*a*): *Ordinary.*—Forest Department requirements are the same as the Public Works Department and only differ from them in being very much smaller in quantity. Whatever agency is considered to be the best for the Public Works Department should apply also to the Forest Department. The requirements of the Province of Burma for these kinds of stores are already considerable and are likely to grow still larger. They are already large enough to occupy the full time of a staff of experts, and I think there is danger of making the machine too unwieldy if any attempt is made to concentrate the requirements of all provinces into a single organization for purchase and inspection. For Burma certainly, and probably also in the larger provinces, local agencies are preferable. The only use I would make of a Central Organization would be as a Bureau of Information to which the local agencies could apply for information as to supplies and prices. The local agencies might be encouraged to purchase and stock stores for each other.

Hitherto the Forest Department has very rarely indented on Public Works Department Stores for its requirements. I think I am right in saying that the chief reason for this is that we can buy articles cheaper in the open market. This ought not to be possible with proper organization.

Item (*c*): *Special Appliances for logging, saw-milling and wood manufacture, including railway plant.*—Hitherto little or nothing has been done under this head. If, however, Burma is to go ahead with the development of its forests, as is now beginning to be thought practicable, it is quite certain that large purchases of skidding machinery, railway plant, and saw-mill machinery will have to be made. As the result of my recent tour in America, I have formed the opinion that Canada and the United States are far ahead of any other country in the world in the development of logging and saw-milling machinery and appliances. I am also of opinion that there is a great field for the use of these machines and appliances in India and Burma, and especially in Burma. I am absolutely convinced that it will be quite impossible to make any large purchases of machinery in America on favourable terms and without serious delays unless there is at least one officer in Burma who is empowered to deal directly with manufacturers, namely, to call for tenders and to place final orders, with free use of cable facilities. It will be fatal to progress if there must be the delay involved in referring to, and obtaining sanction of, one or more officers in another province or in England.

Wood manufacture is on a different footing. Machinery for re-sawing, planting and working up into articles of commerce is for the most part as good in the United Kingdom as anywhere else, if not better. Decision as to where an order should be placed need depend solely on price.

Another point I would emphasize is that for machinery purchased in America *inspection is impracticable.* Reliance must be placed entirely on the good name of the firm dealt with.

In my opinion, inspection of stores in general is made too much of in the papers circulated. I cannot believe it possible that Government will lose by placing more reliance on the good name of firms dealt with. I have heard it said that British firms think India Office inspection is vexatious and that prices quoted to the India Office are high accordingly.

I believe that a Central Agency in India could serve a very useful purpose as a Bureau of Information. It could collect information as to supplies and prices and circulate the information at frequent intervals in all provinces. It might also make a point of including in its periodical bulletins reports of actual purchases made by local agencies in the various provinces. For the purpose of compiling such reports the Central Agency might have a staff of inspecting officers. Their inspection would however, have nothing to do with purchase. It would simply be for information after purchase, and, if well done, it would be of great value to local agencies when making subsequent purchases.

One reason why I am altogether opposed to having a Central Agency for purchase, especially of logging and milling machinery, is that there is no guarantee that in the staff of the Central Agency there will be any official with an expert knowledge as the indenting officer. At the present moment I probably possess more expert knowledge of logging machinery than any one else in India, owing to my recent deputation to America. Within a month or two a Consulting Forest Engineer is expected to arrive in Burma. Provided that indents on America put forward by us meet with the approval of the Local Government it is difficult to see what good would be obtained by insisting on sending them to any other officer for approval. I can give an example of my meaning. It is only a small one but it is a deplorable example of vexatious delays which are liable to occur from time to time if the Central Agency is to be anything more than a post office. As long ago as August 1918, the Forest Department in Burma indented for some Vaughan drag saws, prices about Rs. 400 each. The machine itself is made in America and is illustrated on page 56 of Volume I of my Report. Sixteen months have gone by and we seem to be no nearer getting the machine to-day than we were in 1918. In October last the Revenue Secretary, Burma, informed me that the India Office had written to say that the machines we wanted could not be purchased in England, and it was suggested that a British machine mentioned would serve our purpose equally well. My answer was not complimentary. If I had not been convinced that the American machine was not superior to anything obtainable in England, I should not have advised any officer to apply for it. This sort of thing is extremely irritating and if I thought that there was any likelihood of this experience being repeated every time any proposal was made to make use of the information collected by me in America I should be inclined to drop the whole thing.

The general tendency of existing rules for the supply of articles for the public service appears to be to check the development of local manufacture and the local supply of imported articles or of articles manufactured from imported materials. I believe this attitude to be wrong. Every business firm all the world over knows that if it has any considerable trade in any given locality it pays to have a local, agency or branch of its own. What gain there can be to Government in refusing to make the greatest possible use of these local branches fail to understand.

I would abolish all the restrictions imposed by existing rules with regard to the purchase of stores, and give full and free powers to Local Governments. If a Local Government has power on its own authority to incur up to Rs. 16,00,000 of expenditure on any engineering project I see no reason why its powers of purchase of any particular piece of machinery should be put at a lower figure. I do not ask for increased powers for the Chief Conservator of Forests or any other departmental officer in the province. I should be quite content if the power of sanction to purchase stores in a foreign country be limited to Government itself. The Chief Conservator of Forests or other departmental head can at all times come into direct contact with Government, and if he, with the assistance of other experts in his department, can convince the head of the Government that the proposal is sound and practicable, I do not see what further restrictions are desirable in order to prevent the waste of public funds, and it is quite certain that any such restrictions are bound to check the development of industries in the province.

ANSWERS TO QUESTIONS.

Question 1. No, *vide* notes above.

Question 6. Departments of Government in other provinces should be encouraged to obtain all their requirements through local agencies in the various provinces.

Question 13. Inspection, as far as it is possible, should be carried out by local agencies. In the case of logging machinery, etc., no inspection at all before purchase is possible.

Question 14. Yes. I would abolish indents on the India Office altogether, and confine the activities of the latter solely to being a Bureau of Information.

Question 15. I would modify the rules to permit of free purchase from Indian branches of British and Foreign manufacturing firms. There should be no difficulty in ascertaining from India Office details of prices at Home so that it would soon be brought home to an officer if he paid too much for any article by purchasing it locally. Please note the addition of the words "and foreign." If any considerable headway is made in India with the use of skidding machinery, etc., it is highly probable that American or Canadian firms will set up branches in India, and local officers should be empowered to deal with them just the same as with British firms.

Question 19. I advocate the formation of Central Stock Depôts, one at least for each province:—

(*a*) These Government Depôts would be for the use of all departments, and so separate holding of stocks should be reduced to a minimum.

(*b*) If private firms are prepared to hold stocks of any given article in their branches I should encourage them to do so, by simply keeping a small stock in the Government Depôt as a reserve in case of emergency, and in order to keep down prices.

Question 20. For Burma I would have depôts at Rangoon and Mandalay. I would have them for Indian as well as for imported stores.

Question 23. Yes. I am very much in favour of setting up a Central Agency in India, and also of making use of the India Office as a Bureau of Information for purchasing officers. In my opinion this is the best thing either of them could become.

Question 26. The staffs of Local and Central Stores Departments should be of the same stamp as the superior officers in all departments. In my opinion the only way in which a Central Agency in India or the Stores Department, India Office, can properly handle Forest Department requirements for logging machinery and so forth is to have on their staffs senior officers from the Forest Department with expert knowledge similar to my own, and this can only be acquired by personal knowledge of conditions prevailing in the States and Canada.

Question 30. Yes.

Major J. P. CAMERON, I.M.S., Inspector-General of Prisons, Madras.

It would be advantageous if all the requirements of the Jail Department both in raw materials and plant and tools could be obtained through the agency of a Central Stores Department under the local Government—controlled by the Imperial Stores Controller. This system, worked under expert control, would ensure a proper check on the price and quality of goods and obviate waste of public money now resulting from inexpert purchase.

Indents for plant and machinery required by jails would be submitted, as heretofore, through the Inspector-General of Prisons, but indents for raw materials would be sent direct by Superintendents of Jails to the local agency for compliance, in order to avoid delay and unnecessary correspondence.

2. The following are ordinarily required for jails:

Raw Materials.

Cotton twist.
Woollen twist.
Wool.
Iron.
Aluminium.
Leather for sandals, boots, etc.
Jute.
Coir.
Wood.
Dye stuffs.

Plant and Machinery.

Looms, healds, reeds, combs, etc.
Pumps.
Sewing machines.
Weighing machines.
Disinfecting apparatus.
Motor lorries.
Calendering machine.
Locks.
Tell-tale clocks.
Ploughs.
Scales and weights.

The practice at present followed on receipt of indents for stores from jails is—

(1) to furnish the Director-General of Stores, London, direct, with a probable estimate of the requirements of jails during the next official year;
(2) to obtain the sanction of the local Government for inclusion in the Home indent of articles costing £25 and more;
(3) on receipt of sanction of Government to submit a printed indent on the Director-General of Stores through the Munitions Board. (The submission of the indent through the Munitions Board was introduced only after the commencement of the War.)

It would be advantageous if a stock depôt for Indian as well as imported stores could be maintained under each local Government, situated at Government headquarters. This would save delay in supplying requirements, and permit of articles being purchased and stocked when rates are favourable.

A statement showing the amount expended by the Jail Department in the purchase of stores during the years 1910—1918 is attached.

REGISTERS OF STORES PURCHASED.

The following registers are maintained:—

(1) Stock Book of raw materials—Form No. 68, Jail Manual—showing the prices paid for the raw materials purchased, etc.
(2) Registers of manufacturing plant and machinery —Form No. 75, Jail Manual.
(3) Stock Book of Civil Stores and dead stock—Form No. 29, Jail Manual—showing articles belonging to the Maintenance Department.

The accounts of each jail including purchases of stores, plant, etc., are now audited annually by the auditors attached to the office of the Accountant-General and reports on their audit are furnished to the Inspector-General. The system of audit is satisfactory.

Return of expenditure on stores purchased by the Jail Department.

Years.	Value of imported stores purchased in India.	Value of stores produced in India.		Value of stores purchased through the Director-General of Stores.	Value of other stores purchased outside India.
		Cost of goods obtained from Government factories.	Cost of goods obtained from private dealers.		
	Rs.	Rs.	Rs.	Rs.	
1910-11	38,950	165	1,38,110	153	..
1911-12	33,157	53	1,37,095	716	..
1912-13	22,305	115	1,31,737	170	..
1913-14	27,569	86	1,95,211	10,846	..
1914-15	59,996	318	3,01,534	938	..
1915-16	56,025	71	2,85,417	16,102	..
1916-17	64,670	99	3,65,507	2,570	..
1917-18	57,474	99	4,67,275	5,418	..
1918-19	48,407	9,813	6,94,836	8,316	..

E. D. PUZEY, Esq., V.D., Superintendent of Stores, His Exalted Highness the Nizam's Guaranteed State Railway.

Question 1. The formation of a central agency for purchases in India on behalf of Government departments is advocated. As far as this Company is concerned, such a department would form a further source from which we could draw supplies.

It is considered, however, that the purchase of stores through a central Government agency is likely to be attended with considerable delay and there will be risk of unfair discrimination between the requirements of Government departments and private companies. Further it appears that the principal object of the Government proposal is to promote the use of Indian products and there is a possibility therefore that unsuitable indigenous stores might be supplied in preference to more suitable imported articles. There are considerable, advantages in dealing direct with the agents of firms supplying Europeans stores and the existence of a large Government supply agency might discourage this form of business.

It is desirable therefore that any Government organization should work in competition with other sources of supply and that consuming departments should be in a position to consider quotations from Government stores in competition with quotations from private firms and from prices quoted in Europe.

Question 4. Please see answer to question 1.

Question 9. Inspection should be carried out by an officer directly in touch with the consuming departments: it is obvious that the user knows best the standard of material required.

Question 15. The purchase of European stores through established Indian branches of British manufacturing

firms is advocated. The branches could then carry considerable stocks and would offer immediate delivery and expert advice: this is frequently of the greatest importance.

Question 19. The formation of limited stock depôts by the Government in India is recommended—*vide* answer to Question No. 1.

Question 20. The formation of stock depôts might be carried out at Hyderabad, Bombay, and Madras as far as this Railway is concerned. It is recommended that Indian as well as imported stores should be made available.

Question 22 (*a*) A book record of the prices paid for stores is maintained in this office but the information quickly becomes obsolete.

(*b*) An experienced purchasing officer can soon eliminate firms who are found to be undesirable.

Question 23. If prompt and reliable information regarding prices, the capacity and performances of contracting firms could be given from time to time there is no doubt that information would be most useful. I doubt, however, if it is practicable to do this on the large scale contemplated.

Question 25. Yes—*vide* answer to question No. 1.

Question 27. The cost of the organization should be contributed as a percentage on the value of the stores issued.

Captain F. N. BOOTH, I.A.S.C., Purchasing Officer, Mechanical Transport Stores, Bombay.

Question 1. Not for Mechanical Transport.

The existing Central Mechanical Transport Stores who are responsible for the maintenance of Mechanical Transport are in a better position to purchase their requirements direct or through the M. T. Purchasing Officers.

Breakdowns are very frequent and if Indents were sent to Central Agencies who would then have to transfer them to their Local Buying Agents would cause considerable delays; whereas in the present system the Local Purchasing Officer arranges for local manufacture or purchase for all units in his district; therefore vehicles are put back into commission almost immediately.

Question 2. It is essential that the Mechanical Transport should have its own organisation—this being a very highly specialised work and requiring highly Technical supervision, should be in position to call on its local Purchasing Offices for urgent demands without having to refer to other departments.

Question 3. Yes.

All Stores required for the Mechanical Transport.

The Central Agency not being in touch with the Motor Agencies could not possibly cope with urgent demands for special articles required for breakdowns.

The present Central Mechanical Transport Stores, in my opinion, is better able to control all purchases for this department.

Question 7. The present system only tenders for Firms on Government lists. I would suggest that tenders for large sums should be advertised in Indian and English papers; this would give everybody an equal opportunity to quote.

Question 10. Purchasing Officers for Mechanical Transport should be their own Inspectors and should be held responsible for the prices and quality of goods purchased by them.

Question 11. The Mechanical Transport certainly require their own organisation.

Question 12. A Purchasing Officer should be a highly Technical Officer and able to inspect all Mechanical Transport purchases.

Question 15. Home Indents. If Local firms of good standing received the support of Government there would be no need to send all indents Home, as practically everything could be obtained in India, and I have no doubt, if firms were satisfied that the goods would not remain on their hands they would be willing to take small profit on cost and all departments would be in a position of receiving their supplies quickly, and our department especially would be in a very much better position to cope with urgent requirements.

Question 17. Mechanical Transport Purchasing Officers should send copies of all purchases made by them to the Central Mechanical Transport Stores, who should keep records and advise their Purchasing Officers of prices paid in England and Local markets.

Question 19. Referring to question 15, if this system were carried out Government departments would only need small stocks on hand for urgent demands and thus save enormous upkeep of staff and storehouses.

Question 21. This department was not created in Bombay until April 1917.

(*a*) *Nil.*

		Rs.
(*b*)	1917	10,72,128
	1918	15,00,668
	1919	16,28,083

Question 22. (*a*) Prices of articles purchased, names of firms and dates of purchase are filed in card form alphabetically.

Question 28. All bills are verified by this department and then sent to the C. M. A. of the Division who adjusts payments accordingly.

Question 29. The Central Mechanical Transport Stores should have their own Audit and Disbursing Departments and all bills should be sent to this department for records and disposal.

Dr. E. J. BUTLER, M.B., F.L.S., Imperial Mycologist and Joint Director, Agricultural Research Institute, Pusa.

The Agricultural Department may be roughly divided for the purposes of this inquiry into two sections: one, the scientific, includes the chemists, botanists, entomologists, mycologists, bacteriologists and the like, while the other includes the agriculturists or, as they are styled in the department, the Deputy Directors. The former purchases chiefly scientific apparatus, glassware and chemicals which are required for the purpose of scientific investigation and for such work as chemical analysis of manures and feeding stuffs. Such stores are usually utilized at the headquarters stations of the department at Pusa and in each of the provinces. It is for this section alone that I wish to answer.

I have taken the questions in a different order from that in which they are arranged in the questionnaire as the answers which I shall give to one or two of the more important questions as they concern this department make it unnecessary to refer in detail to a large number of the others.

Question 18. Yes. Purchases on account of the Scientific section of the Agricultural Department.

The existing practice in regard to this section of the department at Pusa is for officers to purchase articles required for experimental or research purposes direct from the manufacturers or dealers. This concession was obtained for certain officers as a result of representations made prior to 1904, and was extended to the Inspector-General of Agriculture in India and the Director of the Agricultural Research Institute, Pusa (both these

offices being now held by the Agricultural Adviser to the Government of India), in 1908.

Previous experience showed that the method of indenting through the Stores Department of the India Office was unsatisfactory for the following reasons:—

(1) It was not expeditious since orders had to pass through several hands before they reached the manufacturer or dealer, and the completed order was often subject to delay for the same reason. As it is difficult to foresee annual requirements in scientific research work, the goods were usually wanted for rapid delivery.

(2) It led at times to actual stoppage of research work owing to lack of a particular piece of essential apparatus for obtaining which the submission of even an emergency indent was often a clumsy substitute for a direct order which might be completed by return parcel post. It frequently led to loss of efficiency owing to the difficulty of foreseeing requirements so far in advance, so that officers had to use whatever they happened to have in stock.

(3) It was difficult to obtain the exact make of apparatus or chemicals required, as the rules discouraged the specification of particular firms when indenting. Very often the indenting officer desired to obtain a particular make and was not prepared to accept any other. The historic case quoted by officers of the department is the regrinding of a highpower Zeiss microscope lens, for which it is said the Stores Department called for a tender, whereas only Zeiss can be trusted to repair Zeiss optical glass. I cannot vouch for the accuracy of this story but it illustrates the point of view.

(4) It led to a loss of economy owing to the necessity of carrying considerably larger stocks than would be required were things ordered as they were wanted. As it was impossible to foresee requirements so long in advance, apparatus was sometimes laid in that was never used. The class of stores consumed by this section of the department is peculiarly liable to deterioration, not only the chemicals but also microscope glassware and many forms of chemical glassware and apparatus. Very heavy losses have been incurred under this head and experience has amply proved that the best policy is to order little and often.

(5) It was difficult to keep an effective control of expenditure within the budget grants, as the details of the expenditure at Home were often not communicated in time to enable an officer to adjust his grant for the following year. Under the rules which cause unexpended balances to lapse at the close of the financial year, this is a very real objection in the case of small budgets.

(6) The scientific officers of the Agricultural Department are highly trained specialists each in his particular field and it is advantageous for them to keep in touch with manufacturers and dealers capable of meeting their requirements. In some cases this is essential, as special apparatus has to be made to their designs and cases often arise entailing correspondence with the manufacturer. It would be obviously uneconomical to maintain in London an equally expert body to deal with their orders, and even if one were constituted it is unlikely that its purchases on their behalf would find favour. Experts do not always agree on such matters and it is safest to permit the man who has to use a tool to decide what is the best one to purchase.

The above refers to my personal experience and that of my colleagues at Pusa. In Provincal Departments of Agriculture the practice is that the Director of Agriculture is authorized to obtain direct and not through the Stores Department such articles as are required by his staff for experimental or research purposes. This probably covers all the requirements of the Scientific section of the department in the provinces. Where the Director's office is at the headquarters station it probably works very much in the same way as at Pusa but where, as in a few provinces (*e.g.*, Madras), his office is elsewhere there may be unnecessary delays. It would be probably better to permit scientific officers to order their requirements direct, submitting their indents after issue to the Director for scrutiny.

Question 3. Yes, the same classes of stores as are referred to in the answer to question 18 above.

The objections to purchasing these through a central agency in India are similar in the main to those already advanced, under Question 18, against purchase of foreign stores through the Stores Department of the India Office. They depend on the limited and specialized character of the requirements of the Scientific section of the Agricultural Department and on the advantage of being able to purchase anything that may be suddenly required with the least possible delay.

It would be even less economical in India than in England to maintain a staff of specialists in a central purchasing agency who would be able to obtain and scrutinize the articles that this department consumes. The quantity and value of these articles are relatively quite small and though they may be most important from the point of view of the user, they would form a small side line in the central agency and would be more trouble than they are worth.

The existing practice at Pusa, where alone I can speak from personal knowledge, is to purchase as far as possible, articles manufactured in India when these are up to standard and not unreasonably more expensive than the imported article. I may instance chemicals, of which we purchase considerable quantities from reliable firms such as D. Waldie & Co. These are often purchased under a guarantee of purity. Of course, for specially pure articles we usually have to purchase abroad. But it is clearly to our advantage to purchase near at hand so long as the standard and price are satisfactory.

As regards imported articles purchased in India the total amount under this head is small if hardware, tools and the like are excluded. The present rules regulating such purchases [Rules 3 (*a*) and 5] are generally suitable so far as concerns Pusa, since under Rule 13 the Agricultural Adviser to the Government of India has the power to purchase under Rule 3 (*a*) up to Rs. 3,000 and under Rule 5 up to the budget limits.

Directors of Agriculture in the provinces have similar powers up to Rs. 250 only for each article or group of similar articles purchased at one time. This latter figure is too low and must; in cases of urgency, entail unnecessary references to the Local Government. It probably also reacts unfavourably on the purchase in India of the requirements of the department, which, under the first of the terms of reference, the Stores Committee desires to stimulate. Suppose for instance a microtome becomes available for purchase in India. The officer concerned is practically certain to inspect it himself before purchase but must then (because the price exceeds Rs. 250) get the Local Government's sanction through his Director. By the time this is received it would probably have been possible to have obtained one from England. In the same way the creation of a central or local purchasing and inspecting agency would probably react unfavourably on the purchase in India of imported articles since rapidity of purchase is often so important, and such an agency would, as I have pointed out above, be quite unnecessary for purchase of this nature, owing to their small quantity and highly specialised character.

Continued.] Dr. E. J. Butler.

Other officers authorized to incur expenditure can only purchase imported articles under Rules 3 (*a*) and 5 up to a limit of Rs. 50 for any one article or group of similar articles purchased at one time. At Pusa this causes no inconvenience since the higher powers of the Agricultural Adviser to the Government of India, whose office is at hand, can be invoked. But in the provinces and especially in those cases where the Director's office is not at the departmental but at Government headquarters the limit of Rs. 50 must seriously interfere with purchase in India.

Question 1. This is covered by the answers to questions 18 and 3 above, so far as the scientific officers of the Agricultural Department are concerned. No central or local purchasing or inspecting agencies are required for the purchases of these officers.

Question 21. The statement required, so far as the information is available for Pusa is attached. (Not printed).

Question 22. The rules for the maintenance of stock registers and for annual stock-taking show that the former have to be entered up annually by each purchasing officer from the cash accounts or invoices of purchases during the year. This necessitates proper filing of all such accounts and these files are maintained from year to year. Records of prices are thus readily available.

Records of equipment and success or failure of firms are maintained in the stores files of each purchasing officer. Each officer is familiar with the previous record of firms and unsatisfactory performances are often communicated unofficially to other officers, and in one or two especially bad cases have been circulated officially to Provincial Departments of Agriculture as well. But most officers take good care to keep themselves informed of the capabilities of the firms who deal in their special requirements and nothing further is required in this direction.

Question 28. Bills are passed for payment by the purchasing officer at Pusa after he has received the goods and satisfied himself as to their quality. Payment is made by the Director's office over his countersignature after he has verified the purchasing officer's signature. The Director's office controls the expenditure within the budget limits of each officer's grants and furnishes each purchasing officer with a monthly statement of the position of his grants. All accounts are kept in the Director's central office.

Major D. S. Johnston, R.E., Executive Engineer, Presidency District, Bombay.

Question 1. A Central Agency for the purchase of general stores is required in India in order to prevent competition between officers in the same market.

Question 2. The stores required for the Public Works Department being of a special nature should be dealt with by a separate branch of the Central Agency.

Question 3. The only stores which should be purchased by a Central Agency for Public Works Department should be:

(*a*) Timber.
(*b*) Cement.
(*c*) Iron and steel sections.
(*d*) Linseed oil, turpentine and paints.
(*e*) Hardware, nails, screws, etc.
(*f*) Machinery, stores for petty repairs should be purchased locally as at present.

Question 4. I do not think that it would be advantageous for local or *quasi*-public bodies, company-owned railways, British Colonies and Protectorates to purchase through the Central Stores Agency.

Question 5. The Central Stores Department would be a suitable agency for purchases on behalf of Local Governments of the stores mentioned in para 3.

Question 6. (No remarks.)

Question 7. (No remarks.)

Question 8. Yes, I think so.

Question 9. The policy of inspection should be dictated by the consuming department.

Question 10. Yes.

Question 11. No.

Question 12. (No remarks.)

Question 13. (No remarks.)

Question 14. Some modifications would probably be necessary.

Question 15. Only limited quantities of European stores should be purchased from established Indian branches of British Manufacturing Firms.

Question 16. Yes, provided that the scrutiny is not a lengthy process.

Question 17. This appears to be a matter of keeping in touch with the various markets.

Question 18. There are various articles such as Marseilles flooring tiles, marble flooring slabs, steel and iron sections from foreign countries which should be purchased by direct negotiation by the Central Stores Agency and not through the Director General of Stores.

Question 19. Each Government Department should hold its own stocks obtaining supplies from the Central Stores Agency.

Question 20. (No remarks.)

Question 21. Statement showing the amounts expended each year, since 1910, on the three heads noted below:

Year.	(*a*) Cost of stores purchased abroad.	(*b*) Cost of imported stores purchased in India.	(*c*) Cost of Indian stores.
	Rs.	Rs.	
1910–11	83,500	11,753	
1911–12	65,475	68,691	
1912–13	93,691	11,925	
1913–14	92,188	83,109	Not available.
1914–15	36,296	3,12,045	
1915–16	87,840	35,515	
1916–17	1,03,584	1,13,220	
1917–18	42,005	61,648	
1918–19	9,826	98,481	

Question 22. Stores are obtained by tenders or by quotations obtained publicly. Owing to the fluctuation in the market there is no uniformity of rates.

Question 23. Yes. This should be feasible.

Question 24. No remarks.

Question 25. No remarks.

Question 26. The scheme for a Stores Organisation prepared by Mr. A. C. Coubrough, Indian Munitions Board appears to be a good one.

Question 27. Yes.

Question 28. Stores are, as far as possible, issued directly to works. A Stock Account is kept for stores not so dealt with. The stock is checked yearly by a gazetted officer.

Question 29. Yes.

Question 30. This can be decided after the proposed departments have been tried for some time.

Ambalal Sarabhai, Esq., nominated by the Ahmedabad Mill Owners' Association.

I approve of the proposals of the Industrial Commission generally (please refer to Appendix 1 on page 3 of the Questionnaire), subject to the following modifications:—

1. The Controller-General and Deputy Controllers should be men with wide business experience. Salaries proposed in Table A on page 6 are, in my opinion, too low

to tempt any capable businessman to give up his business and join Government service. As business experience would go a good way in affecting economy in purchases an additional expenditure would be more than repaid if the right type of men are secured.

2. Provincial Directors of Industries will have such a lot to do that it will not be possible for them to give attention to Stores Purchasing Department unless each of them is given assistance of a capable officer to look after this department. It may be that the same articles may be available in various provinces at varying prices. Unless purchases are of an emergent nature, before a Provincial Agency makes purchases, the indents should be referred to the Central Agency which would be in touch with various provinces. The Central Agency should then decide from which province to buy the articles required. Where the purchases for Government are of a regular nature it would be an advantage to enter into running contracts but this could best be decided by the Central Agency. The Central Agency should not place any contracts direct. The local agencies should invite tenders and submit them to the Central Agency. The Central Agency finally should place contracts through the provincial agencies.

3. It is very difficult for a manufacturer to get in touch with Government Purchasing Departments. There is such a lot of red tape and delays. I favour appointment of committees, Central as well as Provincial, composed of businessmen. Members of committees should preferably be elected representatives of the various chambers of commerce and Industrial Associations, both European and Indian. It may be open to these committees to co-opt the members. These committees should have the power to appoint sub-committees to go into special subjects. The Central and the Provincial Agencies should consult their respective committees on matters of policy. These committees should hear complaints from merchants about purchasing and inspecting departments and their decision should be final. If any firm applies to be put on the list and it is not done so, it should be open to that firm to appeal to these committees. The committees should have power to ask for explanation in case they have reasons to believe that partiality is being shown or there is irregularity. Provincial principal officers should be members of provincial committees, say the Director and his assistant in charge of Stores Purchasing Department, the Assistant being the Secretary of the committee. The chairman of each committee to be elected by the members of the committee. These committees would appoint sub-committees and dedicate to sub-committees upto such power as they possess. Whenever committees think that persons possessing special knowledge of any particular line can give some of the questions coming before them better advice than the committees can do—say for example, questions such as of purchase of chemicals, metals or textiles come up—a committee composed of those who are in the line would be able to deal with such subjects better than whole committees. It would be on such sub-committees that committees will have power to co-opt members: the co-opting members to have the same rights and standing as the members of the committee. As these committees and sub-committees may have to meet often the members should be paid fees for attending meetings. The proposed committees and sub-committees, if constituted, will, in my opinion, be of invaluable assistance to the buying agencies and to Government on matters of Tariff.

4. I am firmly of opinion that, in order to secure articles at the lowest price, it is essential that they should be made in the country if possible. I mean they should be made in the country provided the raw materials and other conditions in the country are favourable for the purpose of manufactures. The present Government rules lay down that, if the quality is sufficiently good for the purpose and the price not unfavourable, preference should be given to articles made in India. Certain industries have been established in India. As far as these are concerned the existing rules are quite in order but with regard to new industries just started and which are in the initial state the quality may not be as good as that of the foreign goods and the price not so low. It is only when new industries get on sound footing in the country that they would be in a position to offer good quality at a price lower than the imported goods. In case of such articles I would strongly suggest a little indulgence being shown with regard to quality and price. If this is done in the beginning I have no doubt that the indigenous articles will be available after some time at a price lower than the imported goods.

5. During the war time my Association had requested Government to send enquiries for textiles to members of the Association. The Munitions Board was pleased to comply with this request but the Ahmedabad mills could not tender or were not in a position to secure orders even in case when they tendered for the simple reason that the class of goods required was new to them. A request was, therefore, made to the Munitions Board to send complete collection of samples of such goods as the department usually require with their approximate prices. The Munitions Board could not see its way to comply with this request. If they had done so manufacturers would have tried to make cloths to match the samples and that they would have been in a position to tender with more confidence and the Munitions Board would have been in a position to know what they (manufacturers) were tendering for. In addition Government would have been able to create healthy competition and gain due to reduced prices as a consequence of it.

6. I, therefore, suggest that Government should have museums in important business centres where a complete range of samples of such goods as Government purchase should be maintained so that the manufacturers would be able to make experiments and when successful tender to Government for their manufactures. Only such articles as are made in a province or can be made in the province should be shown in the museum in that province. In a place like Ahmedabad they may have in the museum textiles, oils, flours, etc.

7. With regard to foreign goods to be purchased for use in this country it should be laid down that provided the quality is good enough and the price not unfavourable English goods should be purchased in preference to goods made in other foreign countries. As many new industries are likely to be started in this country Government should extend its patronage to them. All the indents for foreign goods should pass through the Central Agency. Preference should be given to those firms which have their works in India with major portion of Indian capital. It must be clearly laid down that firms which make race distinction with regard to employment should not be put on Government list. With regard to foreign firms with which the orders are placed by Government there should be a condition that Indian apprentices should have no difficulty in receiving technical training in their works. While, making these suggestions I fully realise that this will not be possible in every case.

In my opinion if preference is given to foreign manufacturers solely on the ground that they have got their works in this country irrespective of the consideration of Indian capital it will greatly hamper the development of new industries in this country.

R. H. Young, Esq., nominated by the Karachi Chamber of Commerce.

Question 1. 1st Part. Yes.

2nd Part. To permit Government to scrutinise all indents and enable them to purchase all stores and material which are procurable or can be manufactured in India.

Question 3. No.

Question 4. Yes.

Question 6. Provided prices are competitive there should be no restriction.

Question 8. Yes.

Continued.] Mr. R. H. Young.

Question 9. Consuming Department.
Question 10. No.
Question 11. All consuming Departments should have Inspection organisations.
Question 15. There should be no restrictions.
a. Larger stocks would be held.
b. Local manufacture would be encouraged
Question 16. Yes.
Question 19. No.
b. Liable to restrict stocks held by private firms.
Question 23. Yes.

D. Clouston, Esq., M.A., B.sc., c.i.e., Director of Agriculture, Central Provinces.

In comparison with certain other Government departments the Department of Agriculture in the Central Provinces cannot be said to be a large purchaser of stores and I am of opinion that the carrying out of a scheme now under consideration would not benefit our department to any great extent. What we urgently require at present is an Agricultural Engineer and a trained staff of mechanics to enable the department to test new types of agricultural machinery now on the market and to devise and to assist in the introduction of new ones suitable for these provinces.

2. Our wants can be classified under three heads :—

(1) Implements for trial and in some cases subsequent sale from implement depôts.
(2) Materials for teaching in the Agricultural College, schools, etc.
(3) Scientific material required by the various sections of the department.

3. We may take it for granted that the department will sooner or later be relieved of part of the work of selling implements through its existing implement depôts. Several Tahsil Agricultural Associations in the provinces have already got implement depots where they stock implements for sale. These associations are working under the guidance of the department and get their supplies through us and there is every reason to believe that their number will increase. The greatest difficulty experienced at present is that of getting suitable implements in sufficient numbers from Home. To get over this difficulty I am strongly in favour of encouraging their manufacture in India.

Stores purchased outside of India can according to the present rules be obtained direct without going through the Stores Department of the India Office—*vide* rules for the supply of articles for the Public Service Nos. 7 (*iii*) and 7 (*x*) (page 18 of printed papers). The purchase of articles made in India under Rules 1 and 2 presents no difficulties. I am therefore of opinion that the present arrangements suit us well. I have had experience of purchasing through the India Office and also of purchasing direct from reliable firms and have found that the latter system is by far the more satisfactory. It might, however, be possible to improve the present system in some respects. Under existing rules articles cannot be ordered by telegram from foreign countries except through the Chief Secretary of the Local Administration. This roundabout way of getting things necessarily results in increased office work and delay.

4. The items in the questionnaire which I am to deal with are as follows :—

Question 1. For the Department of Agriculture—No; our requirements are not sufficiently definite in number or kind at present and we can do better by ordering them direct from manufacturing firms.

Question 3. I consider that the articles now required by the Department of Agriculture can best be purchased direct. Our purchases are mainly agricultural implements and scientific apparatus and chemicals for teaching or research purposes. The agricultural implements required for use in the villages have not yet been finally settled and considerable correspondence is still necessary at times between the staff of the department and the makers or agents.

I see no advantage in purchasing chemicals and apparatus through a central store. The number of firms supplying such articles is not large and the individual officer who uses these articles is more of a specialist and therefore in a better position to know how and where to meet his requirements than the officer of a Store Department would probably be.

Question 18. Yes, the stores enumerated in answer to Question 3 above.

Question 19. Not for such articles as Departments of Agriculture are likely to require.

Question 22. The purchasing officer can always refer to previous bills and as he is constantly concerned with the actual use of the articles purchased he is in a position to know whether the firm's goods are satisfactory or not.

Question 28. On receipt of the purchases they are checked from the invoice by a responsible officer.

The sum of money at the disposal of any officer for the purchase of stores is limited to his budget provision.

Question 29. In my opinion—No.

H. D. Coggan, Esq., of the Central India Mining Company, Kamptee.

With reference to the questionnaire issued by your Committee, a copy of which has been forwarded to me by the Under Secretary to the Chief Commissioner, Central Provinces, Department of Industries, I regret that it is not possible for me to formulate answers to all the questions specifically and as I am only able to express an opinion on the question generally, I have the honor to make the following observations:

Purchase.—I consider the formation of a Central Agency advisable for the purchase of stores for all departments of the Government of India as well as for local and *quasi*-public bodies, Company-owned Railways and British Colonies and Protectorates who buy stores in India, and I am of the opinion that they should contribute towards the maintenance of the Agency by the charge of a certain amount per cent. on the value of the stores purchased on their account.

I also advocate the formation of Local Agencies for the purchase of Government stores for Local Governments and for the purchase of stores required for the departments of the Government of India as far as these requirements can be met from the resources of their particular Provinces.

I consider that the Local Agencies should have as free a hand as possible in the purchase of stores for their own Provinces and that their relations with the Central Agency should be more for the purposes of reference than control. In the case of important contracts, the establishment of a Central Stores Department should render possible the introduction of simultaneous tendering in India and England and although the measure of decentralisation indicated in the preceding paragraph is desirable, I consider that the system of simultaneous tendering in India and England should also apply to important contracts for Local Governments as ensuring efficiency and economy but that such tenders should be arranged for through the Central Agency.

Inspection.—Although the organizations indicated in Appendices A & B appear to be efficient as far as the general question of purchase and inspection is concerned it seems too much to expect that the Inspectors that would be available under such organizations should have the specialised knowledge necessary for the efficient inspection of all stores required by the various departments and I therefore consider it advisable that the policy of inspection

should be dictated by the consuming department, or that the inspection agencies should at any rate have free recourse to the consuming departments in adjudging the suitability of the stores purchased. In the case of purchases by Local Governments, inspection by the Local Agencies should be independent of control by the Central Agency.

Home Indents.—The creation of Central and Local Agencies would naturally necessitate the modification of the Stores Rules of 1913 as far as the system of indents, financial limits, etc., are concerned in order to adapt them to the requirements of the proposed Agencies but their general principles should not be affected.

I consider that the purchase of European Stores should be made through established Indian branches of British manufacturing firms as tending to encourage the holding of stocks and the establishment of manufacture in India, provided that the prices of stores so purchased compare favourably with the cost at which such stores could be imported direct from manufacturers in the United Kingdom. I consider that all Home Indents for important purchases of say, above a certain value should be scrutinised by a central department in India before transmission to the Director General of Stores.

Stocks.—I do not advocate the formation of Central stock depôts by the Government of India as this would tend to discourage the holding of stocks by private firms as well as the establishment of manufacture in India.

General.—The total amount expended by my company on stores since 1910 amounts to about Rs. 7,50,000, of which about Rs.4,00,000 represented the value of imported stores purchased in India and about Rs. 3,50,000 Indian stores. No stores were purchased abroad.

Registers are maintained showing the prices of the stores purchased and the names of the firms from whom they were purchased, with remarks as to the quality of the stores supplied.

I consider that it would be quite feasible for the Central Agency to collect and disseminate to purchasing officers prompt and reliable information regarding prices, capacity and performances of contracting firms.

I do not consider that the inspection of stores for Company-owned Railways and local and *quasi*-public bodies by a Central Government Agency would constitute an interference with the legitimate sphere of private enterprise.

J. C. Ferguson, Esq., I.C.S., Officiating Commissioner, Northern India Salt Revenue, Agra.

Question 1. The evidence of the Northern India Salt Revenue Department must, I fear, be of small assistance. Before the war, when it dealt mainly in manual labour, the Department's purchases were of comparatively small importance and it appears neither to have formed any ideas on the purchase question nor to have had any particular difficulties or troubles. Since 1914 when a large expansion of its activities became imperative, war conditions have so entirely obscured the normal issues that it is impossible to base any useful opinions on its experiences. Much of what was wanted, *e.g.*, electric plant, could not be obtained at all, much had to be got as best it could be, hired, borrowed, bought secondhand, etc., when and where it could be found. Such opinions as I can advance must necessarily, therefore, be *a priori*, and I put them forward with diffidence.

The formation of a central agency for the purchases of stores would, in the opinion of this Department, be of great advantage to it. Our cheif demands in future will be—for the Khewra Salt Mine—electric power plant, cutting machines, endless rope haulages, tubs, track, salt-screening and wagon loading plant, weighbridges, surveying and measuring instruments, etc.,—for Sambhar Lake—power plant (electric or crude oil), pumps, tubs, track, storing and (possibly) bagging machinery—and in general—gunny bags, clothing (mainly khaki drill), oil, coal, timber, pipes, tarpaulins, etc., etc. The valuable assistance and advice which we received from the Munitions Board during the War suggest that the establishment of a Central Agency, in touch, as departmental officers cannot hope to be, with all the big manufacturing firms both in India and Europe and with industrial developments throughout India, from which such advice and assistance would be permanently available, would be of considerable benefit to the Salt Department whose officers, in its absence, have often to depend on the not necessarily disinterested advice of such firms as are known to them in this country and cannot always be certain that they have gone to the best place or secured the best article at the best price. Against the Stores Department of the India Office this Department has, so far as I can ascertain, no complaints, but there is inevitable inconvenience and delay in dealing with an authority at so great a distance.

Question 2. No special arrangements appear to be required for the Northern India Salt Revenue Department, as compared with other departments using comparable machinery and plant.

Question 3. Consuming officers might conveniently themselves purchase ordinary stores locally produced, and, in order to relieve the agency of numbers of small indents, stores of all kinds when the cost does not exceed such a figure as may be fixed as suitable.

Question 4 and 5. These do not concern the Northern India Salt Revenue Department.

Question 6. The Department's only two big purchasing branches being at Sambhar in the Jodhpur State (in Rajputana) and at Khewra in the Jhelum District of the Punjab—a province from which practically none of our wants will be supplied and its chief demands being such as have been already described, it would seem simplest for us to indent on the Controller-General of Stores, who could arrange for supply through a local agency, if such a channel were in any instance convenient. In practice orders would doubtless issue within a very short time, laying down to whom particular classes of indents should go.

Question 7. None.

Question 8. It should do so. But simultaneous tendering may lead to very considerable delay and should be confined to matters in which there is no element of urgency.

Question 9. The policy of inspection should undoubtedly be dictated by the consuming department. There is always a risk that the alternative suggestion might some time expose the patrons of the industries to charges of partiality.

Question 10. Such an arrangement appears suitable, subject to the condition mentioned in the answer to the last question.

Question 11. No such special organisation is required for the Northern India Salt Revenue Department.

Question 12. No articles of which I have expert knowledge.

Question 13. The statement of the central inspection agency might fittingly be distributed in convenient centres throughout the country and inspection areas allotted to each unit of it in regard to purchases made within the area.

Question 14. If a real advance is to be made it seems desirable to amend the rules so as to make quality and price alone determine whether any article (wherever it may have been manufactured) which is available in India shall or shall not be bought in India.

Increase of financial powers for the Commissioner, Northern India Salt Revenue, would be welcome. We might conveniently be given the powers of a local government.

Question 15. Here again the conditions of quality and price alone appear essential. *A priori* the concession should encourage both the holding of stocks and the establishment of manufacture in India.

Continued.] Mr. J. C. FERGUSON.

Question 16. Yes, unless excessive delay is to be feared from the introduction of such scrutiny.

Question 17. No.

Question 18. Spares for, additions to, and duplicates of machinery and plant already in use might conveniently be procured without the intervention of the Director General of Stores.

Questions 19 and 20. I am unable to express any useful opinion.

Question 21. The figures are as follows—(please see statement below).

Total amount expended by the Northern India Salt Revenue Department each year since 1910 on—

Year.	(a) Stores purchased abroad.	(b) Imported stores purchased in India.	(c) Indian Stores.
	Rs.	Rs.	Rs.
1910–11	502	1,362	22,177
1911–12	9,523	9,847	5,975
1912–13		2,476	12,831
1913–14	-	1,863	10,644
1914–15	2,238	31,869	47,036
1915–16	27,056	21,967	26,686
1916–17	2,333	32,272	49,099
1917–18	937	1,38,430	73,394
1918–19	57,381	20,672	57,740

Question 22 a. No separate record is maintained.

b. No such record is maintained.

Question 23. I doubt it as regards prices. Direct enquiry from approved firms by the officers concerned seems inevitable. But it ought to be possible to supply information regarding the capacity and performances of at least the chief firms.

Question 26. None.

Question 27. Unobjectionable if the charge is made only on orders actually placed.

Question 28. (See the answer to Question 22.) The cost of stores purchased through the Director-General in England is adjusted in the Home Accounts with which this Department has no concern. The purchase in India of stores costing over Rs. 10,000 requires the previous sanction of the Government of India. Such purchases have been few, mostly recent, and made under war conditions in connection with the hurried expansion of the Khewra and Sambhar sources. There is no separate audit of the purchases of stores.

Question 29. Presumably it would help to do so.

Question 30. Not, I think, essential, but it might help towards a good understanding and easy working.

J. A. KELLIE, Esq., Agent and Chief Engineer, Rohilkhand and Kumaon Railway.

Question 1. I consider the formation of a central agency for purchase on account of departments of the Government of India advisable in the interests of the industrial development of India, because such an agency properly constituted would be in a favourable position to encourage such development by giving preference in purchasing to indigenous products and articles of Indian manufacture where the quality is sufficiently good for the purpose and the the price not unfavourable, and thus remedy the prejudicial effects on Indian industry of the present tendency on the part of responsible officers to evade responsibility by obtaining the bulk of their requirements through the Director-General of Stores irrespective of whether any of these could be favourably obtained in India.

Question 2. The Central Agency by employing a sufficient number of specially, qualified experts for inspection purposes could, I consider, be entrusted with the purchase of machinery and plant materials and consumable stores for all departments of the Government of India.

Question 3. Building materials, etc., should not be purchased by the central agency when these can be got locally. The purchase of local supplies should be arranged by the Officer-in-charge of the work.

Question 4. It might be advantageous in some cases for local and *quasi*-public bodies, company-owned railways and British Colonies and Protectorates which buy stores in India to make their purchases through the central stores agency. In such cases their contribution towards the maintenance of the agency should be in the form of a percentage charge on the purchases made.

It should not, however, be made obligatory for any of these bodies to make their purchases through such a central agency. They should be at liberty to call for quotations from the central agency and also on the open market yearly and to make running contracts on their own behalf and so be in a position to avail themselves of the most favourable terms obtainable, it being assumed that the officers employed by such bodies are qualified to decide regarding the quality and suitability of the more favourably priced articles. A comparison between the purchases of such bodies and those of the Central Agency would be valuable as a mutual check.

Questions 5 and 6. A central stores department would be, I consider, a suitable agency for the purchases of the general requirements of local Governments, but in each Province there should be a local agency for the purchase of the products and manufactures of such province and their distribution within the province and to the Central Stores Depôt for supply to other provinces.

Question 7. No.

Question 8. This ought to be feasible.

Question 9. In the meantime the policy of inspection should be dictated by the department responsible for the industrial development of the country. The consuming department should, however, have the right of appeal to the Controller-General of Stores as against the inspecting department when in the opinion of the officers responsible the quality of the materials supplied is not good enough for the purposes for which they are required.

Question 10. Inspecting officers should be absolutely independent of the purchasing agency.

Question. 11. It should, I consider, be possible by the employment of the necessary experts, to have all inspections carried out by the central agency.

Question 12. No.

Question 13. The inspection should be carried out, under proper arrangement, by the central agency.

Question 14. The discretionary and financial powers of the agencies would need to be greater than those provided for in the stores rules of 1913.

Question 15. All purchases of European stores should be made by the agency in direct communication with the manufacturer. This would reduce the holding of large stocks in India but would also encourage the establishment of manufacturing concerns in India.

Question 16. Yes.

Question 17. Arrangements could be made for the periodical receipt of priced catalogues from leading firms in the United Kingdom and in India.

Question 18. Stores required outside the United Kingdom might be purchased by central purchasing agency.

Question 19. I would advocate the formation of central stock depôts by Government.

(*a*) This would in all probability reduce the total quantity of stock held now by government departments.

(*b*) It would reduce the holdings by private firms.

Question 20. The depôts should be situated near the chief industrial centres of each province.

Small stocks of Indian stores should be held.

Question 21.—

	Rs.
(*a*) Stores purchased abroad.	3,08,006
(*b*) Imported stores purchased in India.	8,13,971
(*c*) Indian stores.	26,47,223
Total Rs.	37,69,200

The figures given are for the four years 1915-16 to 1918-19. Figures for previous years are not available in this detail.

Question 22. Contract rate lists are maintained and copies of all bills paid are kept for record and reference.

Question 23. This ought to be quite practicable.

Question 24. No remarks.

Question 25. Yes, if made compulsory in all cases. These bodies should be allowed to a certain extent to choose their own purchasing and inspecting agencies.

Question 26. My views are that only men of the very highest integrity should be chosen for the central and local stores departments, and that they should be highly paid so that the posts would be sought after by the best class of men.

Question 27. Yes.

Question 28. State-worked Railway rules on the subject are followed.

Question 29. This should result.

Question 30. Interchanges of personnel between the Home and Indian Stores should be arranged in the cases of certain picked men only.

Colonel E. C. OGILVIE, C.M.G., C.B.E., Commanding Royal Engineer, Meerut Division.

Question 1. Yes. I consider it would be of great assistance to officers of the Military Works Services.

Owing to the general uncertainty as regards the allotment which will be received for works it is now difficult to foresee what stores are required in time to obtain them from England, and any system which will accelerate the supply and enable articles to be obtained locally will be much appreciated.

Generally when stores have to be purchased locally, the officer concerned sends round to various reliable firms and asks for quotations. His range is very limited and he has to take what he can get, probably on much less advantageous terms than a central agency could obtain. Unless he can get a local officer of the Military Works Services to pass the stores before despatch, he is more or less at the mercy of the firm as regards quality, and on account of the delay involved probably has to accept them, even if not up to standard.

Question 2. The stations administered by the Military Works Services are widely scattered over the whole country, but their requirements as regards purchase are not as a rule, of any very special character, and arrangements suitable for Public Works Department, Railways and other Government Departments should satisfy their wants.

Question 3. There does not seem to be any necessity for the intervention of the central agency in respect to stores produced in the locality, such as bricks, tiles, lime, etc., or timber and firewood when it is grown on the spot.

The consuming officer will be quite capable of inspecting and purchasing such classes of stores. It will always be necessary to make small local purchases of articles which are in common use by the general public.

Question 4. Not applicable to Military Works Services.

Question 5. Not applicable to Military Works Services.

Question 6. I think it would be desirable to obtain stores through local agencies when practicable. They would be in touch with local conditions, Railway Companies, etc., and there should be economy in consolidating contracts, running and otherwise, for all the consumers in one locality. They would also keep an eye on the general improvement of the district.

Question 7. No, except as stated in Question 1.

Question 8. I have no information about this.

Question 9. I think the policy of inspection should be dictated by the consuming department. The danger of lowering standards to suit a particular industry might be considerable, especially when they were used by officials accustomed to standard articles, and it would be better to make the industry strive to obtain these standards.

Question 10. Yes.

Question 11. No special inspection organization required for the Military Works Services.

Question 12. No, I assume that expert inspection will be available for machinery, pumping and electric plant, cement, etc.

Question 14.—

Rules 3 (*a*) and 5—I see no reason for continuing the financial limit in Rule 13.

Rule 12—The central purchasing agency need not be restricted as to the supplying firms, if it is satisfied regarding quality and country of origin.

Question 15. Purchase of European stores should be permitted when prices are favourable, speedy delivery is assured, and the quality is satisfactory, such as in the case of recognized standard manufactures. The purchase of goods other than those of British, Colonial, or Indian manufacure should not be permitted for Government purposes.

Question 16. Yes. No doubt in some cases it could be shown that local purchase would be equally satisfactory. Indents would be standardized and doubtful points made clear before transmission to England, thus avoiding delays.

Question 17. No, but no doubt all firms would recognize the importance of sending their price lists to the central agency, and learn to index them properly.

Question 18. No.

Question 19. Yes.

(*a*) It would certainly tend to decrease the quantities of articles held in numberless small stocks all over the country.

(*b*) It might at first adversely affect the holding of stocks by the private firms, but when it was found that certain articles were always available in the market in sufficient quantities, the Government stocks could cease to hold them.

Question 20. I approve of the formation of central stock depôts. Before the war, the Assistant Commanding Royal Engineer at the main ports held reserve stocks of imported articles, *e.g.*, R. S. Joists, Water Supply materials, hardware and small stores, etc., which were of the greatest convenience to officers upcountry, who know at once where they could obtain standard articles, and fixed prices on which to base their estimates.

The central depôts should be situated at the ports, and also at convenient inland centres, such as Lahore, Delhi, Lucknow, etc., to avoid delay on the Railway and excessive freight charges on small quantities.

A Field Park, to meet Military requirements in War, is now established at Lahore (and there may be one at Quetta), and it should be able to reduce its holding if it worked in conjunction with the central depôts.

It might be an advantage to stock certain Indian stores also of which there is sometime a difficulty in obtaining adequate quantities when required, such as turpentine, linseed oil, etc. The price of timber would probably be steadied if sufficient stocks were held. The timber depôts would probably be near the sources of supply say, Jhelum, Doraha, Nowshera and Sukkur in the North, and at the ports in the case of Burmese and Australian woods, etc.

Question 21. This information will no doubt, be obtained direct from the Director-General, Military Works, for the whole of the Military Works Services.

Question 22. (*a*) Half-yearly Registers of stock are maintained in district offices, in which the prices paid for stores are recorded. These prices include incidental charges, Railway freight, carriage, etc.

In the case of stores which are charged off direct to works and which do not pass through stock, no special records are maintained, and the transactions would have to be looked up separately.

(*b*) Catalogues of firms are maintained in district offices. No other records are as a rule kept, except a confidential book, maintained by Assistant Commanding Royal Engineers, in which remarks concerning contracting firms are made.

Continued.] Col. E. C. OGILVIE.

Question 23. I think it would be feasible for a central agency to collect and disseminate a great deal of information about contracting firms, which would be of the greatest use to purchasing officers, who should also be encouraged to send in remarks on the firms' performances.

Question 26. No.

Question 27. A percentage charge on purchases would probably be the fairest way of covering the cost of the Department. It might be necessary to fix a sliding scale of percentages for different classes of goods.

Question 28. Quotations are obtained from various firms, and orders placed with the most satisfactory, at the discretion of Assistant Commanding Royal Engineers.

The bills are verified by the officer receiving the stores, the allocation is noted on them, and the rates checked with the quotations. The receipted bills are then sent for audit with the monthly accounts.

If the stores are brought on to stock they are entered in the stock register which is sent to the audit officer half-yearly for audit.

In the case of stores charged direct to works, the expenditure is shown under the subhead of the estimate concerned in the register of works, which is examined by the audit officer during his inspection of the district.

Question 29. I do not know that it would make any appreciable difference as regards audit. No doubt the rules would be found less irksome, and inadvertent contravention of them would be less frequent.

Question 30. Interchange of personnel should be most beneficial.

W. F. PERREE, Esq., President, Forest Research Institute and College, Dehra Dun.

Question 1. So far as this institute is concerned a central agency for the purchase of stores is not necessary.

The President, Forest Research Institute and College, is included in the list of officers who may indent direct for stores required for experimental and research purposes.

Question 14. So far as this institute is concerned no change is necessary.

Question 16. The scrutiny of a central department appears unnecessary for our purpose. Delays are already excessive and the imposition of further delays in a central office would not bring any advantages commensurate with the delays involved.

Question 19. Yes, a number of chemicals which are in common use in chemical laboratories could usefully be kept in stock by the Medical Store Department. I do not thereby advocate a fresh stock depôt but an elaboration of the existing depôt which might become the Chemical and Medical Stores Depôt.

Question 20. At existing stations.

Yes, they should include articles of foreign and Indian manufacture. The object of including the latter is to ensure that the stores are of good quality.

Question 21. See table below.

Year.	Stores purchased abroad.	Imported stores purchased in India.	Indian Stores.
	Rs.	Rs.	Rs.
1910–11	..	852	333
1911–12	225	1,430	903
1912–13	142	4,284	133
1913–14	..	24,227	2,559
1914–15	..	1,124	3,075
1915–16	224	852	845
1916–17	371	1,052	1,393
1917–18	..	1,872	2,073
1918–19	..	271	716

Question 22. (*a*) *Nil.*
(*b*) *Nil.*

Question 23. If a central agency is justified it should certainly make it its business to disseminate to purchasing officers (1) the nature and prices of all stocks at the depôts also (2) the names of approved firms to whom indents can be sent direct.

Question 27. I see no objection to this provided the charge does not raise the price of materials beyond the ordinary retail price at which they can be purchased direct from the manufacturers.

The relatively small value of the stores required for this Research Institute makes it unnecessary to change existing procedure. The greatest inconvenience is however felt from delays in transmission. For instance an indent for apparatus and chemicals sent up in September was received back for purposes of proof-correction on 2nd January last. It is also felt that insufficient touch is maintained between the Stores Department in England and indenting officers. From the time that an indent is submitted it is usually the case that nothing is heard until the goods have arrived in India. Meanwhile it is difficult to know what is taking place and make-shift arrangements are required to carry on, sometimes to the detriment of Government interests. In dealing direct with firms this disability is minimised as it is always possible to learn by return mail when an indent is likely to be shipped.

For the special requirements of this institution it would answer all requirements to limit the functions of the Stores Department in England to the circulation of information giving names of reliable firms on whom indents can be made. I have already indicated that the expansion of the Medical Stores Department to include Chemical Stores would answer a useful purpose.

I do not advocate the inclusion of mathematical or scientific apparatus among the articles to be kept in India as too often this results in the supply of obsolete material or substitution of a pattern which is not asked for. Such material should be obtained by direct indent upon approved makers.

J. W. A. GRIEVE, Esq., I.F.S., Conservator of Forests, Eastern Circle, Punjab, Lahore.

Question 1. I do not advocate the formation of a central agency for purchases on account of the Forest Department.

It is essential that the users of the materials should be in as close touch as possible with the authorities sanctioning their purchase. To effect this, Forest Utilisation Circles in each province must be re-organised in the manner suggested by Mr. A. J. Gibson, I.F.S., in paragraph 27 of his Note dated Dehra Dun, 21st November 1919, which runs as follows:—

> "A satisfactory solution of the difficulties outlined would appear to be the re-organization of the Utilisation Circle practically on a company basis and to provide for management by a Board consisting of Government officials and business men as suggested in the annual report of the Circle, and in the late Chief Conservator's Note on the subject, Appendix IV. On the analogy of a company Government would represent the shareholders, the Board, the Directors, and the Direction Division of the Utilisation Circle the Managing Agents."

The quantities of stores required by this board are by comparison with those required by Railways, very small, though they may be expected to increase very largely in the near future.

The absolute essential is the prompt supply of material indented for. To insure this, the officer indenting must be in direct touch with the suppliers. Ordinarily he himself will be sufficiently expert to buy his own material without reference to any one outside the department, but in cases where he is not, it is essential that expert advice should be easily accessible. This will not be the case if he has to refer to a central agency: nor is it likely that any central agency could comprise experts on all the classes of material which it would be called upon to purchase.

Question 9. In the case of the Forest Department "the consuming department and the department responsible for the industrial development of the country" are at present one and the same. The work of the Utilisation Circles which will deal exclusively with the economic development of the Forests, will always have to be subservient to that of the ordinary forest department which is primarily responsible for the supply of its wants to the local population. I consider that the Utilisation Conservator should have power to appoint technical experts as Inspecting officers for each particular class of work. He should be empowered to employ outside experts from any firm or other source whether in this country or not, on payment of fees at his absolute discretion. Thus, in the earlier stages of their development, it might be necessary to obtain expert advice, in such highly technical industries as Turpentine production and saw milling from France or America.

But ordinarily, the technical experts in the regular employ of Government should be capable of passing or rejecting the material ordered by them.

Question 10. The inspecting officer where employed would be independent of but would work under the control of the purchasing agency.

Question 11. The forest department requires to be reorganised on the lines suggested in paragraphs 27 to 34 of Mr. Gibson's note, or selected projects might be dealt with on the lines suggested in paragraph 35.

Question 12. No.

Question 13. Local inspection agencies must be provided for as and when required.

Question 14. Yes. The Utilisation Conservator aided by necessary outside advice would control all purchases without reference to any other agency. Any project he put up would be passed by the Provincial Financial authorities, after which he should have full powers to spend the sum given him.

Question 15. Under any conditions considered necessary by the Utilisation Conservator and his advisers.

Question 16. No.

Question 17. It would be the business of the purchasing department to keep in touch with the prices of materials, both at Home and in India.

Question 18. I consider that the Utilisation Conservator should purchase in any country at his discretion.

Question 19. Whether stocks should or should not be held in India would depend entirely on the nature of the concern. The Utilisation Conservator should be empowered to negotiate with firms in this country with a view to retaining stocks of materials ordinarily unobtainable in it, where necessary. He should also determine where such stocks should be kept.

Question 21. The total amount expended by this Department is as follows:—

Year.	Stores purchased abroad.	Imported stores purchased in India.	Indian stores.
	Rs.	Rs.	Rs.
1910–11	54,366	9,497	...
1911–12	15,383	13,091	...
1912–13	5,701	32,645	...
1913–14	12,490	27,024	24,688
1914–15	19,160	27,229	13
1915–16	18,170	48,323	...
1916–17	15,960	53,284	...
1917–18	21,699	1,05,270	...
1918–19	16,451	1,24,249	66
Total . . .	1,79,380	4,40,612	24,766

Question 22. No special arrangements are in force in the Forest Department for maintaining the records in question.

Question 23. The collection and dissemination of all economic information will be part of the business of the Utilisation Conservator.

Question 25. Not in the case of the Forest Department.

Rai Sahib Lala Panna Lal, nominated by the Punjab Chamber of Commerce.

A general Agency for the purchase of stores in India, under the Government of India as a connecting link between the Provincial Agencies when one province has to buy in another province may be established and staffed with several experts. This arrangement will assist the development of Indian Industries and enable Government to place large orders with firms of known efficiency. Each expert may be a specialist in a particular line so that the different departments of Government may be efficiently served.

When a provincial Director of Industries is in a position to fulfil the requirements of his Local Government in his own province with articles of a standard quality at the most favourable rates, he should be permitted to make his purchases up to the limits allowed to his Local Government without any interference from the Central Agency, except when requirements of a similar nature of various provinces indicate the probability of securing still more favourable rates by being grouped together.

Purchase of Stores for British Colonies and Protectorates in India should be left to other than Government Agencies so that private enterprise may not be prejudiced.

Purchases made through Central or Provincial Agencies should pay 2½ per cent. as a contribution towards their maintenance, the said contribution being divided half and half between the Central and Provincial Agencies when a third province is the buyer. But for purchases made by the prospective Local Self-Government Board (under the Reforms Act) on behalf of Local and quasi-public bodies through Central or Provincial Agencies a similar division of contribution should be made between the Board and the Agency concerned.

When quality and prices are favourable, requirements of the several departments of the Government of India should be entirely purchased in India through one or more Provincial Agencies, failing which whole or partial indents may be sent to the Stores Department in London, treating provincial requirements similarly if need be.

In cases, where rates for goods tendered from England are less than those tendered in India, and the difference, including freight and port charges, is 15 per cent. or under, preference should be given to Indian tenders. The Central Stores Department in India may simultaneously advertise its requirements both in England and India.

Inspection Agency should be attached to the Central Agency and send inspection reports through the latter to the consuming and purchasing departments, the latter sending copies to the manufacturers or suppliers as warnings or appreciations as the case may be. A healthy atmosphere will prevail all round, if Inspection Agency be kept above local influence.

Stores Rules of 1913 may be amended in the light of remarks made above.

Indents before their transmission to the London Stores Department should be scrutinised by the Central Agency in India.

Continued.] Rai Sahib Lala PANNA LAL.

Quotations of prices from England and India may be ledgered opposite to each other under individual heads, and this arrangement will facilitate reference.

In my opinion the keeping of large stocks in India will not affect private interests, and they may be maintained in central positions, whence they may be distributed for public services. Bombay, Calcutta, and Karachi will do for this purpose, so far as exported goods are concerned, but for goods purchased in India other places like Lahore, Ambala, Delhi, etc., may be selected.

H. R. PHELPS, Esq., nominated by the Punjab Trades Association.

Question 1. No, but merely a Central Bureau of Information and Statistics, with which the Finance Departments of each Province should be in direct touch on the one hand, and the Head of the Provincial Purchasing Agency on the other. I suggest that this Central Bureau should collect and collate all information as to prices prevailing and provide the Government of India with the necessary statistics, being always with the Government of India in Simla and Delhi.

I do not advocate a Central *Purchasing* Agency, as serious delays must be inevitable owing to red tape. I suggest Provincial Purchase Agencies, for both Government and Provincial purchasing. (One concern).

Question 2. No remarks, except that there must be natural centres where it is convenient to purchase requirements for each Department mentioned. I favour decentralization for purchases and a single eye watching and comparing the statistics and variations in rates from Head Quarters.

Question 3. No remarks.

Question 4. Certainly. I would encourage the Provincial Agencies to buy for bodies mentioned and charge 5 per cent. agency-fee. It would probably in time teach those bodies to be independent.

Question 5. (No remarks—see end of my Paragraph 1.)

Question 6. No, but Provincial Agencies should do the necessary buying for Government and Local Governments. It is merely a question of debit. These Provincial Agencies naturally become huge business agencies and open account books in regular form ; these books and stocks would be regularly audited under the Central Bureau instructions.

Question 7. None.

Question 8. The Central Bureau could arrange for the simultaneous tendering for contracts.

Question 9. Each Department of the Government of India might have an Expert officer with a small staff of experts for inspection of Stores, but Provincial Agencies should be qualified to do their own inspection and the final receiving officer of *Consuming* Department held responsible for acceptance or rejection of Stores. The Bureau under the control of a Director-General and Staff might be considered the final authority in case of disputes. No inspecting staff would be necessary.

Question 10. By the Central Bureau.

Question 11. Each Department probably has a special Inspection Department already, which would not interfere with my suggested scheme.

Question 12. I should suggest that if the Munitions Board is to continue that special specialised officers should be retained to advise when necessary.

Question 13. I have already anticipated this question in 1 and 9.

Question 14. It is difficult for me to answer this as I do not know what buying agency Government have at Home, but I should say that clauses referring to an officer's powers of purchase should be entirely struck out as unnecessary from the Stores Rules 1913—and an officer's powers to indent might conceivably be unlimited instead (he would be responsible).

Question 15. The ordinary conditions of demand and supply—if Government or the Provincial Governments purchased freely from English firms, in time firms would be encouraged to stock to meet these requirements.

Question 16. No, I do not consider scrutiny of Home indents necessary if responsible officers attest their necessity.

Question 17. My No. 1 reply meets this case. I fear a central buying agency would be too cumbersome, too complicated and not up-to-date, but a bureau of information watching Government and Provincial expenditure, etc., would be the natural solution.

Question 18. This will be answered by experts.

Question 19. No, certainly not. My experience, based on hearsay, to some extent, is that Government lose a vast sum of money by (1) indiscriminate purchases of stock which eventually deteriorate, (2) firms can look after themselves and learn to be prepared for emergency. Government Departments would naturally keep forward stocks.

Question 20. My Nos. 1 and 2 answer this, in my opinion.

Questions 21-30. are obviously questions not concerning my opinions. I cannot, however, help saying to No. 30 that a properly constituted department of officers will have to be established—officered by men who would pass examinations—and that obviously a system of interchange as with the Indian Civil Service would be desirable. Style the Indian Government Purchases Department: Bengal, Bombay, Madras, Punjab, etc., with appropriate titles. What need there is for Director of Industries I do not see —the term is misleading.

I shall be in Simla first week in April should I be required.

K. PRESTON, Esq., Electrical Engineer, North-Western Railway, Lahore.

Note on the Supply of Electrical Machinery from England.

1. I submit herewith a few notes in connection with the procedure now in force for the supply of Electrical Machinery from England.

2. There are now two Technical Sections in London dealing with the supply one being the Electrical Branch working under the direct orders of the Director-General of Stores at the India Office. The other section is the Consulting Engineers Messrs. Rendel Palmer and Tritton.

The Electrical Branch in the Stores Depôt deals with all demands for Electrical Stores from the Telegraphic Department, the Military Works Department, Irrigation Branch, the Public Works Department and *some* of the Stores demanded by the State Railways.

The Consulting Engineers deal with all the demands for Electrical Stores from—

The East Indian Railway.
The Bombay, Baroda and Central India Railway.
The Bengal North-Western Railway.
The Madras and Southern Mahratta Railway.
Several small Railways such as Jodhpur-Bikaneer Railway.
All the train lighting plant and some of the other demands submitted by the State Railways.

The Bengal-Nagpur Railway, the Great Indian Peninsula Railway and the South Indian Railway have their own Consulting Engineers.

3. There is little co-operation between the Electrical Department of the India Office Stores and the Consulting Engineers, for example hitherto although both sections have been dealing with plant for the same Departments in India, the standard specifications issued by each differed considerably. Attempts were made in 1919 to bring both specifications into line but up to the time I left England

nothing had been decided and I was informed by the purchasing officer in the Stores Depôt that even if the Consulting Engineers Specification was accepted and used for Railway work it did not follow that it would be used for work for other Departments, such as the Public Works Department, Military Works and Irrigation Branches, although it is obvious that a machine built to suit the requirements of the Railways should be equally suitable for any other Department in India.

4. Further there seems to be no definite policy as to whether the Electrical Department of the Stores Department or the Consulting Engineers should deal with an indent and cases have occurred in which, of two demands from one Railway for exactly similar plant, one has been dealt with by the Consulting Engineers and the other by the Stores Depôt. I understand that on more than one occasion Inspectors from both branches have visited the same works in the same week to inspect similar machines being supplied to different orders for the same Railway.

Further, indents that require special technical advice are not always referred to the Consulting Engineers and others that require no special instructions are. As an example I quote the case of a 600 K. W. Generating Set for the Oudh and Rohilkhand Railway which obviously should have been dealt with by the Consulting Engineers but was dealt with by the Stores Depôt and the specification that was issued for the plant was extremely vague.

In fact the policy of the Director-General of Stores seemed to be to make use of the Consulting Engineer's Electrical Department as little as possible which seems a pity, because of the two branches I think that the Consulting Engineer's Staff both in the office and outside on inspection work is better able to look after technical points than the staff employed in the Stores Depôt.

5. The present procedure for obtaining electrical plant is—

> The Electrical Engineer scrutinizes the Home Indent which is then sent to the Director-General of Stores who issues it to the Electrical Branch of the Stores Depôt or to the Consulting Engineers who prepare specifications and return them to the Director-General who invites tenders. On receipt the tenders are sent to the Stores Depôt or the Consulting Engineers for report and are then returned to the Director-General who places the order. Any technical questions that arise after the order is placed are referred to the Stores Depôt or the Consulting Engineers and if they cannot be answered are in turn referred to the Electrical Engineer in India through the Agent.

This procedure obviously involves considerable delay in getting the stuff and much inter-office correspondence and is the subject of adverse criticisms amongst the Electrical Manufacturers.

6. The Consulting Engineers under the present procedure are consultants in name only and their correct title should be Inspecting Engineers. The staff in the Stores Depôt are purchasing officers. Neither the Consulting Engineers nor the Stores Depôt ever send any of their staff to India to ascertain the local conditions or offer advice to the Resident Engineers, and neither branch officially attempts to keep the officers in India up to date with technical publications or details of Electrical developments in other parts of the world. Neither branch has any knowledge of the purposes for which the plant is required other than the information they can glean from the indent or from private correspondence between them and the Resident Engineer in India. Also from information I gathered whilst in London neither branch has very much idea of buying in the best and at the same time the cheapest markets.

7. Before suggesting a revised and better method of purchasing electrical stores I give a few particulars of the position of the Electrical Industry in India.

(A) *Electrical Accessories* in which are included

(*i*) Electric Cables,
(*ii*) Lamps,
(*iii*) Shades,
(*iv*) Fittings, etc.
(*v*) Fans,

are obtainable from at least a dozen firms in India either direct representatives of the Parent Company in England or Agents for reputable English Manufacturers. All commercial firms in Calcutta, Bombay, etc., purchase these requirements locally. Government Departments and Railways generally purchase locally when in stock only otherwise indents are sent to England and whilst on deputation I saw several indents for short lengths of cable, switches, ceiling roses and similar accessories which can be purchased over the counter in India.

(B) *Train Lighting Equipment.*

The following firms are represented in India :—

Messrs. J. Stone and Company.
Messrs. Mather and Platt.
Messrs. Vickers, Limited.
Messrs. Chloride Accumulator.
Messrs. Prichard and Gold (Agents).
Messrs. Tudor Accumulator Company (Agents).
Messrs. D. P. Battey Company (Agents).

Most of the Train Lighting requirements are indented for from England.

(C) *Electrical Plant Engines and Boilers.*

Messrs. The Metropolitan Vickers Electrical Company.
Messrs. The English Electric Company.
Messrs. The British Thomson Houston Company.
Messrs. Electro-Motors (Agents).
Messrs. Bruce Peebles (Agents).
Messrs. Laurence Scott (will shortly open an office in India).
Messrs. Lancashire Dynamo Company (will shortly open an office in India).
Messrs. The General Electric Company of India.
Messrs. Babcock and Wilcox.
Messrs. Ruston Proctor Oil Engines and Boilers (Agents).
Messrs. Tangye, Limited, Oil Engines and Boilers (Agents).
Messrs. Marshall and Company, Oil Engines and Boilers.
Messrs. Broohirst and Company, Electrical Starters (Agents).
Messrs. Worthington Pump Company, Pumps, etc.
Messrs. Belliss and Morcom, Limited, Steam Engines and Turbines.
Messrs. Parsons Steam Engines and Turbines.

Sundry other agency firms who deal in small engines Petrol Sets, Electrical Instruments, etc.

All Railway, Military Works, Irrigation demands for plant now manufactured by the above firms are invariably sent to England for execution. All commercial firms in Calcutta and some of the Government Departments such as the (Public Works Department Electrical Inspectors Branch) purchase their requirements through the firms in India for forward delivery. In this connection I might mention that the orders for the Delhi Durbar Plant, the Hardwar Dam Plant, the Simla Hydro-Electrical Plant were all placed in India for forward delivery and all schemes were quite successful; and further that certain Government Electrical Engineers other than Railway Engineers purchase all their plant in India and strongly object to indents being sent through the India Office.

8. I now submit the following suggestions for consideration :—

(a) That all accessory stores enumerated in paragraph 7 (A) should be purchased in India through the Chief Storekeeper of the Railways concerned whether the stores are actually in stock in India or not. In the latter case orders should be placed in India for forward delivery.

(*b*) That a Consulting Engineer either employed by Messrs. Rendel Palmer and Tritton or some other firm or direct by Government should be resident in India. That all demands for plant and stores enumerated in paragraphs 7 (B) and 7 (C) should be sent to him direct by the resident engineers on the Railway.

(*c*) That he should obtain quotations for the plant demanded (other than for electrical machines direct coupled to or forming parts of machine tools and cranes) and that on receipt of such quotations he should forward them to the Railway Electrical Engineers with his recommendations or comments.

(*d*) That the Stores Department of the Railway concerned (after scrutinizing by the Railway Electrical Engineer) should place the order direct with the Manufacturer F. O. B. British or F O. R. Indian Port.

(*e*) That a copy of the order should be sent to the Consulting Engineer in India who would inspect the plant in India if purchased from stock, or would arrange through his principals in London to inspect the plant before shipment from England if purchased for forward delivery.

9. The above is only a very brief outline of the proposed procedure and I realize the question of payment for and shipment of stores from England would have to be considered.

If some such scheme as outlined above is introduced I believe it would—

(*i*) Eliminate much unnecessary delay and correspondence.

(*ii*) Ensure that the plant is suitable for the purpose for which it is required and that it is the latest type of its kind.

(*iii*) Keep the Consulting Engineers and the Railway Electrical Engineers in close touch with each other.

(*iv*) Enable all technical points to be quickly settled.

(*v*) Reduce the cost of purchasing the plant.

(*vi*) Encourage British Firms to develop their Indian Branches.

10. It may be argued that purchasing through firms in India would increase the cost of the goods.

This is not so in the case of the firms who have their own offices and staff such as the Metropolitan Vickers Company, The British Thomson Houston Company, etc., who can quote English prices with or without freight charges, etc.

In the case of firms represented by Agents it is probable that the cost of the plant would be 5 per cent. to 10 per cent. above English prices but I believe that once it is decided to purchase Electrical Plant in this country many of the firms now represented by Agents would send out direct representatives and open up their own offices.

11. The above scheme is primarily intended to apply to the purchase of Electrical Plant for Railways but if adopted, could be extended to embrace electrical plant purchased by all other Government Departments in India.

12. In conclusion, I would like to make clear that the criticisms offered are directed against the present system and not against any individual either in the India Office or the Consulting Engineers from all of whom I received nothing but courtesy and assistance during my deputation in England.

Flight Lieutenant J. Robertson, R.A.F., Superintendent Aircraft Factory, Lahore.

I regret that the department of which I am in charge, not having been concerned in the actual purchase of Aeronautical Stores I am not in a position to put forward any recommendations for this branch.

Question 9. Having regard to the stringent inspection which is demanded for all Aeronautical Stores it is most essential that the policy of inspection should be dictated by the consuming department.

Question 10. Inspection should be carried out by a Central Agency, independent of, but working under the same control as the agency for the purchase of stores.

Question 11. Special inspection organizations of their own would be required for Air Force stores.

Question 12. Specialised inspection is required for all Aircraft timbers, metals, fabrics, paints, varnishes, glues and dopes.

Question 13. Having regard to the specialised inspection and probable high cost of same, required for Aeronautical Stores, it would, I think, be advisable that inspection be carried out by a central inspection agency.

My remarks under the purchase heading apply equally to this.

If central stock depôts are formed I am of opinion that they should be maintained for Indian as well as for imported stores, as it is hoped that in the near future Indian manufacturers will be able to produce a number of Aeronautical Stores which have at present to be imported and I see no reason why these should not be stocked along with the imported stores.

Question 21. No figures are available in this department regarding the amounts expended.

Question 22. (*b*) Large numbers of tests of Aeronautical Stores received from various firms which have either manufactured, or supplied, have been carried out in this department, and records of all the tests are kept, and provided to the firms in question when asked for.

Question 23. I consider that it would be quite feasible for a central agency to collect, and disseminate to purchasing officers, prompt and reliable information regarding the prices, capacity and performances of contracting firms and I consider it very essential that this should be done.

J. S. Pitkeathly, Esq., C.V.O., C.B.E., D.S.O., Electrical Engineer, Delhi.

Question 1. I advocate the formation of a central agency for purchasing all raw materials, such as steel, cement, timber, iron mongery, etc. and annual expendable stores required by various Departments of the Government of India as I consider that consolidated purchase of large quantities of such materials would enable Government to obtain its requirements at favourable rates, and such an agency would be in a position to arrange for efficient inspection. Such an agency would be of considerable assistance to engineers carryin out ordinary works in isolated districts remote from sources of supply or Public Works stores as it would relieve them of all delays and troubles attendant in obtaining tenders and arranging for inspection of the stores required from time to time. While advocating the formation of a central agency for purchasing stores I am strongly of the opinion that the agency should be prepared to delegate its powers of purchasing stores to any department of Government which is sufficiently well organized to carry out these duties.

Question 2. I consider that special arrangements would be required for all the Departments mentioned in the question.

Question 3. I am of the opinion that in large public works projects such as a New Capital or a Hydro-Electric undertaking which entail the use of large quantities of highly technical stores and machinery and on which experienced engineers who are responsible for obtaining certain engineering and financial results, are employed the purchase of

all stores and machinery required should be done by the engineers and not through a central agency.

Question 4. I consider that the turn over of stores in a company-owned Railway is large enough to enable that Railway to buy its stores at favourable rates and of suitable quality without the help of the central stores agency

In the case of stores required by local and *quasi*-public bodies I consider that the purchase of stores for these bodies by the central agency might seriously interfere with the legitimate enterprise of local traders. With regard to the purchase of stores on behalf of British Colonies and Protectorates it would appear that a central stores agency would be an eminently suitable organization for purchasing stores on their behalf and I consider that they should be expected to contribute towards the maintenance of the central organization.

Question 5. I consider that Local agencies for the purchases of Local Governments will be essential.

Question 6. I consider that the policy should be for departments of the Government of India to obtain through local agencies such stores as are manufactured in the areas under the jurisdiction of such local agencies.

Question 7. I have no useful criticisms to offer.

Question 8. I see no great difficulty in introducing a system of simultaneous tendering in India and England, but consider that we should aim at encouraging English manufacturers to establish themselves in India. It is far more satisfactory to deal with people on the spot who know all local conditions and who are prepared to undertake all responsibility and in the case of machinery to quote for plant erected, tested and ready for service.

Question 9. With regard to raw materials such as steel, cement, timber, etc. and manufactured materials required for general use for which Standard Specifications can be framed and adhered to, I consider the policy of inspection should be dictated by the department responsible for the industrial development of the country.

With regard to special machinery and technical stores demanded for special purposes by Officers and Departments who are responsible for obtaining engineering and financial results, I am strongly of the opinion that the policy of inspection should be dictated by the officers or Departments responsible for the suitability of stores purchased.

Question 10. Yes.

Question 11. Yes. The Army, Railway, Posts and Telegraphs and Public Works Departments would require special inspection organisations of their own.

Question 12. I have expert knowledge of various Electrical and Mechanical appliances and specialised inspection of these would be necessary.

Question 13. Local Inspection Agencies would undoubtedly be necessary.

Question 14. The Stores Rules of 1913 would require considerable modification and should be completely revised to provide for the purchase in India of all classes of stores whether in India or not at the time of the purchase.

Question 15. The purchase of European Stores (whether in India or in the United Kingdom at time of purchase) through established Indian branches of British manufacturing firms should be encouraged in every way possible and no restrictions should be placed on such purchases. The only condition I should impose would be—

(a) Quality must be in accordance with specification.
(b) Prices must be favourable.
(c) All stores will be inspected in India.

The concession would greatly encourage firms in India to hold large stocks and would also be a great incentive to firms to establish manufactures in India.

Question 16. As a general principle I approve of the scrutiny by a central department in India of all Home indents before their transmission to the Director-General of Stores, but in case of stores such as spare parts of special machines or machinery which the demanding officer knows is not manufactured or available in India the scrutiny is unnecessary and only causes needless delay.

Question 18. I consider that all classes of stores which do not require inspection during course of manufacture or before despatch from Europe should be procured otherwise than through the Director General of Stores

Question 19. With the exception of depôts of stores required for mobilisation purposes, I do not advocate the formation of Stock Depôts by the Government of India. The whole policy should be to encourage the holding of stocks by private firms and establishing Stock Depôts by Government will in my opinion have the reverse effect.

Question 21. This information is not available.

Question 22. During past four years the demand for stores has exceeded the available supplies and prices have varied considerably. No attempt has been made to maintain detailed records of prices paid for stores beyond the usual record of all purchases which is maintained for Audit purposes. No definite records of success of Firms dealt with are maintained beyond a note of any unsatisfactory supply by a Firm. In practice any Firm not found satisfactory in dealings is not asked to tender again.

Question 23. I consider this will be one of the most important duties of the Central Agency.

Question 24. I have no experience in shipbuilding in India.

Question 25. It is most probable that the purchase and inspection of such stores by a Central Government Agency would interfere with the private enterprise of the smaller traders at local centres.

Question 26. The staff will have to be selected men with large experience and commercial knowledge. A system of attaching officers of various consuming departments to the central or local stores departments for certain periods should be developed.

Question 27. Yes! This seems the only practical way of debiting the actual cost incurred in obtaining the stores and materials against the works or projects on which they are used.

Question 28. The Pre-Audit system is in use here. Briefly the procedure is as follows:—

A copy of any order for stores is sent to the Audit Officer when the order is placed with the supplier. A copy is also sent to Subordinate Officer who will receive and inspect the stores. After inspection the stores are brought on charge. The bill covering cost of stores is forwarded to the receiving officer who checks it against the order and stores received. If correct, the bill is forwarded to Audit Officer duly verified by the receiving officer. The Audit Officer again checks the bill of cost of stores against the official order and if correct the cheque is forwarded direct to the supplier by the Audit Officer.

Question 29. I do not think so.

Question 30. Yes, I consider it most desirable in fact, if efficiency is to be maintained frequent interchange of personnel will be essential.

G. H. W. DAVIES, Esq., I.C.S., Controller (Industrial Intelligence, Home Indents, etc.), Indian Munitions Board, Simla.

Note for the use of the Stores Purchase Committee.

Consideration of Stores Rules.

I think the first point for consideration by the Stores Committee is whether the prescriptions of the Stores Rules are suitable to the altered conditions that prevail and will prevail in future in India. The Indian Industrial Commission approved generally of the rules regarding the classes of articles that may be bought in India.

It seems to me that these require further examination in certain respects:—

(i) *Purchase of Imported Stores. Rule 3.*—Broadly speaking, the rules at present debar purchases in India of imported stores. The reasons for this are twofold, first, because there is no agency for inspecting such purchases and, second, because such purchases are uneconomical. The first of these obstacles will shortly be removed, and I question whether we should lay too much emphasis on the second. During that period of the war when the submarines were playing havoc with our communications, we experienced intense difficulties owing to the fact that stocks of essential articles were held in such small quantities in this country. I think Government ought to take active measures to encourage the holding of stocks in India by private firms. After all, the private consumer relies largely on purchases from such stocks—though it must be admitted that many firms, by preference, seek to import against definite orders—and why should Government, the representative of the taxpayers, attempt to place itself in a more favoured position than individual taxpayers? Further, why should we place India's orders with those British firms which shelter behind the custom of the Director-General of Stores rather than with those which are venturous enough to come to India and to lay in stocks in anticipation of orders. I would accordingly suggest that some modification of Rule 3 (*a*) is required to give much more latitude in respect to considerations of price, *always provided the articles are already in India at the time of the order.* I regard it especially as a matter of great importance to encourage firms to hold large stocks of imported articles in common use by the Army Department. Unless these are held in sufficient quantities to provide a war reserve, I think Government would have to establish stock depôts of its own.

Purchase of imported stores.

The foregoing remarks, be it understood, do not apply to imported articles which require test *during manufacture.* Articles of this class must be obtained through the Director-General of Stores; but I believe that on examination they will be found to be comparatively few in number.

(ii) *Purchase of Indian made articles. (Rules 1 and 2).*—Here, too, I am of opinion that more latitude should be given in the comparison of prices. Rule 2(*b*) enforces a limit which, as usually interpreted, is too strict for the interest of Indian development. I would also suggest that where an Indian firm can manufacture articles of sufficiently good quality (whether of Indian or imported materials) the only comparison in the matter of prices to be instituted should be with imported articles *actually on the Indian market.* I would discourage competition from British firms which are not on the spot in time of need.

Purchase of Indian made articles.

(iii) The question of purchases from branches of British manufacturing firms requires careful consideration. I favour the insertion of an enabling rule, as I believe that a British firm, which has established a selling branch in India, is likely in time to start manufacture in this country (*vide* Marshall, Sons and Company, Calcutta). Great advantages will also accrue to consuming departments from having an expert firm at hand to undertake the erection and repair of special types of plant. At the same time we must not overlook the danger that such a firm, while importing all its machinery from Home, might establish a virtual monopoly in India for certain articles; and as long as it is flourishing under such conditions, it is not likely to set up manufacture out here. Any rule permitting purchases from branch firms in India must, therefore, leave wide open the alternate channel of the India Office. And the Controller-General of the Indian Stores Department must bear in mind that no encouragement should be given to British firms which obviously have no intention of establishing manufacture out here.

Purchase from branches of British manufacturing firms.

2. The most difficult point which the Committee will have to decide is the measure of decentralization to be allowed to local Governments and departments of the Government of India. At the outset I may point out that decentralization will lead to loss of money through (*a*) repetition of staff and (*b*) competition from purchasers and will prevent (*c*) consolidation of demands and (*d*) standardization of types.

Centralized *versus* decentralized purchases.

(*a*) *Repetition of Staff.*—A certain minimum purchasing staff would be required whatever be the volume of the purchases. No single person can have expert knowledge of more than a few kinds of stores. It is apparent, therefore, that each local purchasing agency would have to maintain a special staff for its purchases. I place below a statement from the Abstract Return of Expenditure on Stores in India, showing the purchases of the chief Local Governments in the past three years:

Province.	Value of imported stores purchased in India.	Value of Indian stores purchased in India.
	Rs.	Rs.
Bengal—		
1915–16	8,82,468	4,96,613
1916–17	9,07,767	6,38,607
1917–18	11,98,127	10,16,099
Bombay—		
1915–16	10,16,277	9,97,121
1916–17	14,91,544	11,43,785
1917–18	17,16,656	14,84,320
Madras—		
1915–16	7,18,902	12,71,887
1916–17	8,51,578	15,34,743
1917–18	8,55,068	22,24,073
United Provinces—		
1915–16	11,36,944	4,85,968
1916–17	10,77,556	5,40,771
1917–18	9,50,849	6,42,151
Punjab—		
1915–16	8,30,117	8,02,725
1916–17	7,10,999	10,28,387
1917–18	8,84,507	10,95,339
Central Provinces—		
1915–16	3,68,978	5,88,055
1916–17	2,69,528	6,02,003
1917–18	3,14,442	6,67,174
Burma—		
1915–16	10,32,756	11,94,955
1916–17	15,27,544	10,81,282
1917–18	11,64,285	11,10,125
All India—		
1915–16	1,12,14,685	2,64,52,923
1916–17	1,34,47,585	3,06,16,213
1917–18	1,76,44,881	3,66,70,510

These figures are, it is true, not a complete indication * of local purchases. They show, however, that few Local Governments purchase more than 20 to 30 lakhs worth of stores locally per annum. Taking the cost of a Stores Department at 2 per cent. † of the purchases, we get only R40,000—R60,000 for a local department, which would be far from adequate. It must further be remembered that many of these purchases are made *outside* the province against which they are shown, the bulk probably being from Calcutta and Bombay. The actual purchases made in provinces like the United Provinces, the Punjab, Madras and the Central Provinces, would be far too small to justify the establishment of a self-contained Stores Department.

* All items purchased locally are not included in the Abstract Return.

† *Vide* paragraph 346 of Indian Industrial Commission's Report.

(*b*) *Competition from purchasers.*—It is unnecessary to point out that the Indian market is limited and, if there are several purchase agencies competing against one another, prices will be forced up and friction created between rival departments striving to obtain early deliveries of their own requirements.

(*c*) *Consolidation of demands and* (*d*) *standardization of types.*—The larger the orders to be dealt with, the more effective action in this direction will be. At present departments are compelled to forecast their demands on the Director-General of Stores, but they live largely from hand to mouth so far as demands on India are concerned. In the past few months most of the indents on India preferred on the Indian Munitions Board have passed through my hands, and I think I am correct in saying that almost 75 per cent. are marked urgent or dates of delivery within one or two months given. It will be an important function of a central department to habituate indenting officers to foresee their requirements and thus give leisure for proper examination of the indent and for economical buying. Standardization will naturally ensue inasmuch as the officer complying with the indent will be an expert in the stores with which he is dealing.

Arguments in favour of decentralization considered.

3. On the other hand, it will be urged that Local Governments should be masters in their own house and should have the right to do their own buying, in particular, so that the Directors of Industries will be in a position to offer encouragement to local industries. Too much stress can easily be laid on this argument. In the first place, the industrial development of India should be looked on as a whole. It would be folly for, say, the Bombay Government to try to encourage a jute-mill at Bombay by placing their orders for gunnies with it. The instance is extreme, but the fact remains that Local Governments will not be in possession of any intimate knowledge regarding industries outside their own provinces; and I doubt whether it would be possible for any central intelligence department effectively to supply them with the kind of information which they would require when dealing with indents. Again, the real encouragement to industries will come from the large orders which the central department will be in a position to place, not from the smaller orders which local departments could place. Small and irregular orders probably hamper rather than help an industry. And I am not sure that local Directors of Industries, subject to the cross-currents of influence that will be brought to bear on them by their advisory boards, would altogether welcome an unrestricted right of placing out local orders.

One point may, however, be noted. If we admit the right of a Local Government to control its own purchases, then we admit also the principle of non-economy or provincial protection, regardless of the interests of the taxpayer; and the word "economy," which has long been the head and front of the control by the Director-General of Stores, can be set aside in any future discussions on the merits of purchase in India *versus* purchase in the United Kingdom.

Case of Burma.

4. The case of Burma requires special consideration. Until overland communications are established between India and Burma, the latter should not be compelled to rely too much on India. And, in any case, Burmese sentiment is so insular and anti-Indian that I question whether it would be wise to force Burma against its wishes into a central scheme. I should accordingly allow Burma to run a local agency of its own, subject to the proviso that all orders placed outside Burma must be placed on the Indian Controller-General of Stores. I admit that this is a sacrifice of logic to sentiment and that, in the event, the question must probably be decided on political grounds.

Indents to be placed on the central department.

5. Apart, then, from Burma, I should like to see one large centralized purchasing agency which would undertake all purchases on behalf of Government departments, railways, etc. Local officers should be allowed to make their own purchases up to certain monetary amounts to be fixed by rule, but in all other cases they should place indents on the central department. In specially urgent cases, they should also have the right to give out orders direct in excess of the fixed limits, but such purchases should be carefully examined in audit as regards the circumstances which prevented the demand being forecasted, the amount of the order placed out and the sacrifice of economy involved. Where the Controller-General of Stores had made running contracts with any firm, local officers might place their orders direct with that firm, sending a copy of the order to the Controller General of Stores.

Measure of decentralization to be allowed.

6. All indents from provincial officers (I use the term to connote officers serving under Local Governments) should be sent to the central department through the provincial Directors of Industries. In passing the indent the latter might indicate that he wished the order to be placed with a particular firm, giving his reasons. If the Controller-General, Stores, disagreed, he would inform the Director of Industries why he considered such a contract undesirable. I would then leave the decision with the Local Government; if they decided in favour of the local firm, the order would be placed accordingly by the central department. I do not consider that a further measure of decentralization towards local departments and away from the central department is desirable. It should, however, be possible after some experience has been gained to lay down that certain indents might be placed on an Assistant Controller at a local centre not on a Deputy Controller at headquarters (*vide* paragraph 8). But I would suggest that it is advisable at the outset to centralize and gradually to adopt this kind of decentralization, when shown to be feasible.

Summary of foregoing paragraph.

7. I would then foresee a large central department with its headquarters at Calcutta, on which would be placed all indents from departments of the Government of India, local departments and railways, etc. Indents would be received at regular periods, not more frequently than quarterly for ordinary (non-urgent) indents. All indents would be indents on the Indian Stores Department, which would be responsible for executing them in India or passing them on to the Director-General, Stores, London.

Organisation of central purchasing department.

8. It would be idle at present to attempt to make an accurate estimate of the strength of the staff which the Stores Department would require, as no estimate is possible of the extent of operations. We may, however, conceive that the headquarters staff will consist of a Controller-General, Stores, who would be in supreme charge, would supervise the more important contracts and deal with matters of policy, references from Local Governments, etc. Under him would be Deputy Controllers (at suitable headquarters) in charge of definite groups of stores such as oils, machinery, hardware, etc., assisted by Assistant Controllers in local purchase centres. There would also be Consulting Engineers attached to headquarters whether as whole-time officers or feed experts. I may remark that a branch like the Munitions Manufacture Branch of the Indian Munitions Board, how

ever, necessary for the purpose for which it was created, would seem out of place in the new organisation, in which each Deputy Controller should have full responsibility for all classes of stores to be dealt with by him, whether such are to be procured by purchase or by manufacture. Further, a branch like the Home Indents Branch would not be required, if a proper organisation be effected, as will be shown in the following paragraph.

Preparation and receipt and distribution of indents.

9. It may at first be necessary to maintain a special indents distribution branch, but if a proper demarcation of the functions of Deputy Controllers be made, it should be possible, after examination of all Government indents received during a couple of years, to supply all indentors with indent forms which would show clearly the appropriate Deputy Controller to whom an indent should be addressed. An indent for oil should go direct to the Deputy Controller, Oils, and to no other officer (unless some decentralization to an Assistant Controller, Oils, be subsequently allowed). The Deputy Controller, Oils, should be in possession of the information which would enable him to place out the order in India or to indent home. He would not be in the position of the Controller, Home Indents, in the Munitions Board, who perforce has no expert knowledge of many of the items which he receives. The Deputy Controller, Oils, would examine various indents which could not be given out in India and place at regular intervals consolidated demands on the Director-General, Stores, London (who would, of course, consign the stores direct to the various indentors whose demands are included in the consolidated indent). In case of an indent for machinery, the Deputy Controller, Machinery, would examine the plans, consulting the indentor, if necessary, and then place out the indent or pass on to the Director-General, Stores. If an orderly arrangement like this be observed, the centre of gravity would swing from London to Calcutta. The Director-General, Stores, London, would arrange his office in corresponding sections, he would receive demands consolidated in such a way that he could place out the order direct, and clerical labour in London (which is highly expensive) would be reduced to a minimum. The greatest advantages would accrue from the establishment of an intelligent system of indenting.

System of budgetting.

10. Another point to which I desire to draw attention is in connection with the system of budgetting. At present the individual indentor has to make accurate budget provision for his purchases in India, while his budget provision for purchases in England is consolidated with that of other indentors. It, therefore, causes grave inconvenience to his financial arrangements if an officer subsequently wishes to purchase in India stores which, when preparing his budget, he had estimated to purchase in England. In future an individual officer should budget only for total purchases whether in India or in England. The Controller-General, Stores, should combine in his Indian budget all estimates from individual officers of purchases in India, so that he can adjust an under estimate by one officer against an over-estimate by another, or transfer sums from England to India or *vice versa* should a deficit in either country arise.

Inspection to be in the interests of industrial development.

11. In the first place I think inspection should be carried out by the agency which is responsible for the industrial development of the country. Intelligent inspection will furnish one of the greatest opportunities of improving Indian industries, and the Inspectors must be in touch with and in sympathy with industrial progress. They must be like the twelve honest men of a British jury, who leaven law with common sense not like the French Judge whose function is first to prosecute and then to adjudicate. There probably are certain classes of stores, *e.g.*, weapons of warfare, where quality is of such paramount importance that not the slightest deviation from specification can be allowed; but I doubt whether these are so numerous as to necessitate the maintenance of a special inspection department to deal with them. Either the ordinary inspectors can inspect these under rules more rigid than would be imposed for ordinary stores, or a few special experts can be added to the general inspection department working under the same control.

Inspection must be by a central agency.

12. Whatever be the decision about central and local purchase departments, all inspection must I think, be done by a centralized agency. This is demanded not only by considerations of economy, but more forcibly by those of uniformity. It would be preposterous to have standards for stores varying from province to province, and it would create great dissatisfaction among the consumers.

Organisation and control of inspection.

13. The inspection agency must be independent of the purchasing agency, in order that the interests of consumers may obtain fair consideration. It should, however, be under the same departmental head (*viz.*, the Controller-General, Stores) so that inspection may be based on broad principles, the co-ordination of purchase and inspection assured, and a ready means guaranteed of settling disputes that may arise between the two departments. The inspection department will be a repository of valuable information, which must be circulated promptly to the purchasing department and in many cases to other industrial officers; and the purchasing department will be able to afford valuable advice in drawing up and in revising specifications, of which many of the existing ones have been prepared without full considerations of Indian conditions. The staff would, I think, have to be much stronger that that suggested by the Indian Industrial Commission, *viz.*, 1 deputy controller (inspection), 6 inspectors and 20 assistant inspectors, which is little more than the existing inspection staff employed by the Ordnance Department alone.

It would be advantageous if inspectors could be divided into branches which would correspond with the branches of the purchasing department, so that an inspector of machinery would correspond with the deputy controller of machinery purchases and would inspect machinery purchases over a large area rather than, say, purchases of machinery and oils in a smaller area.

Necessity of utilising existing facilities.

14. There is a further problem to be considered here. The function of inspection, pure and simple as I understand it, is to test the quality of goods. This is done mainly in three ways, by inspecting the goods during manufacture in the workshop, by inspecting them after manufacture in the workshop or at some inspection depôt, and by testing samples.

The central department as a whole should, however, be responsible for three things:—

(1) that the goods are of the proper quality,
(2) that the quantity is correct, and
(3) that they are properly packed and despatched to the indentor.

I have had to deal with very many complaints regarding stores supplied by the Munitions Board, and, except in the case of bulky items of machinery, etc., which can best be tested and despatched from the workshops of the contractor, I see no way of guaranteeing that all the above-mentioned duties are satisfactorily fulfilled unless delivery from the contractor is taken at a transit or inspection depôt belonging to the Stores Department. Here the stores can be promptly inspected, bills can be passed at once, and it will be possible definitely to fix responsibility for any shortcomings subsequently alleged. This is the system followed by the Ordnance Department and is the ideal one. The difficulty that I foresee is that distances in India are so great the depôts, inspectors and storekeepers cannot be expected to be found at all the places in India where they would be required, and there is danger that this deficiency would tend to concentrate all purchases in a few large centres, not in my opinion an unmixed evil, but one which local Governments would not tolerate for political reasons, apart from the rise in charges which would be caused by extra carriage of goods. The Ordnance

Department, of course, manage very well. But their depôts are used for other purposes than mere inspection, and I may be permitted to doubt whether their inspectors are really expert in all the classes of stores with which they deal.

A remedy might be found in having travelling inspectors with large areas in their charge and in making arrangements to take deliveries at depôts of the Railways, Ordnance and similar departments, which must in any case maintain store depôts where facilities for inspection and despatch, etc., would be provided.

Intelligence proper.

15. Sir E. Low particularly requested me when preparing this note to allude to the subject of intelligence and to suggest measures for the mobilisation of the units of useful information scattered throughout the industrial department. It may be anticipated that the new industrial organisation will include a Director of Industrial Intelligence located at the headquarters of the imperial industrial department, whose function will be to act as a clearing-house for all industrial information. This officer will receive information from the public, from provincial Directors of Industries, from imperial experts, and other sources generally, and will pass on such information to persons interested. If the organisation which I have outlined be accepted, there will be deputy controllers (with subordinate assistant controllers) in charge of clearly demarcated branches of purchase, each of whom will have a corresponding inspector (with assistant inspectors where required). In the course of his duties each deputy controller (purchase) will obtain very valuable information regarding the classes of stores which he deals with and the manufacturing capabilities of the country in these stores. Each * should, therefore, be in constant and direct communication with the Director of Industrial Intelligence, who, on the one hand, would pass on to them the information which he had obtained on any relevant matters of importance and, on the other hand, would receive much valuable information from them, which he in turn would impart to suitable quarters. Deputy controllers should, however, not occupy the same position as special experts, *vis a vis* general enquiries. The usual procedure when the Director, Industrial Intelligence, receives an enquiry regarding glass would be for him to pass it on to the Glass Expert (I hope we shall have one soon) who would reply *direct to the enquirer* after consulting such persons as might be necessary. Deputy Controllers (Purchase), however, in the majority of cases, would not be in possession of sufficient information to deal straight off with all the aspects of the enquiries which the Director, Industrial Intelligence, would receive, nor would they be able to spare the time required to collect it from outside sources. They should act, therefore, merely as one of the tributaries and not as the main channel and outlet of information.

* I think the deputy controller rather than the inspector should communicate with the Intelligence officer. It is necessary for the inspector's information to be passed to the purchase officer, but the converse is not necessary.

Information about prices.

16. There are two classes of information regarding prices to be considered:—

(*a*) Prices in England and India.
(*b*) Prices in India.

(*a*) *Prices in England and India.*—If the suggestions which I have made in paragraphs 1 (*i*) and (*ii*) of my discussion on the Stores Rules could be carried out, the occasions which required comparison of prices at Home and in India would be very few and could be dealt with by special enquiries. Presupposing, however, that the pill will not be swallowed entirely, it will be necessary to advise some more efficient system than the existing Rate Lists for obtaining in India prompt information regarding prices in England. This should not really cause much difficulty. The trouble in the past was that no one knew what articles were required to be priced and that any information collected had to be circulated to all indenting officers in India. I have outlined an organisation in which only the Deputy Controller in charge of one purchase group will have to be supplied with information, and he will be an expert and will be in direct communication with an expert in London dealing with a corresponding purchase group. Examination of the indents received over a short period should quickly show the articles regarding which comparison of prices would be likely to be required. It should not be difficult to draw up a list of those items obtainable either at home or in India which habitually fluctuate in prices and to arrange for telegraphic reports from London at fixed intervals, or whenever an item in the list fluctuates above or below some agreed-upon limit. I may say that I am convinced that one of the first tasks of the Stores Department will be to devise a much handier and more elastic cipher (for use in combination with the Stores Code) than the elephantine word code which is at present in use for Home telegrams. The Deputy Controller will have in his office a schedule showing the various charges to be included in calculating Home rates. This might be revised annually and should give a total sum per unit in each case for convenience of calculation. There will probably have to be a statistical branch attached to the office of the Controller General for this and other purposes.

(*b*) *Prices in India.*—This is a question which I feel much diffidence in discussing and yet it is one on which the success of the department largely depends,

First, it may be remembered that the fewer the departments which are to maintain and obtain such information the more readily can price lists be circulated. If several local departments have to be supplied with price lists, increasing complications will arise. Again a clearly demarcated group-purchase system will tend to facilitate matters. A further point to be noted is that timely receipt of indents will give leisure for enquiries at the various centres from which purchase might be made, and less necessity, therefore, for the maintenance of regular market reports. There will, however, be cases in which the Deputy Controller (or an Asistant Controller) will have to make an immediate purchase or in which an immediate reply will have to be given to the inquiry of a local officer contemplating a purchase within his own powers. And, generally, the Deputy Controller will have to choose between placing an order on the Assistant Controller as Centre A or Centre B and the Assistant Controller will have to choose between firm A and firm B. Also the audit officer will require general information about prices, if he is to conduct an efficient audit.

In the first place, I think there will have to be a central statistical section, which should probably be attached to the Controller-General's office rather than to the audit department. This section would be supplied with copies of and would maintain ledgers for contracts made (probably only contracts above fixed quantities of the various items would be necessary) by all purchasing officers, and would issue promptly to all concerned quarterly statements showing the average prices paid at the various centres. This section would also have to compile and keep up to date schedules showing the railway freights for all classes of articles from the transit depôts alluded to in paragraph 14 to all the leading centres in India, as such schedules would be essential for a proper comparison of prices.

It would not be practicable for the Deputy Controller to obtain regular reports from all his assistants of the market prices of all the items dealt with; but it would be easy to select a few of the more important articles of which prices constantly fluctuate and to obtain monthly reports regarding them which could be immediately printed up and circulated to all concerned. It is very necessary to remember that Government orders repeat themselves very considerably from year to year. Experience would probably show that the classes of articles regarding which regular market reports should be maintained are much fewer than might be imagined, and officers purchasing the same classes of articles from year to year would readily accumulate a fund of information, that would be far more practicable and valuable than any system of cut-and-dried statistics.

Replies to Questionnaire.

In replying to the questionnaire of the Stores Purchase Committee, I desire to refer to a note * dated the 17th November 1919 in which I have already expressed my views on the subject of the enquiry. My answers to the questionnaire should be read along with that note. I wish, however, particularly to refer to two points. The first is in connection with the figures shown in the table on pages 2 and 3 of that note. I should have made it clear that the Abstract Return of Expenditure on Stores in India did not include purchases for the Army Department during the years 1915 to 1918, and consequently it must be noted that the figures shown against all-India are exclusive of expenditure on the Army Department. Some idea of their extent may be derived from the fact that during the year 1917-18, the Indian Munitions Board alone expended about 8½ crores of rupees on supplies to the Army (including of course overseas supplies).

The second point is that, since I wrote that note, the entire outlook has been changed by the acceptance by Parliament of the principle that the development of industries (which presumably includes the supply of stores) is to be a transferred subject. The Government of India will have to frame rules providing for the details of transfer, but there seems no reason to suspect that the supply of stores to Government departments generally will not be treated as transferred. I presume, therefore, that the principles of supply will be governed by the wishes of the people as represented in the legislative councils and not by the dictates of efficiency. This makes it much more difficult to propound a homogeneous scheme, as, apparently, any local Government will be, at any time in a position to break away from a central purchase agency, whose powers will be correspondingly impaired; and it may eventually lead to considerable decentralization in the purchase for departments of the Government of India.

2. In these circumstances, it seems to me that the case of the Army Department (including the Royal Indian Marine) requires special consideration. I expressed my opinion in my former note that the Army Department should rely on a central stores agency both for purchase and inspection of its stores. I see no reason now to believe that the central agency will be so large or so efficient as I had expected at least after a few years when provinces are likely to develop self-contained organisations. I am doubtful, therefore, how far the supply of stores to the army should be considered as coming under the development of industries and whether it should not be considered as part of the administration of the army, to be dealt with as a reserved subject. The Army Department must be in a position to insist on two essential matters in the supply of its stores—(*a*) that the supply is promptly made and (*b*) that the stores are of the required standard. On the whole I am inclined to think that, for some years to come, the Army Department may be able to rely on the central stores agency for its requirements, but it must have special safeguards to which I shall allude in replying to the questions.

Question 1. The reply is in the affirmative for the following reasons:—

(1) Individual officers cannot buy satisfactorily. The result of the arrangements in force at present is that either they make local purchases uneconomically or that they procure all their requirements through the Director-General of Stores, London.

(2) Speaking generally, the requirements of the various departments of the Government of India are similar enough in nature to admit of their being dealt with by one purchasing department.

(3) A central purchasing agency will secure increased efficiency with economy. It will be able to amalgamate indents with the result of purchasing more cheaply and to standardize different types of the same articles. It will prevent rival departments forcing up prices in the limited Indian markets by bidding against one another.

(4) Purchase by Government can be used as a powerful lever to develop Indian industries; but this lever cannot be used effectively unless the purchase department is working in collaboration with the Industries Department and unless it is in a position to place out large orders.

Question 2. As indicated above, I think that the Army Department requires special consideration. For the Army Department, the cost of stores is not a primary consideration so much as the prompt supply of suitable articles. I am not satisfied that, with the arrangements proposed in my note, the Army Department would be in a position effectively to enforce its point of view, if purchases were being made by a central purchasing agency. I would, therefore, suggest that the principal indenting departments of the Army should have liaison officers at the principal purchasing centres, who would receive copies of all indents placed by their branches. It would be their business to follow out the execution of the order and to report at once to the officer in charge of army supply * all cases in which they had reason to apprehend that satisfactory arrangements for supply were not being made. On receipt of such complaints the latter officer should have power to place the order by cable on the Director-General of Stores. I admit that the arrangements suggested are likely to cause a certain amount of inter-departmental friction, but the matter is so important that some safeguards must be made.

Vide Under questions 9-13.

(2) The supply of medical stores also calls for special attention. At first glance it would seem that, with the recent developments in Indian manufacture, the purchase of medical stores should be handed over to the central purchasing agency. On the other hand, there is at present a well-organized medical stores branch, which deals with manufacture as well as with purchase, and which is controlled by officers of the Indian Medical Service who specialise in this department. The supply of medical stores is also largely a supply for the Army. I think, therefore, that it should be kept under its present organization. The importance of developing local resources should be strongly impressed on the officers of the medical stores branch—I know that some of them are very keen on the question—and they should devote special paragraphs in their annual report to the progress in this direction made during the year.

(3) The supply of stationery to departments of the Government of India (and some local Governments) is being made by the Controller of Printing, Stationery and Stamps. He fulfils other functions, such as the control of printing. As far as the purchase of stationery is concerned, he ought to be brought under the central purchase agency.

(4) So far as I am aware, no special arrangements are required for other departments of the Government of India.

Question 3. It is difficult to reply without a detailed examination of Government indents. In no circumstances should the purchase of lethal weapons or stores which are produced in the ordnance factories be made by a central agency. There are probably also various classes of stores which individual departments are in the best position to purchase, *e.g.*, coal and coke for the Royal Indian Marine; special types of machinery *e.g.*, saw-mill machinery for the Forest Department; certain types of agricultural machinery. In cases like these, the purchasing officer is more or less of a specialist and is in a better position to buy than a central department would be. There would be no objection to the order being placed through the central agency, if considered convenient.

Question 4. A central stores agency would afford much assistance to public bodies, company railways, and British Colonies in making purchases. There are many varieties of stores—and will be more in future—which public bodies, etc., might with advantage buy in India provided they had arrangements for expert buying and inspection. These bodies, etc., however, represent special

* Reproduced above.

interests and in some cases are in a position to use expert knowledge in effecting their purchases. In other cases, I understand that they are able to make advantageous purchases without outside assistance, *e.g.*, I believe that certain of the railways have special arrangements for obtaining coal and coke and that other railways get their pig iron at specially low rates on condition of supplying coke *per contra*. On the other hand any orders placed by them with the central agency help to swell the power of that agency for developing industries, and it is, therefore, desirable in the public interest that they should be brought into the central purchasing scheme, as far as possible. In view of the loss in efficiency which must result in the central stores agency due to the transfer of industries, it is not certain that these departments will desire very whole-heartedly to co-operate in a central scheme. The arrangement must, I think, be on a purely voluntary basis. Public bodies, etc., should be allowed to place, what orders they wish, on the central agency and, if these can be shown to be executed with economy and efficiency, I have no doubt that in time they will come to rely very largely on it for their purchases.

I shall refer to the question of contribution under question 27.

Questions 5 and 6. I consider that a central stores department would be a suitable agency for the purchases of local Governments and I would not suggest any measures of decentralization away from the central department except that the Director of Industries should have power to scrutinize provincial indents and to suggest to the Controller-General of Stores that they should be placed out locally, the final decision, in case of difference of opinion, resting with the local Government. I do not favour the creation of local agencies for the purchases of local Governments. It is very probable that before long some of the provincial legislative assemblies will demand provincial agencies. But even admitting that this contingency has to be faced, it is much better to begin with a strongly centralized organization and subsequently to decentralize.

Question 8. The establishment of a central stores department would render possible the introduction of simultaneous tendering in India and England for important contracts for the supply of stores. I understand that the reason in the past which has prohibited local officers from inviting such tenders has been that, though a local officer could decide on questions of price, he could not decide on the quality of the articles tendered. With a central department to invite simultaneous tenders from India and England, the difficulty in respect of deciding on quality would still remain, but the officer inviting the tenders would have expert knowledge of the stores required and would be in close relations with the Director-General of Stores in London. It should not, therefore, be impossible for him to come to a right decision. Moreover, I am suggesting an alteration in the Stores Rules so as to give preference to imported articles actually in stock in India, if of sufficiently good quality for the purpose required and provided the price be not unreasonable compared with the Home prices. If this suggestion be accepted, it would considerably reduce the number of cases in which comparison between tenders from England and from India would be required.

Questions 9 to 13. I have dealt with these points in my former note. I hold that inspection generally should be carried out by the Industries Department under a central agency independent of, but working under, the same control as the agency for the purchase of stores. In view, however, of the industries department becoming a transferred department, I am of opinion that the Army Department must have special inspectors of its own. I regard this as undesirable and as a retrograde step, but I consider that it is justified by the importance to be attached to the quality of supplies to the army, which must be able definitely to bring home shortcomings to officers under its own control. I fear that the interest of the Army Department would not receive sufficient consideration from an industries department, if industries be a transferred subject. I have suggested that special liaison officers should be appointed to look after the execution of army indents. It might be a suitable arrangement if these liaison officers and the army inspectors all worked under the orders of an army officer of high rank in charge of army supplies. This officer should be entirely independent of the control of the Industries Department, but he should attend in an honorary capacity all meetings of the Imperial Board of Industries (if one be created), so that he may be in touch with and in sympathy, with industrial development and he should be allowed to bring up for discussion matters affecting army supply.

The army inspectors would be independent of the central stores purchase and inspection agency, but they would naturally work in close co-operation, as far as the drawing up of specifications, standardization of types and dissemination of industrial intelligence are concerned.

I think that a special inspector (or inspectors) is also required for medical stores, if these are bought without inspection, and this officer should work under the Director-General, Indian Medical Service.

I would strongly deprecate the creation of local inspection agencies.

Questions 14 to 17. I have discussed the Stores Rules in my note and have suggested modifications to enable more frequent purchase in India of imported stores *actually in stock*, and to grant considerable latitude in comparing the price at which such articles could be obtained through the Director-General of Stores. I have also suggested that where an Indian firm can manufacture articles of sufficiently good quality (whether of Indian or imported materials) the comparison with imported articles to be instituted in the matter of prices should be with imported articles *actually on the Indian market*. I have also suggested that purchases from branches of British manufacturing firms should be allowed, but I have added that the Controller General of the Indian Stores Department must keep a watch on such transactions and encourage the firm first to maintain stocks in India and in time to set up manufacture out here. I have also stated my opinion that scrutiny of Home indents by a central department in India is very necessary and I have suggested measures for obtaining information regarding Home and Indian rates.

Question 18. There are certain classes of stores which are satisfactorily obtainable in the United States of America only (*e.g.*, saw-mill machinery, some types of wood-working machinery, paper-pulping machinery, railway-control equipment, spare parts for Ford cars). These articles are often required for ordinary, not merely for experimental purposes (Rule 7 (*iii*) of the Stores Rules), and it is idle to try and force the indentors to use unsatisfactory types of British-made machinery instead of getting them from the United States of America. So far as I am aware, no advantage accrues from obtaining these through the Director-General of Stores, and it would save time if they could be obtained direct from America. As a rule, the officers requiring such machinery are experts and might very well be allowed to make direct purchases with the concurrence of the Controller-General of Stores. The American Trade Commissioner who came to see me lately informed me that his department would be willing to co-operate by bringing buyers into touch with the most reliable firms. Except where a foreign firm has an agent in London, I see no benefit in obtaining stores from abroad through the Director-General of Stores.

Questions 19 and 20. Theoretically, the formation of central stock depôts by Government in India would lessen the holding of stocks by individual departments. I do not think it would produce much effect on the holding of stock by private firms, except in the case of certain special articles such as vacuum-brake equipments, phowrahs, which are imported largely for sale to Government (including railways). If, however, a strong central purchasing agency be created and if the stores rules be relaxed so as to allow purchases of imported stores in India, I consider it would be undesirable for Government to establish central stock depots. Government should rely as far as possible on private enterprise and should not attempt to hold stocks, except perhaps in the case of a few essentia

articles of which military considerations may demand a reserve and which merchants cannot be relied upon to import. It is likely to be a more costly method of procuring stores than by depending on the private importer; and the majority of Government departments would still continue to stock their own reserves, although with a smaller margin of safety.

In no circumstances should stocks of Indian stores be maintained.

Question 21. Separate figures are not available but I append a statement which gives some idea of the supplies made by the Munitions Board from the 1st of April 1917 to 31st October 1918 :—

(Thousands of rupees.)

—	1st April 1917 to 31st March 1918.	1st April 1918 to 31st October 1918.	REMARKS.
II.—SUPPLIES—			
(*a*) River craft and Inland Water Transport stores.	1,50,97	82,79	
(*b*) Tata's rails and fish-plates.	1,05,16	28,98	
(*c*) Other railway materials.	1,46,82	1,56,80	
(*d*) Timber . .	86,36	1,43,68	
(*e*) Textiles and jute.	85,50	80,51	Does not include payments on account of the Army Clothing Department which are taken to Head III(*a*).
(*f*) Ordnance and miscellaneous stores.	2,63,83	9,10,81	Does not include payments on account of the Indian Ordnance Factories which are taken to Head III (*b*).
TOTAL II .	8,38,64	14,03,57	
III.—FACTORIES, ETC.—			
(*a*) Army Clothing Factories.	3,87,67	7,08,70	
(*b*) Ordnance Factories.	67,74	2,71,00	
(*c*) Acetone Factory. .	1,09	52	Does not include expenditure on building the factory. which is charged to the Military Works Head.
(*d*) Albion Shell Factory.	6,69	6,71	
(*e*) Tanneries and Tanstuff.	15,35	9,36	
(*f*) Kutra Iron Works.	1,37	58	
(*g*) Tent Making Factory.	..	48	
TOTAL III .	4,79,91	9,92,35	

Question 23. I have discussed this question in my note.

Question 24. I consider that the rules for shipbuilding are generally suitable to the present state of the shipbuilding industry in India, though they may require change when developments occur. It is obvious, however, that for many years to come ships can be more cheaply produced in England than in India, as such ships would earn freight on their outward voyage. The only amendment that I would suggest in the rules is that, with reference to rule 7(*c*), the Marine Department should consult the Industries Department before coming to a decision.

Question 25. It is possible that certain interests would complain against the measures proposed, but I should disregard such complaints. The bodies referred to would be quite entitled to form a co-operative purchasing agency of their own and, as they represent other than purely private interests, I do not see why they should not be given the benefits of participation in the Government organization.

Question 26. The staff of the central stores purchasing agency should, I think, form part of the Imperial Industrial Service. It should consist of permanent officers with a pension to look forward to; otherwise I see no guarantee that they would perform their duties honestly, and they would merely utilise the experience which they would obtain in the discharge of their work as a stepping-stone for securing more highly paid occupation with commercial firms. Many of these officers would also be mechanical engineers who might, with advantage, be employed in other branches of the Industries Department, thus obtaining a fresh outlook and additional experience. If local purchasing agencies be created, the Imperial Industrial Service might be looked upon as a reservoir from which officers to staff the local agencies would be obtained, such officers being entirely under the control of the local Government.

Question 27. The cost of central and local purchasing agencies might well be met by a percentage charge on orders placed with them. I do not consider, however, that the organization should be run entirely on a commercial basis and I think that Government should bear some part of the costs in recognition of the fact that the development of industries is the chief reason for the existence of the department.

Question 29. I feel certain that the audit department could exercise a more efficient audit on the purchases of a central stores department than it does under existing arrangements. It should be possible to create a self-contained audit branch merely for auditing purchases of stores which would work in close connection with the stores department.

Question 30. I foresee no difficulty in arranging interchange of personnel between the Indian Stores Department and local purchasing agencies (*vide* reply to question 26), but the comparative rates of pay between the home and Indian Stores Departments would form a serious obstacle in arranging interchanges between officers of the home and Indian Stores Departments. Apart from the Director-General of Stores (£1,200), the Deputy Director-General of Stores (£800-50-1,000), the Superintendent, Stores Depot (£800-50-1,000) the Deputy Superintendent, Stores Depot (£600-20-800) there are no officers on the Home list whose pay rises above £600 per annum. It does not seem possible to interchange inspectors and engineers from whose deputation the most useful results would accrue.

N. V. HOLBERTON, Esq., Controller (Timber Supplies), Indian Munitions Board, Simla.

I regret the meagre nature of my replies to the questions asked, which will, I fear, be of very little assistance to your Committee, but I may explain that the Timber Supplies Branch of the Indian Munitions Board is a temporary organization formed for war purposes which has been in existence for 2½ years only, and which deals with supplies of timber (in the form of logs, scantlings, and planks) and bamboos only, not with supplies of sleepers or any form of manufactured wooden article. The extent of the information at my disposal is consequently very limited.

Question 1. No. So far as purchases of timber are concerned, my impression is that in normal times these are not sufficiently extensive to render purchase through a central agency of any advantage.

Question 2. No.

Question 3. Yes—timber. See reply to Question 1. Purchases should be made by the department concerned. In the case of purchase of any considerable quantity of timber the advice of the Conservator of Forests, Utilisation Circle, in provinces where such officers exist, or of the Forest Economist, Dehra Dun, might be asked as to the most convenient and cheapest source of supply.

Question 7. No.

Question 9. By the consuming department.

Question 10. By the purchasing agency.

Question 11. The requirements of the departments mentioned in Question 2 above in timber and articles made from it are so varied that their own inspection organisation would probably be better able to judge the suitability of materials supplied than any central inspection agency.

Question 12. Most of the timber and forest produce required by Government departments for their own special purposes (for example, sleepers, lance staves, half-wroughts for rifles, and timber for aircraft construction) require specialised inspection. I am unable to say whether this applies also to manufactured wooden articles.

Question 14. No.

Question 16. Yes.

Question 17. Lists showing current rates for timber and other forest produce are published monthly by the Forest Economist, Dehra Dun. Information as regards prices of manufactured wooden articles would presumably be obtainable on demand from the various manufacturing firms.

Question 18. No.

Question 19. No. Seasoned timber other than teak is at present practically unobtainable in India, and a very limited number of the other species commonly used are immune from attacks of white ants. Losses from deterioration of stock would therefore probably outweigh any advantage to be gained by the establishment of such depôts. Please see also reply to Question 1.

Question 21. Not known. All records of expenditure by the Timber Supplies Branch of the Indian Munitions Board are kept by the Deputy Controller of War Accounts, Munitions Branch.

Question 22. (*a*) Please see reply to Question 21 above. (*b*) No special arrangements.

Question 23. Yes.

Question 28. Please see reply to Question 21 above.

A. J. R. Hope, Esq., Superintending Engineer, Simla Imperial Circle.

Question 1. Yes a central agency with provincial branches.

I consider a central controlling and purchasing agency necessary to ensure economy and efficiency and the fixing and maintenance of a reliable standard of quality of articles to be supplied to Government Department.

So far as I can judge by no other means can the best sources of supply be tapped or promising and new sources developed.

Question 2. I think that, while no special arrangements may be necessary in the organisation of the central and local agencies for the Public Works Department, the purchase of all stores cannot be carried out invariably by these agencies. The declared policy of Government based on the recommendations of the Public Works Department Reorganisation Committee is to encourage the gradual establishment of a class of contractors for the execution of public works. Tenders are to be invited for complete works and the contractors are to be permitted to supply all materials required for the execution of their contracts. It follows therefore that only where a contractor is unable to get any special stores or materials necessary that the stores would be supplied through Government agency.

The Engineer responsible would specify the required quality or brand of article to be used. These would be such as the inspecting staffs of the central agency had approved and the Engineer could indicate the sources from which the contractor could obtain them.

Question 3. I do not think the central agency or the provincial agency can be concerned with the purchase of articles of purely local supply, *e.g.*, bricks, lime, local timbers, etc. The arrangements for supply and purchase of such must, I consider, remain in the hands of the officer requiring them. As stated in 2 above contractors are to be encouraged to supply everything necessary for the completion of their contracts.

Question 4(*a*). Local and *quasi*-public bodies would in my opinion benefit equally with Government Departments by making their local purchases through the central agency or the provincial agency, but it is possible that if these bodies and company-owned railways are admitted or so catered for it might be looked upon as an interference with private enterprise.

Company-owned railways and British colonies would also benefit.

All should be required to contribute towards the cost of the central agency.

Question 5. Yes, provided provincial agencies are established also.

As regards measures of decentralisation it seems to me that if the proposals outlined in paragraph 197 of the Industrial Commission's proposals are put in force these should meet requirements. I would only add that where running contracts are entered into, local officers should be allowed to place their orders for small stores direct with the firms concerned reporting such to the local stores department. I think such an arrangement would save time in getting delivery.

Question 6. I am inclined to think that departments of the Government of India should preferably obtain their requirements through the central agency who would pass on indents to the local agency best able to supply the articles required.

Question 7. I have no personal experience.

Question 8. I am unable to give any definite opinion but I should think it would be quite practicable to introduce simultaneous tendering in India and England for important contracts.

Question 9. So far as the Public Works Department is concerned in this matter I am of opinion that the policy of inspection may be dictated by the department responsible for the industrial development of the country but the Public Works Department should have the right to stipulate for any special inspection that it may consider necessary in special cases.

Question 10. Yes, but I suppose the experts on the provincial staffs would also be available.

Question 11. Subject to the reservation made in 9 above I do not consider the Public Works Department require any special inspection organisation.

Question 12. I would suggest steel products and cement and electrical plant.

Question 13. Inspection should be carried out by a central inspection agency but for the inspection of ordinary stores produced within a province arrangements would doubtless be made for the experts on the provincial staffs to carry out the necessary inspection as far as possible. Inspection of the products of a large industry which was located in a particular province, *e.g.*, the steel industry should be carried out by the central inspection staff entirely.

Question 14. I would suggest that if a central agency is established with a Controller-General at the head of it and if all inspection and purchase is to be carried out by this agency, the Stores Rules of 1913 would be superseded so far as they relate to the Public Works Department.

It should be left entirely to the Controller-General to decide when it was necessary to transmit indents to the Director-General of Stores at the India Office.

Continued.] Mr. A. J. R. Horn.

Question 15. I consider that purchases of European stores through established Indian branches of British manufacturing firms should be freely allowed. I do not think this need affect Indian industries adversely, on the contrary it should stimulate private enterprise.

The grant of this concession would in my opinion lead to—

(*a*) the holding of regular and adequate stocks in India by the firms concerned,

(*b*) firms establishing manufacture in India with consequent advantage to the general industrial development of the country.

Question 16. Yes. Scrutiny by a central department in India will eliminate unnecessary demands Home for articles which can be supplied in India and also make better known the resources of the country to supply its own needs.

Question 17. I can only suggest that the provincial stores branches should send to the central department, information of the prices ruling for local products at stated intervals. Besides the information in the hands of the local stores branches there would be information available from the provincial Departments of Industries and the results of tenders for running contracts called for by the central agency.

For prices in the United Kingdom I think the Stores Department of the India Office should keep the central agency in India supplied.

I would suggest here that there should be representatives in the Stores Department of the India Office sent from India. Such officers would be on deputation and would be replaced from time to time. They would have a live interest in the requirements of the country and if given facilities would be able to keep the central agency posted with information as to the possibilities of supply and prices at Home and of new developments.

Question 18. I cannot say but I would suggest that only articles from the United Kingdom should be obtained through the Director General of Stores at the India Office. If stores are to be obtained from countries other than the United Kingdom then I think the central agency should be free to arrange as it finds best.

Question 19. So far as I can judge central stock depôts will be required. Their establishment should tend to reduce the holding of stocks by Government departments and restrict the number of small store depôts, which in present circumstances has to be kept up.

It should be unnecessary for the central depôts to stock such articles as private firms showed their readiness to stock in sufficient quantities and articles for which running contracts had been entered into, otherwise the effect would be to discourage private firms from maintaining their stocks up to market requirements.

Question 20. For imported articles the depôts would be located at the chief ports—Bombay, Calcutta, Madras and Rangoon.

For Indian stores at places convenient to the main places of manufacture.

I think the depôts will be required for Indian as well as imported stores.

Question 21. My charge has only come into existence recently but I give below such information as is available:—

Year.	Value of imported stores purchased in India.	Value of stores produced in India.			Value of stores purchased through the D.-G. Stores.	Value of other stores purchased outside India.
		Obtained from Govt. factories.	Obtained from private dealers.	Total.		
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1914–15	53,933	41	15,301	15,342	..	..
1915–16	26,408	..	11,285	11,285	..	..
1916–17	37,271	..	11,857	11,857	..	..
1917–18	94,781		15,123	15,123	..	..
1918–19	1,77,117	409	1,41,190	1,41,599	..	..

Question 22. No record exists at present beyond what is contained in the stock lists kept up and the correspondence carried on with firms.

Question 23. I do, and I think it is most important that this should be done.

Question 25. It is probable that private enterprise might think so and argue that the resources of a large Government agency should not be placed at the disposal of such bodies.

Question 27. Yes. I think this is desirable; the true cost of purchase would not otherwise appear.

Question 28. Stores purchased by the Public Works Department may be classified as under:—

(*i*) Articles manufactured in India from Indian materials.

(*ii*) Articles manufactured in India from imported materials.

(*iii*) Articles which are not manufactured in India.

There are no special audit rules for (*i*) and (*ii*). As regards (*iii*) purchase is made:—

(*a*) Through the Director-General, Stores.

(*b*) In India with the sanction of competent authority.

The audit procedure is as follows:—

(*a*) When purchase is through the India Office as soon as the stores have been despatched by the Director-General, Stores, an invoice of stores showing price, freight, etc., is forwarded by the India Office to the Accountant-General of the Province concerned. The invoice is passed on by the Accountant-General to the Executive Engineer who adjusts the amount by credit to head "Expenditure in England" and debit to head "London Stores."

When the stores are received the head "London Stores" is credited and the work or service for which the stores are intended is debited. The transactions appear in the Executive Engineer's monthly accounts and are supported by the invoices and the Accountant-General passes the transactions finally.

In order to cover the cost an amount equal to the value of the stores is transferred from the Budget Grant of the work for which the stores are received to the head "Expenditure in England." Any excess or saving under this head is watched by the Accountant-General who instructs the Executive Engineer from time to time to take steps for the adjustment of lapses or excesses.

(*b*) When purchase has been made in India, Audit has to see that competent sanction exists for the local purchase of stores as required by rule 13 of the Stores rules. To satisfy audit, disbursing officers have to note on the voucher for payment the rule under which purchase is made and also the reference to the sanctioning authority's letter.

Question 29. I should think that this would undoubtedly be attained.

Question 30. Yes, I consider it would be desirable to arrange interchanges of personnel in both cases as this would help to keep the department in closer touch and would tend towards efficiency.

Mr. A. H. Silver.

A. H. Silver, Esq., C.I.E., of Messrs. Mitchell and Company, Delhi.

Question 1. I regard the formation of a central agency for purchase on account of departments of the Government of India as very desirable. The various departments and Provincial Governments overlap in a considerable degree in their purchases of the same goods, particularly in such goods as textiles, boots and leather equipment, machinery and engineering stores and similar items, which are common to requirements of all classes. Individual purchasing by individual departments or provinces leads to competition one with another, and at times when business is brisk and manufacturers are well employed, such competition must give rise to increasing of prices. Moreover, a number of individual departments or Provincial Governments cannot possibly have in each case the same amount of information as would be possible to a central agency dealing with the requirements of all consuming departments, nor can they provide the same expert buying or inspecting arrangements.

Question 2. The division into special arrangements of the Central Agency would follow the lines of classes of goods, rather than particular departments, and the divisions of the same fall into natural groups, such as :—

(*a*) Textile goods, including made up clothing.
(*b*) Boots, saddlery, harness and leather equipment generally.
(*c*) Machinery, engineering and railway stores.
(*d*) Timber and forest produce, *e.g.*, resin, turpentine, etc.
(*e*) Grains and food stuffs.
(*f*) Stationery.

Similar groups will naturally suggest themselves but in addition it may be necessary to make special arrangements for the particular requirements of certain particular departments, as for instance, the Ordnance Department in its requirements of purely military stores.

Question 3. Subject to the exception named above, in the case of purely military stores, I do not think that any particular class of stores need be purchased except by the Central Agency.

Question 4. I am of opinion that it would be advisable for such bodies as those named to make their local purchases through the Central Stores Agency. Their contribution towards the maintenance of the Central Organisation should take the form of a percentage charged upon the value of the goods purchased.

Question 5. I regard the Central Stores Department as a suitable agency for the purchases of Local Governments. I would suggest that a local Director of Purchases should be attached to the Industries Department in each Local Government, who should have limited powers of independent purchase up to a maximum figure of, say, Rs. 2,000, for any individual requirement. The Director of Purchases, although linked with the Director of Industries in the Local Government, would be under the control of the Central Purchasing Agency and he would be in a position, when forwarding the demands of Local Governments, to indicate the prices at which such goods could be obtained locally. Other things being equal, the Central Purchasing Agency would doubtless authorise the purchase of such goods in the local area.

Question 6. I do not consider it desirable for departments of the Government of India to obtain any of their requirements through local agencies, otherwise than by the method above indicated in answer to Question No. 5.

Question 7. I have a certain amount of experience in commercial life of the existing system by which Government calls for tenders for supply of stores. According to my experience it is difficult for a manufacturer to keep in touch with the demands for tenders by the various Local Governments and purchasing departments. There is also an objection to the time ordinarily taken between the date on which the tender is submitted and the date when notification of acceptance or rejection is received. During that time the manufacturer is in an uncertain position with regard to the demands likely to be made upon him. If, for instance, three consuming departments each call for tenders for, say, 50,000 blankets at the same time and the manufacturer is in a position to undertake the supply of 50,000 only altogether, he dare not tender for all three in case all three might be accepted. He tenders, therefore, only for one requirement and if it so happens that his tender for that requirement is not accepted, he has lost the business altogether although the rate quoted in the tender which was rejected might have proved acceptable in the case of the other tenders. The consolidation of all requirements into one set of tenders would place the manufacturer in a position to make a closer tender, both as regards quantity and price.

Question 8. I do not think that simultaneous tendering in India and England would be practicable. I see no objection, however, to tenderers in England submitting their tenders to the Authority inviting them in India—it only means giving rather longer notice—all tenders should be dealt with by one authority which I suggest should be the Central Stores Department.

Question 9. I consider that the policy of inspection should be dictated by the consuming department, who should consult the Industries Department freely when specifications are framed with a view to ascertaining whether it is possible to so frame the specifications that they should present no real difficulty to manufacturers in India. With such a policy I am confident that the industries of the country would fall into line. I may mention that, in connection with the purchase of textiles for the Indian Munitions Board, mills in Bombay which had not previously tendered for Government requirements and who believed that they could not tender up to the specifications required, took up these orders during the war, and found themselves able to supply in accordance with specification. In one instance at least the Managing Director of the mills informed me that the experience had been valuable to them as they found that it had improved the general standard of their work.

Question 10. In my opinion inspections should be carried out generally by a Central Agency, working under the same higher control as the agency for the purchase of stores. This Inspection Agency should consult the Industries Department freely, as suggested above, with regard to the framing of specifications, and should further consult them when required as to the desirability or otherwise of loosening inspection in the case of particular stores.

Questions 11 and 12. As mentioned previously, special inspection would naturally be required in the case of purely military stores. It would also be necessary in the case of say, scientific instruments, medicines and drugs, and machinery.

Question 13. Even in the case of purchases by Local Agencies, I still consider that inspection by the Central Inspection Agency is desirable.

Questions 14 and 15. With the adoption of extended purchases in India and the establishment of either Central or Local Agencies for purchase it would probably be necessary to introduce modifications into the Stores Rules of 1913. The purchase of European stores through established Indian branches of British manufacturing firms should be encouraged and would doubtless lead to the establishment of independent manufacture in India and to the holding of stocks in India. Any measures tending to encourage the holding of stocks in India are to be encouraged, as the knowledge that ample stocks were ordinarily held in the country would possibly enable Government Departments to reduce the quantities of stocks held by Government, thereby saving warehousing charges and establishing a solid reserve.

Question 16. I consider that the scrutiny by a Central Department in India of all Home indents before their transmission to the Director-General of Stores is essential.

Question 17. If the system of central purchasing be adopted the department would have on hand ready information as to the prices at which articles are obtainable, and those articles would include both those made in India and those made in England, if the purchase of European

Continued.] Mr. A. H. Silver.

stores through established Indian branches be encouraged. In the ordinary course the prices for all goods would be posted in a classified Price Register and the Purchasing Agency would therefore have at hand for instant reference a record showing the last price paid. This information could be kept up to date by enquiries addressed to suppliers from time to time by the Central Purchasing Agency.

Question 18. I would regard it as desirable that machinery at least should be procured by direct indent upon the supplier, rather than through the Director-General of Stores.

Question 19. If it be decided to encourage the purchase of European stores through established Indian branches it would not be necessary to form Central Stock Depôts by the Government in India. The establishment of such Central Stock Depôts would discourage the holding of stocks by private firms.

Question 20. If it should be decided to maintain a Central Stock Depôt for any class of stores these stock depôts should obviously be maintained at the port at which the goods enter. I would not consider it necessary to maintain stock depôts for Indian stores. In this connection it may be remarked that manufacturers and firms in India would doubtless be willing to hold at the disposal of Government certain imported stocks in return for a continuing contract.

Question 23. I do not think that it would be feasible to collect and disseminate information of the character mentioned to local purchasing officers.

In the case of purchasing officers attached to the Central Agency the information referred to would be in their own hands.

Question 25. I do not think that the purchase and inspection of stores for company-owned railways and local and *quasi*-public bodies by a single Government Agency would constitute any interference with the legitimate sphere of private enterprise.

Question 27. I am of opinion that the cost of Central and Local Purchasing Agencies should be met by a percentage charge upon the goods supplied against their orders.

Question 29. I believe that the creation of a Central Stores Purchasing Department would render it possible to exercise a more efficient audit on purchases and would ensure fuller compliance with the rules in force.

Question 30. I believe that an interchange of personnel between the Home and Indian Stores Department and between the Indian Stores Department and any local purchasing department or agency would be valuable.

Mr. D. B. MEEK.

Memoranda by Directors of Industries.

MEMORANDUM BY D. B. MEEK, ESQ., M.A., B. Sc., Director of Industries, Bengal.

The following is a very brief note to indicate what I consider to be the best solution of the problem of the relationship of the Central Stores Purchasing Agency to the provincial Departments of Industries.

For many obvious reasons the establishment of an Imperial Stores Purchasing Agency is desirable but such an Agency will only be effective and economical provided it is run on a large scale *i.e.*, provided there is only one such an Agency in India. This follows from the fact that a large number of experts will be required and the cost of running such a department will be much larger than would be justified by the demand of any one province but if the provinces join together it should not be too large for the establishment of an Imperial Agency. Unless such a Stores Agency is supplied with the necessary experts it would be less effective than the purchasing arrangements as they stand at present. This is more or less recognised in the report of the Industrial Commission. But that report indicates that some of the officers of this Imperial Stores Agency might be allocated to the various provincial Departments of Industries, each officer working under the local Director of Industries. This is an arrangement which is open to various objections but the most important one is that the provincial Directors of Industries will certainly not have sufficient time to control carefully the Workings of such Imperial Stores Agency Officers as might be seconded to them. If the control is not close and minute it is worse than none as it relieves the Imperial Stores Agency of responsibility while at the same time it does not supply the control which is necessary. In my opinion the purchase of stores should not be one of the functions of the Directors of Industries. It is merely a means to an end and as such may be profitably used by Directors of Industries while not remaining an end in itself. The Imperial Stores Purchasing Agency should be a branch of the Imperial Industrial Department. Its officers may be situated in the various provinces but these will remain officers of the Government of India and the activities should be controlled by the Imperial Stores Department and the responsibility for their activities should rest with that Department.

The duty of the provincial Director of Industries with regard to the execution of provincial indents would be merely advisory, the working of the scheme being as follows :—

All indents for articles above a certain value and contained in a certain list which should be periodically circulated would be forwarded to the provincial Director of Industries. These indents would be passed through his Industrial Intelligence Branch and in forwarding these to the local representative of the Imperial Stores Agency it would be the duty of the provincial Director of Industries to indicate in detail where such indents could be met within his own province *i.e.*, the provincial Director of Industries would indicate the names of manufacturers or firms within his province who are in a position to meet the indents or to meet portions of these indents. He would give as much details as possible regarding price, outturn, quality and previous supplies. He should also have the power to suggest to the Stores Agency the names of firms with whom orders might be placed and if the provincial Governments were willing to subsidise through placing orders any particular industry he should have power to inform the Stores Purchasing Agency that the local Government is willing to have its demands met from certain firms even although such firms initially were not in a position to make the lowest quotation. In all such cases he should be expected to state definitely a percentage limit up to which the local Government might be willing to subsidise. If in the working of such a plan the provincial Director of Industries discovers that his suggestions were not being given what he considered sufficient attention he should have power to forward his objections to the Imperial Industrial Department direct under which the Central Stores Agency would work. It would also be one of the duties of provincial Director of Industries to keep the Central Stores Agency supplied with periodical reports as to the possibility of his province and in return he should receive similar reports from the Central Stores Agency regarding the possibilities of other provinces.

From the above it will be seen that I have departed from the suggestions of the Industrial Commission's Report but my reasons for this departure are :—

(1) that I do not consider the demands of any one province sufficiently large to establish at present a thoroughly equipped Purchasing Agency of its own, and

(2) that I do not consider that control of officers of an Imperial Agency by a provincial Director is advisable.

Mr. Meek also submitted the following answers to the questionnaire.

Question 1. I advocate the formation of an Imperial Stores Agency for the purchase of stores required by the various departments of the Government of India. My reasons are as follow :—

(*a*) Under the present rules a purchasing officer either purchases in India or if, for various reasons, he is not in a position to purchase satisfactorily in India he purchases through the Director-General of Stores, London. An examination of the indents passed on to the Director-General of Stores, London, discloses the facts that many articles are purchased in London which could be obtained in India. The cause of this is that many purchasing officers in India are neither in a position nor suitably staffed to purchase economically in India. They naturally fall back on the only organisation at present in existence which is suitably equipped to make purchases satisfactorily. If such an organisation existed in India there can be no doubt that it would be utilised to the fullest extent by purchasing officers. The fact that some purchasing officers in India are suitably placed and equipped to make their own purchases economically in India is a further argument for the formation of one large purchasing department so equipped to make the purchases which these officers effect and to do so more efficiently in virtue of better expert staff. The establishment of such a purchasing agency does not necessarily involve the closing down of the London department. The latter might with advantage remain as a branch of the Imperial Stores Agency purchasing for this Agency all stores which cannot be obtained in India.

(*b*) *Economy and standardisation.*—The stores required for many departments are very similar in character. Each purchasing officer holds certain views on details which are the result of the limitation of his past experience, and this leads purchasing officers of different departments to order articles varying only in those minor details. A little experience with an Imperial Stores Agency would lead to the elimination of these personal ideas, and articles would

become standardised without in any way suffering in their functioning. With standardisation and pooling of demands would come purchase in bulk and, as a natural result, economy in purchase. Economy would also follow through the absence of competition—a competition which is involved through several Government departments being in the market for the same article at the same time. Standardisation would also be to the advantage of the growing industries in India, in that pioneers of these industries would not have such a large range of types to work up to initially. The purchasing department would be in a position to give large orders for one standard article, and a young concern might be able to undertake profitably the production of one standard article where it would be impossible for it to undertake the production of a large and varied range of such articles.

This leads on to—

(*c*) *Encouragement of local manufactures.*—A department which is in a position to place large orders possesses the most powerful instrument for the industrial development of the country in which it works. Industries will only flourish if they can find suitable markets for their products, and it is only fair to the department which is responsible for the industrial development of India to give that department the control and use of this instrument of development.

(*d*) *Expert advice on the purchase of stores.*—At present there are many officers with large purchasing powers who feel acutely the absence of expert advice on the purchase of stores. They are not in touch with the markets and their many duties prevent them ever hoping that they will be able to keep in touch with markets. The business of most of the large towns in India is buying and selling and keeping in touch with markets, and if this is the business which occupies most of the members of large firms in a place like Calcutta, surely it is sufficiently important to warrant the establishment of a special department to look after the requirements of Government departments who, in India, form no small fraction of the buyers.

Question 2. With an Imperial Stores Agency properly constituted and thoroughly staffed with experts, I do not consider that any special arrangements would be required for any particular department of the Government of India. As will be seen by reference to my answer to Question 9, I contemplate the drawing up of full specifications and the working to these. The only other point which occurs to me is the urgency of the demand, and this is a question which could be arranged by a system of priority worked out at the head office of the Agency in consultation with the various departments concerned. The demands of the various departments would then be met in rotation according to the class of priority arrived at as a result of this consultation. Such a state of affairs would most probably only arise at very exceptional times such as have been experienced during the past few years. In the selection of the officers for the staff of the Imperial Stores Agency it is presumed that the requirements of the various departments mentioned in this question would be carefully considered and a certain number of the posts would be filled by officers who have had special experience of the stores required by those departments. Any difficulty which might possibly arise through the absence of knowledge on the part of the officers of the Imperial Stores Agency could be overcome by deputing officers with such special knowledge to act as liaison officers.

Question 3. There are certain articles in the purchase of which by the Imperial Stores Agency no advantage would be obtained, *e.g.*, certain building materials, such as bricks, sand, etc., straw, brushes, etc. Ordinary bricks for building purposes can be made anywhere in India almost, and the officer requiring them can generally arrange for their local manufacture more economically than a central stores agency could. There will always be a number of articles required in small quantity and required at once, and such small urgent purchase could be made locally as efficiently by the officer requiring them as by a stores agency. In the beginning, the Imperial Stores Agency should concentrate on the large items of indents, especially on large items recurring annually, for which forward contracts at favourable rates can be made. Complete list of the articles which may be purchased by the indenting officers without going through the stores agency could be drawn up and a monetary limit could be placed on such purchases. Periodical reports of purchases made by heads of departments without going to the stores agency could be supplied to the agency, and an annual examination of these lists and the prices paid would indicate whether at any stage an article might with advantage be transferred from the list of articles not purchased by the agency to the list of articles purchased.

Question 4. I am of opinion that it would be greatly to the advantage of (*a*) local and *quasi*-public bodies, (*b*) company-owned railways and (c) British Colonies and Protectorates which make purchases in India to make their purchases through the proposed stores agency; but except with company-owned railways in which the Government has a controlling interest the question of the utilization of the stores agency by the above-mentioned bodies will, in my opinion, remain a voluntary one. If such bodies make use of the agency they should be expected to contribute to the cost of running such an agency, and the simplest method of doing this would appear to be by charging a percentage commission on the value of the goods purchased through the agency.

Question 5. The relationship between the Stores Purchasing Agency and the Provincial Directors of Industries.—I consider that the Imperial Stores Agency, as I contemplate it, would be suitable for the purchases of local Governments.

For many obvious reasons the establishment of an Imperial Stores Purchasing Agency is desirable, but such an agency will only be effective and economical provided it is run on a large scale, *i.e.*, provided there is only one such agency in India. This follows from the fact that a large number of experts will be required and the cost of running such a department will be much larger than would be justified by the demands of any one province, whereas if the provinces join together it should not be too large for the establishment of an Imperial Agency. Unless such a Stores Agency is supplied with the necessary experts it would be less effective than the purchasing arrangements as they stand at present. This is more or less recognised in the report of the Industrial Commission. But that report indicates that some of the officers of this Imperial Stores Agency might be allocated to the various provincial Departments of Industries, each officer working under the local Director of Industries. This is an arrangement which is open to various objections, but the most important one is that the provincial Directors of Industries will certainly not have sufficient time to control carefully the working of such Imperial Stores Agency officers as might be seconded to them. If the control is not close and minute it is worse than none, as it relieves the Imperial Stores Agency of responsibility, while at the same time it does not supply the control which is necessary. In my opinion the purchase of stores should not be one of the functions of the Directors of Industries. It is merely a means to an end, and as such may be profitably used by Directors of Industries while not remaining an end in itself. The Imperial Stores Purchasing Agency should be a branch of the Imperial Industrial Department. Its officers may be situated in the various provinces, but these will remain officers of the Government of India and their activities should be controlled by the Imperial Stores Department, and the

Mr. D. B. Meek. *Continued.*

responsibility for their activities should rest with that department. The duty of the provincial Director of Industries with regard to the execution of provincial indents would be merely advisory, the working of the scheme being as follows:—

All indents from Government departments, for articles above a certain value and contained in a certain list which should be periodically revised and circulated, would be forwarded to the provincial Director of Industries. These indents would be passed through his Industrial Intelligence Branch, and in forwarding these to the local representative of the Imperial Stores Agency it would be the duty of the provincial Director of Industries to indicate in detail where, in his opinion, such indents could be met within his own province, *i.e.*, the provincial Director of Industries would indicate the names of manufacturers or firms within his own province who are in a position to meet the indents or to meet portions of these indents. He would give as much details as possible regarding price, outturn, quality and previous supplies. He should also have the power to suggest to the Stores Agency the names of firms with whom trial orders might be placed, and if the provincial Governments were willing to subsidise any particular industry, through placing orders he should have power to inform the Stores Purchasing Agency that the local Government is willing to have its demands met from certain firms, even although such firms initially were not in a position to make the lowest quotation. In all such cases he should be expected to state definitely a percentage limit up to which the local Government might be willing to subsidise. If in the working of such a plan the provincial Director of Industries discovers that his suggestions were not being given what he considers sufficient attention, he should have power to forward his objections to the Imperial Industrial Department under which the Central Stores Agency would work. It would also be one of the duties of the provincial Director of Industries to keep the Central Stores Agency supplied with periodical reports as to the possibility of his province, and in return he should receive similar reports from the Central Stores Agency regarding the possibilities of other provinces.

From the above it will be seen that I have departed from the suggestions of the Industrial Commission Report, but my reasons for this departure are (1) that I do not consider any one province sufficiently large to establish at present a thoroughly equipped Purchasing Agency of its own and (2) that I do not consider that control of officers of an Imperial Agency by a provincial Director is advisable. From the above it will be seen that in my opinion the success of a Stores Purchasing Agency will depend on concentration within one Imperial Agency with branches in various parts of India, but these branches will be branches of the central department.

Question 6. I am not in favour of the establishment of local agencies under local Governments, but of local branches of the Imperial Stores Agency. This being so, the Government of India would obtain its requirements from the Imperial Agency through the local branches whenever convenient.

Question 8. If an Imperial Stores Agency is established there should be no difficulty in arranging for simultaneous tendering in England and India for important contracts. The London department would, according to my idea of the scheme, be a branch of the Stores Agency and the tenders could be submitted on the same day in London and India and the London tenders sent to India. The tenders would all be opened at the same time and orders passed on them at the head office, which would be in India. In the event of a Home tender being accepted, this order would be cabled to the London branch of the Agency. These tenders would only be for large contracts, and the delay of one month say, in obtaining the tenders from Home and communicating the result to the Home branch would not be serious in such large contracts as are contemplated.

Part II; Question 9. So far as inspection is concerned, arrangements must be made whereby the consumer obtains what he wants or something sufficiently near what he asks for as to satisfy his requirements. The first thing to be done, therefore, in this connection is to find out what the Stores Agency can do towards meeting the requirements of the consumers. The Stores Department and the consumers must therefore in consultation draw up definite specifications. When these specifications have been drawn up and agreed to by the consumer, the consumer has nothing further to do with the inspection. The inspection will be carried out by the inspection branches of the Stores Agency. The whole Stores Agency will be under the Imperial Industries Department, and therefore once the consumers have agreed to the specifications, the inspection will be carried out by the Stores Agency, which will be a part of the Imperial Industries Department.

In the case of such departments as require stores of a highly technical character, for the proper inspection of which the Stores Agency is not thoroughly equipped, then the consuming departments concerned could by arrangement depute liaison officers to inspect and pass the stores.

Question 10. The inspection should be carried out by the inspection branch of the Stores Agency. The inspection branch should be entirely separate from and independent of the purchasing branch; but the two branches would form parts of the same Stores Agency and should be under the control of the head of the Agency. As in the case of the purchasing branch local inspection branches will be necessary; but in these local branches the purchasing and inspection will be entirely independent of each other.

Questions 11 and 12. These questions have already been dealt with.

Question 13. I do not advocate the creation of local agencies where by "local" is meant agencies under the control of the local Government. According to my scheme, therefore, the question does not arise.

Question 15. This raises a point where, in my opinion, entire freedom should be left to the Imperial Stores Agency proposed. The main object in purchase is to buy at the lowest price, but purchases are not always free from conditions which render this ideal always possible, *e.g.*, the element of time enters into many, although my idea of the Stores Agency is that it should, in the earlier stages at least, deal with purchases for which a fair latitude in time is given. Purchases of European stores which are required urgently would in many cases be made from Indian branches of British manufacturing firms, and for this reason such branches would tend to hold larger stocks; but urgent demands on the Agency should be discouraged as far as possible, as these in many cases result from a lack of foresight and do not work for economy. If indenting officers find they can get everything simply when they ask for it, there will always be a tendency on the part of those officers to indent for articles only when these are immediately required. I am not in favour of the purchase of European stores from Indian branches of European firms unless it is clearly proved that such purchases cannot be made more economically from the headquarters of these European firms, and from my experience of Indian branches of European firms this will take some proving. As to the encouragement of Home firms to establish manufacture in India, I am not of opinion that this would be strengthened by purchases from Indian branches of such firms. In fact, I am rather inclined to think that such a method of purchase would tend more to perpetuate the present system of manufacture at Home than of manufacture in India. This is a question of the cost of manufacture. The European firms will know the Indian demand, and if this begins to be met from purely Indian sources it will be for the European firms to investigate

the question and to decide to establish manufacturing branches in India or to lose the Indian market. Any active firm which observes that its Indian market is diminishing will not be slow to take up the investigation; infact many such firms are doing so already.

Question 16. As I picture the organisation of the Imperial Stores Agency, the department of the Director-General of Stores would be a branch of the whole Agency and no indents or items of indents would be sent to that branch for compliance which could be met in India. For this purpose, therefore, an intelligence branch of the Imperial Stores Agency is essential. It would be in a position to say definitely which items could be supplied satisfactorily in India; it would have full information of the Indian and home rates; it would receive periodical reports from the various local branches of the Imperial Stores Agency and from the local Directors of Industries and it would publish all the information which the Imperial Stores Agency receives regarding annual demands from Government Departments and which it receives from the various provinces. Besides scrutinising indents and indicating sources of supply for various items of indents it would be the industrial intelligence bureau for the whole of India.'

Question 17. When normal conditions return, the markets for most of the articles which the Imperial Stores Agency will purchase will become stable and these will only be subject to slight fluctuations. Under such circumstances the Home market rates posted weekly to the head office of the Agency in India would not vary much for the home markets rates at the time when such reports were received in India. The ordinary mail would appear, therefore, to be quite satisfactory as a means of keeping the head quarters informed of the Home rates. Should market fluctuation become violent at any time recourse can be had to code cables giving the most recent market quotations, but it would not appear that any difficulty need be anticipated in keeping the central office up to date as regards Home markets.

Question 18. The intelligence branch of the Imperial Stores Agency should also be in a position to obtain information regarding the other important markets outside India besides that in the United Kingdom. With such information available there would be cases where orders might with advantage be placed outside India and the United Kingdom and there would be no useful purpose served by sending these orders through the Home branch of the Imperial Stores Agency. These orders would be placed direct by headquarters in the country where they would be met most economically.

Question 19. I do not advocate the formation of central stock depôts by the Government of India. The stock depôts already in existence attached to the various departments which would make purchases through the Imperial Stores Agency would, in all probability, be sufficient for the purpose, and it should not be difficult to arrange to stock at the most covenient depôt any materials which the Imperial Stores Agency might buy forward on estimated annual demands. Direct delivery to the departments purchasing through the Agency will be the cheapest method—it will save handling charges, depôt rent, and reduce transhipment to a minimum:

(*a*) Even if the Imperial Stores Agency established central depôts the various Government Departments would be very loath to reduce their holdings in stock.

(*b*) The establishment of central stock depôts would also tend to discourage the holding of stocks by private firms, not that I attach much importance to this, for if private firms hold stock they will always want the expenses entailed by such holdings covered by the prices which they quote to the Imperial Stores Agency.

Question 20. As my answer to question 19 is against the formation of stock depôts, question 20 does not arise.

Question 23. I am of opinion that it is not only feasible but also desirable to have a branch of the Imperial Stores Agency which will collect and distribute reliable information regarding prices, capacity and performances of contracting firms. This work would naturally fall to the Intelligence Branch which I have mentioned elsewhere, and the information would be embodied in the periodical reports of that Branch.

Question 24. I do not consider that the shipbuilding rules require much alteration. They probably require more publicity. It is perhaps scarcely sufficient that they exist. They might with advantage be clearly brought to the attention of the various firms who might be in a position to undertake shipbuilding contracts. For some time to come it seems unlikely that the shipbuilding firms in India will be able to compete with those at Home in the construction of ships which are large enough to make initial voyages to India under their own steam, carrying cargoes with them; but in the construction of coasting vessels and river-craft there appears to be an opening for shipbuilding construction in India.

Question 25. Company-owned railways and *quasi*-public bodies will have to decide whether they wish to benefit by the organisation of an Imperial Stores Agency, and in the case of company-owned railways the Government would probably have a large say in the decision. I do not consider that their participation would constitute any interference with the legitimate sphere of private enterprise.

Question 26. (See below.)

Question 27. The cost of running the Imperial Stores Agency should be met by a percentage charge on the value of orders executed through them.

Question 28. Stores purchased by the Munitions Board may be divided into the following classes for purposes of audit:—

(*i*) for stock,

(*ii*) for despatch to consignees through Indian Munitions Board Depôts—

(*a*) to Indian consignees,

(*b*) to overseas consignees—

(*iii*) for despatch to consignees direct by contractors—

(*a*) to Indian consignees—

(*b*) to overseas consignees.

Purchasing officers send copies of all supply orders to the Deputy Controller of War Accounts, and the bills are first checked against these orders as regards rates and quantities. The further checks exercised in the several cases are detailed below:

(*i*) *Stock purchases.* The Depôt submits a daily return of stores received to the Deputy Controller of War Accounts. On receipt of bills, which are supported by challans countersigned by the Depôt, the Deputy Controller of War Accounts verifies the receipt of the stores with the Depôt returns and passes the bills.

(*ii*) *Purchases for despatch through the Indian Munitions Board Depôts.* For such stores also the Depôt renders a return of stores, received and issued to the Deputy Controller of War Accounts. On receipt of bills which are supported by inspection notes granted by the Depôt, the Deputy Controller of War Accounts verifies the stores with the returns and passes the bills for payment provisionally. In the case of despatches to Indian consignees the Depôt forwards packing lists (Form K) to the consignees with the stores, and one of these packing lists duly accepted by the consignee is sent to the Deputy Controller of War Accounts, and these are checked against the bills and the bills are then finally passed in audit.

In the case of stores despatched overseas, the Depôt forwards packing lists (Form D) to the Deputy Controller (Transit), Bombay. One copy of this Form D duly accepted by the Deputy Controller (Transit) and with the number and date

Mr. D. B. MEEK. *Continued.*

of invoice (Form B)—*i.e.*, the shipping document—is sent to the Deputy Controller of War Accounts. The Assistant Controller of War Accounts, Bombay, also sends a copy of the Form B duly acknowledged by the ship's officer. These two documents are checked against the bills by the Deputy Controller of War Accounts, and no further action is taken by him. The Assistant Controller of War Accounts, Bombay, however, obtains the ultimate consignee's receipt and checks it with the invoice (Form B). This completes the audit.

(*iii*) *Direct despatches*—

(*a*) To Indian consignees. Bills duly countersigned by the consignees are received and passed for payment.

(*b*) To overseas consignees. Bills are in the first instance passed on the certificate of the purchasing officer. Subsequently Forms D, B and ultimate consignee's receipts are obtained, as detailed in the case of stores despatched to overseas consignees through Depôts, and the same checks are exercised.

Question 29. I am of opinion that the formation of an Imperial Stores Agency would render possible a more complete and efficient audit.

Question 30. Interchanges between the Home and Indian branches of the Imperial Stores Agency might be desirable, but the question of salaries paid at Home and in India will always be a difficulty, and probably an insurmountable difficulty.

Question 26. The organisation of the Imperial Stores Agency. The organisation required for the working of the Stores Agency will depend considerably on the amount of work which it is proposed to undertake. I have not figures regarding the volume of the work contemplated so that it is not possible for me to go into great detail as regards the organisation, but I give below the general outline of such an organisation as appears to me necessary. The Agency will have to be in the nature of a growing concern, capable of expansion when and where advisable. I have based my organisation on that of the Indian Munitions Board, modifying the latter where experience has suggested such modification.

The following are the main posts with suggested salaries in rupees per month, headquarters and qualifications necessary:—

—	Headquarters.	Salary.	Qualifications.
1. Controller General of Stores and Contracts.	Calcutta	Rs. 4,000	Administrator, knowledge of the working of such a department and experience in such working.
2. Deputy Controller General of Stores and Contracts.	Do.	2,500—3,000	Similar to those of the Controller General, with preferably some engineering qualifications and experience.
3. Controller of Purchase.	Do.	2,000—2,500	Engineering and stores experience.
4. Controller of Inspection	Do.	2,000—2,500	Engineering and experience in inspection work.
5. Controller of Intelligence and Home Indents.	Do.	2,000—2,500	Experience in handling indents, in collection and distribution of information and in the editing of publications.
6 Law Officer (this officer would most probably be only part-time).	Do.	. . . .	Knowledge of the Contract Law.
7. Controller of Accounts.	Do.	2,000—2,500	Accounts Officer, with experience of the accounts of a stores department.

Under the Controller of Purchases—

(A) Deputy Controller (Hardware, Metals, Plants and Machinery)—salary Rs. 1,500—1,800; headquarters, Calcutta.

(*a*) Assistant Controller, Calcutta, salary Rs. 800—1,000.

(*b*) Assistant Controller, Bombay, salary Rs. 800—1,000.

(*c*) Assistant Controller, Madras, salary Rs. 800—1,000.

(B) Deputy Controller (Manufactures)—Salary Rs. 1,500—1,800; headquarters, Calcutta.

(*a*) Assistant Controller, Calcutta, salary Rs. 800—1,000.

(*b*) Assistant Controller, Bombay, salary Rs. 800—1,000.

(*c*) Assistant Controller, Madras, salary Rs. 800—1,000.

(*d*) Assistant Controller, Lahore, salary Rs. 800—1,000.

(C) Deputy Controller (Miscellaneous)—Salary Rs. 1,500—1800; headquarters, Calcutta.

(*a*) Assistant Controller, Calcutta, salary Rs. 800—1,000.

(*b*) Assistant Controller, Bombay, salary Rs. 800—1,000.

(*c*) Assistant Controller, Madras, salary Rs. 800—1,000.

(D) Deputy Controller (Oils & Paints)—Salary Rs. 1,500—1,800; headquarters, Calcutta.

(*a*) Assistant Controller, Calcutta, salary Rs. 800—1,000.

(E) Deputy Controller (Timber)—Salary Rs. 1,500—1,800; headquarters, Calcutta.

(*a*) Assistant Controller, Rangoon, salary Rs. 800—1,000.

(F) Deputy Controller (Leather)—Salary Rs. 1,500—1,800; headquarters, Cawnpur.

(*a*) Assistant Controller, Calcutta, salary Rs. 800—1,000.

(G) Deputy Controller (Textiles)—Salary Rs. 1,500—1,800; headquarters, Bombay.

(*a*) Assistant Controller, Cawnpur, salary Rs. 800—1,000.

Under the Controller of Inspection—

(A) Deputy Controller of Inspection—Salary Rs. 1,500—1,800; headquarters, Calcutta.

(1) Assistant Controller, Calcutta, salary Rs. 800—1,000.

(2) Assistant Controller, Cawnpur, salary Rs. 800—1,000.

(B) Deputy Controller of Inspection—Salary Rs. 1,500—1,800; headquarters, Bombay.

(1) Assistant Controller, Bombay, salary Rs. 800—1,000.

(2) Assistant Controller, Lahore, salary Rs. 800—1,000.

(C) Deputy Controller of Inspection—Salary Rs. 1,500—1,800; headquarters, Madras.

(1) Assistant Controller, Madras, salary Rs. 800—1,000.

(D) Superintendent, Test House, Alipore Staff:—

(E) Superintendents of other Test Houses, if formed.

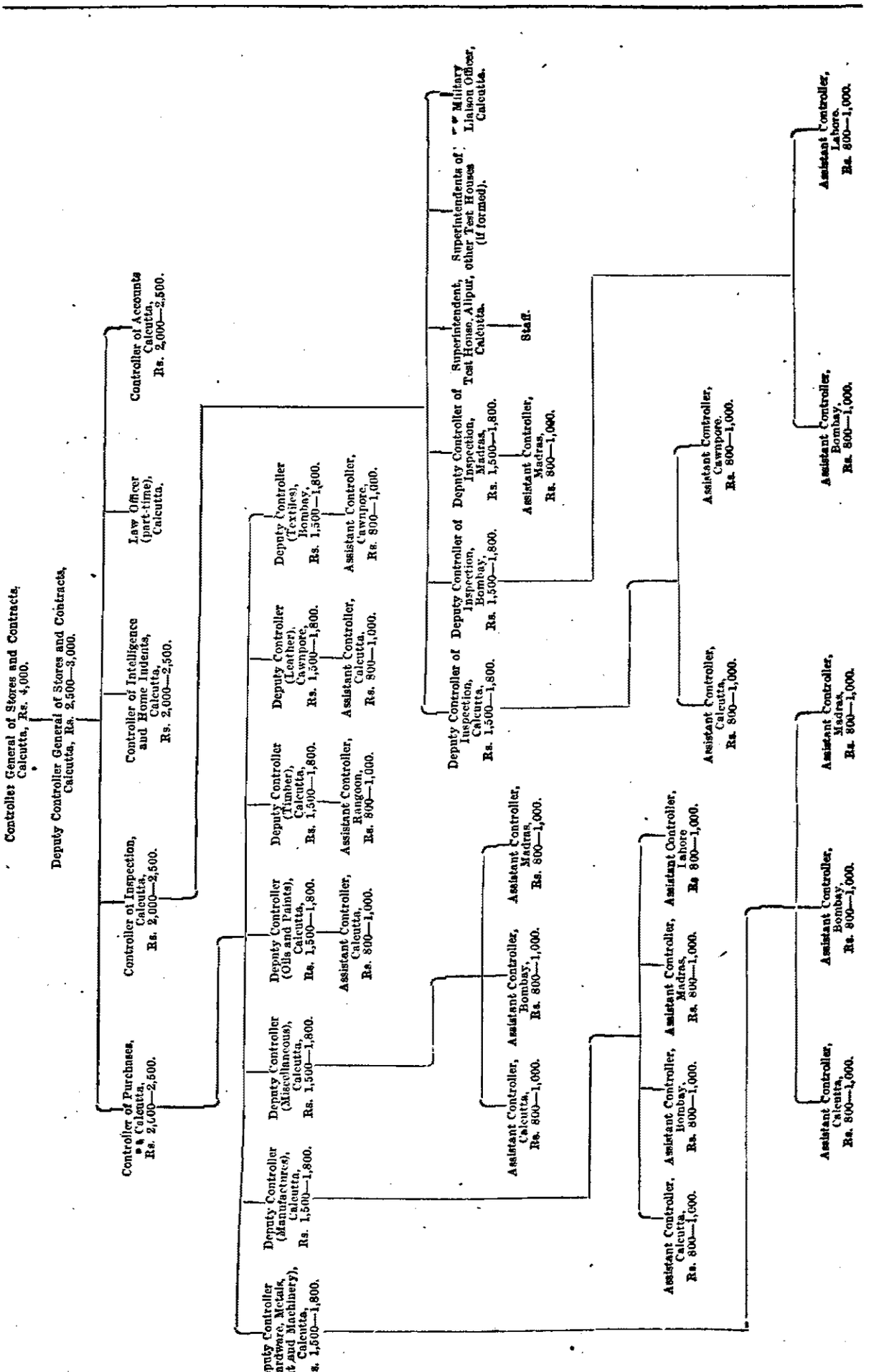
(F) Military Liaison Officer—Headquarters, Calcutta.

In addition to the salaries proposed a scale of local allowances should be drawn up based on the relative cost of living in the various places to which officers are allocated. For Calcutta the local allowances suggested are:—

Rs. 300 a month for married officers;
Rs. 100 a month for bachelors.

I have no information on which to base the local allowances for the other places in India where officers will be stationed.

Motor car allowances should be given to all officers whose work involves a large amount of travelling about within their stations.


Controller General of Stores and Contracts, Calcutta, Rs. 4,000.
Deputy Controller General of Stores and Contracts, Calcutta, Rs. 2,500—3,000.
Controller of Purchases, Calcutta, Rs. 2,000—2,500.
Controller of Inspection, Calcutta, Rs. 2,000—2,500.
Controller of Intelligence and Home Indents, Calcutta, Rs. 2,000—2,500.
Law Officer (part-time), Calcutta.
Controller of Accounts Calcutta, Rs. 2,000—2,500.
Deputy Controller (Hardware, Metals, Plant and Machinery), Calcutta, Rs. 1,500—1,800.
Deputy Controller (Manufactures), Calcutta, Rs. 1,500—1,800.
Deputy Controller (Miscellaneous), Calcutta, Rs. 1,500—1,800.
Deputy Controller (Oils and Paints), Calcutta, Rs. 1,500—1,800.
Deputy Controller (Timber), Calcutta, Rs. 1,500—1,800.
Deputy Controller (Leather), Cawnpore, Rs. 1,500—1,800.
Deputy Controller (Textiles), Bombay, Rs. 1,500—1,800.
Assistant Controller, Calcutta, Rs. 800—1,000.
Assistant Controller, Rangoon, Rs. 800—1,000.
Assistant Controller, Calcutta, Rs. 800—1,000.
Assistant Controller, Cawnpore, Rs. 800—1,000.
Deputy Controller of Inspection, Calcutta, Rs. 1,500—1,800.
Deputy Controller of Inspection, Bombay, Rs. 1,500—1,800.
Deputy Controller of Inspection, Madras, Rs. 1,500—1,800.
Superintendent, Test House, Alipur, Calcutta.
Superintendents of other Test Houses (if formed).
Military Liaison Officer, Calcutta.
Staff.
Assistant Controller, Madras, Rs. 800—1,000.
Assistant Controller, Calcutta, Rs. 800—1,000.
Assistant Controller, Bombay, Rs. 800—1,000.
Assistant Controller, Madras, Rs. 800—1,000.
Assistant Controller, Cawnpore, Rs. 800—1,000.
Assistant Controller, Bombay, Rs. 800—1,000.
Assistant Controller, Madras, Rs. 800—1,000.
Assistant Controller, Lahore, Rs. 800—1,000.
Assistant Controller, Calcutta, Rs. 800—1,000.
Assistant Controller, Bombay, Rs. 800—1,000.
Assistant Controller, Madras, Rs. 800—1,000.
Assistant Controller, Lahore, Rs. 800—1,000.
Assistant Controller, Calcutta, Rs. 800—1,000.
Assistant Controller, Bombay, Rs. 800—1,000.
Assistant Controller, Madras, Rs. 800—1,000.
Assistant Controller, Lahore, Rs. 800—1,000.

Mr. J. P. Hardiman.

Memorandum by J. P. Hardiman, Esq., B.A., I.C.S. Commissioner, Meiktila Division and formerly Controller of Munitions, Burma.

My personal opinions on the general question, based on experience of the working of the Indian Munitions Board, and governed by the desire to see industries in Burma expand, are as follows :—

I. Purchase.

A Central Purchasing Agency for the whole of India, including Burma, should be created. This Central Agency should collect indents from all Government Departments (and public bodies) in India, including Burma, and should distribute orders where they can be most economically and efficiently carried out. There should be a branch agency of the Central Agency in Burma.

2. Provisos to general rule that Central Agency should place the orders of all Government Departments :—

(*a*) Indents from Government Departments, etc., in Burma should be scrutinised by the branch agency, which should have power to order in Burma the articles required, if supplies of good quality at a reasonable rate are available locally. The balance of the indent only to be sent to the Central Purchasing Agency for disposal, as above.

(*b*) Some of the Burma witnesses expressed fear that the transmission of indents from Burma to India would result in excessive delay. I do not think there is much substance in this objection. The departments can forecast ordinary requirements a long time ahead, and indents for such could be forwarded sufficiently early to ensure delivery in good time. The Local Government should, however, be empowered to purchase locally in the event of any emergent requirement.

(*c*) It should also be empowered to order locally, irrespective of price, in special cases, such, for instance, as the need of encouraging a particular nascent manufacture.

(*d*) The central system should be extended to Departments gradually so as to minimize dislocation and the risk of delay.

3. Provided that the Local Government is given latitude to buy direct in cases (*a*), (*b*), (*c*) and (*d*) above, I can see no disadvantage in making Burma a branch of a Central Purchasing Agency for India. I can, on the otherhand, see considerable advantage. The focussing in the Central Agency of orders from all departments in India should lead to the placing of many orders with suppliers, both private and Government, in Burma.

4. The centralized system has in fact, been tried, and with advantage, in Burma. When the Indian Munitions Board was the Central Purchasing Agency, it placed in Burma orders for a considerable quantity of logs and timber (sawn sections)—engineering wood—and for a fair quantity of Ordnance Stores, particularly wooden manufactures like Telegraph posts, Flag poles, Ammunition boxes, Rifle chests, etc. The railways, and the Ordnance and Public Works Departments, in war and peace, give very large orders for timber and wooden manufactures. The possibilities of the Burma Forests are immense, and no stone should be left unturned to obtain for Burma as many of these orders (from all provinces) as possible. Major Walker, R.A., now in charge of the Rangoon Arsenal, informs me that he has never seen in India such good manufactures as those supplied by the local branch of the Indian Munitions Board to the Ordnance Department during the war. This shows that Burma manufacturers can produce to a severe specification and a rigorous inspection, at a profit. It would be a mistake not to try to revive the manufacture and revival can best be ensured by making Burma a part of the all-India purchasing system. If Burma is left out of the Indian scheme of purchase, I do not think that orders will come so readily to the province. It will be, as I think a decided mistake of policy not to arm the Forests Utilisation Conservator and the (future) Director of Industries with the opportunity of examining the all-India indents for timber and timber articles received in the Central Purchasing Agency and of asking for all the orders that Burma can fill at the price.

5. The objection (Mr. Walton) that the unit is too large, in the case of a Central Purchasing Agency for the whole of India, ignores the fact that the system has already been tried, and that very large quantities of stores were supplied on the centralised system, on the whole without undue delay, although the Indian Munitions Board was an improvised organisation working under the difficult conditions of war. Other successful instances of centralized purchase that may be cited are coal supplied through the Railway Board, and Stationery (purchase centralized in Superintendent of Stationery, Calcutta).

6. The necessity of obtaining orders for wooden articles constitutes a very strong argument for including Burma in the general scheme. It follows that I am not in agreement on this point with paragraph 3 of Development Department letter No. 739M., dated the 19th May 1919, in which it is recommended that the Central Purchasing Agency should not control the purchase of stores for Burma. Provided that the latitude outlined in paragraph 2 above is allowed, I think that it will be much to the advantage of suppliers in Burma, both private and Government, *e.g.*, the Forest Department, for Burma to be included in the general scheme.

II. Inspection.

7. As regards inspection, the policy should be dictated by the consuming department, *i.e.*, the consuming department should draw up the specification. Inspection should be carried out generally by Officers of the Central Agency, independent of but working under the same control as the Purchasing Agency. But a special inspection organisation will be needed in certain cases, *e.g.*, Ordnance Stores. Specialized inspection will be needed in case of many articles.

All should be scrutinized by the Central Purchasing Agency.

8. Departments in Burma at present having Stock Depôts should continue to have them. For departments which at present do not possess depôts, a small Store Depôt should be created. It will be necessary for the branch agency in Burma to keep small reserves, and distribution will be impracticable in many cases unless a depôt exists. In the case of indents filled from the Central Agency in India, it should arrange to lend the article in Rangoon, in the Store Depôt concerned, or possibly, in cases of approved manufacturers, direct to the consuming officer.

V. General.

The Central Agency should collect and disseminate information regarding prices, the capacity of contracting firms, etc.

Memorandum by The Hon'ble Mr. A. Y. G. Campbell, C.I.E., I.C.S., Director of Industries, Madras.

This note is intended to be applicable to Madras Presidency only and it is recognised that the arrangements proposed may not be suitable in other parts of India

1. The receipt of indents.—Indents from the Madras Presidency should be sent direct to the central purchasing authority, but a copy should, at the same time, be sent

Continued.] The Hon'ble Mr. A. Y. G. CAMPBELL.

to the Director of Industries, Madras, who should be at liberty to submit to the central authority any remarks on the indent.

3. Consolidation of indents.—Indents should be consolidated in the office of the central authority, but copies of all consolidated indents should be sent to the Director of Industries, Madras.

4. Specifications.—Standard specifications should be drawn up by the central authority but copies should be sent to the Director of Industries, Madras.

5. Calling for tenders.—Tenders should be called for by the central authority, but the Director of Industries should have copies of all notices calling for tenders so that he may be in a position to inform enquirers in Madras Presidency regarding tenders.

6. Receipt of tenders.—It should be permissible for tenders to be delivered to the Director of Industries, Madras, at a fixed hour and sent unopened under seal to the central purchasing authority. This will give local firms who have not agents in Calcutta a chance of tendering without having to go to Calcutta.

7. Placing the orders.—Orders will ordinarily be placed direct by the central purchasing authority or by the consuming departments under the instructions of the central authority. The Director of Industries may, however, be informed of any considerable orders over a limit to be decided later placed in the Madras Presidency. The Director of Industries may also be recognised as agent of the central purchasing authority, if required, for the collection of minor products through petty contractors or otherwise where tenders cannot be called for (example, bees wax); but such cases would presumably be exceptional.

8. Inspection.—The Inspectors should, in my opinion, be under the central authority and entirely independent of the Director of Industries. The Director should, however, be informed of cases of important rejections with reasons and it should be optional but not necessary for Inspectors to suggest remedies and improvements to the Director of Industries. The Director of Industries should maintain a research institute at which tests should be carried out when required by Inspectors. In special cases in the absence of the inspecting agency under the central authority, the Director of Industries should allow his experts to inspect if so desired by the central authority.

9. Stocks—No stock should be maintained by the Director of Industries.

10. Delivery of goods.—Goods should not be delivered through the Director of Industries. Goods should ordinarily be delivered direct to the indenting authorities, after being passed by the central authority's Inspectors.

11. Information.—The Director of Industries should be recognised as the central authority's source of information either direct or through a central bureau of information; the central authority should not maintain in Madras Presidency a separate agency for obtaining information.

12. Indents on England.—The Director of Industries should have copies of *all indents* sent by the central authority or by a consuming department with the sanction of central authority to England so that he can take steps to get such articles manufactured in the Presidency if possible.

13. Petty indents.—It is possible that the stores rules may provide that certain petty indents may be dealt with by consuming departments without submission to the central agency provided the purchase is made locally; in such case it should not be necessary for the indents to be seen by the Director of Industries.

14. Note.—In the above I have assumed that the indents, specifications and notices calling for tenders dealt with by the central authority will be printed.

15 Briefly my proposals amount to a suggestion that the Director of Industries should be the local agent of the central authority except in respect of inspection, drafting specifications, dealing with tenders, placing orders and accountancy.

Memorandum by R. D. BELL, Esq., C.I.E., I.C.S., Director of Industries, Bombay.

There should be considerable elasticity in the organisation of Central Stores Department and in its relations with provincial Governments. As in actual practice the central agency is not likely to develop fully for a number of years, the exact details of its organisation can only be settled by its Controller-General in the light of experience, and only broad lines of organisation can be indicatd now.

2. The central organisation should, if possible, be organised in separate branches under Deputy Controllers. I contemplate that the supervision of the Controller-General will not be so detailed as in the case of the Controller-General of Stores, India Office. The immense area to be supplied in India and the great distances to be travelled make it necessary that the Deputies should have a very considerable measure of independence. This is also in accordance with official traditions in India where conditions differ from those of the United Kingdom.

3. *Head Quarters.*—I am inclined to think that Delhi-Simla will on balance be the most convenient headquarters for the Controller-General. My own experience was that it was comparatively simple to do business from Delhi-Simla and that it would have been more difficult for me if situated in Bombay and Calcutta to have kept in close touch with the requirements of the indenting departments at Army Headquarters. My war experience was somewhat special, however, and I admit that the choice between Delhi-Simla on the one hand and Calcutta or Bombay on the other is not quite easy to make. On the whole, I should say, try Delhi-Simla in the first instance and let the Controller-General represent the need of a change if experience shows that change is necessary.

4. The Deputy Controllers would not necessarily have their headquarters at the same place as the Controller-General; indeed, if the Controller-General were stationed at Delhi-Simla, the Deputies should generally be at Calcutta or Bombay or other convenient centre.

5. If the Controller-General's headquarters were located at Calcutta or Bombay, the organisation should be strongly represented at the other port as well.

6. *Inspection.*—The inspectors should be thoroughly well qualified men, and hardly any price is too great for their services if it secures entire respect for their decisions from consuming departments. They ought to work in close co-operation with purchasing officers with the object of utilising fully the resources of the country and of developing its manufactures. While the inspectors must be strict in their duties, it should be part of them to assist manufacturers by advice and otherwise to reach the specification standard

7. Generally, there should be as much specialisation as possible, *e.g.*, if it is necessary to have a Deputy and three assistants to purchase cotton textiles, woollen textiles, jute and perhaps a few other materials it would seem to be time to have a special Deputy for cotton, another for jute, and so on. This specialisation is especially advantageous where rigid inspection according to specified standards is not necessary.

8. *Provision for Local Governments.*—It may be expected that in the future, local Governments will become increasingly independent in matters of administrative detail, and this must be taken account of in making recommendations for the stores purchasing organisation. Some local Governments may desire that the present system of individual purchasing should continue, others will desire to have their own special organisation; others may be eager to obtain the assistance of the central purchasing department. It should, therefore, be purely optional for local Governments to utilise the services of the central purchasing organisation. It is probable that in the light of the

information collected by the present Committee the majority will desire to organise their stores purchases on better lines. This could be conveniently arranged under the local department of Industries which would, subject to the control of the local Government, have wide discretion in disposing of its indents. It may make its own arrangements for purchase inside the province or it may transfer indents to the central organisation. There should, of course, be some measure of co-ordination to prevent the local Government and the Imperial Government competing in the same province through their respective stores departments; such co-ordination is also essential when a provincial Government purchases from sources outside its own province.

9. *Accounts.*—It is just as necessary to prevent a wide gulf between the purchasing and the accounts organisation, as it is to prevent the same between the purchasing organisation and the inspection department. When I was a purchasing officer of the Munitions Board, the accounts branch declined to supply me with information showing when the bills which were passed on to them for payment were actually paid. I considered it part of my duties to see that firms were promptly paid, as prompt payment undoubtedly influences prices. In actual practice, I devised a method of getting the information which I wanted from the firms themselves, but the spirit in which the information was refused is the matter to which I wish to draw attention. In the same way, in the case of stocks, the books containing the values of the stocks, are managed entirely by the accounts department, and for want of technical information there must be frequent mistakes, *e.g.*, in averaging the values of similar articles of unlike quality. The accounts department must of course have a large measure of independence, but its conduct is apt to lead to so many safeguards that certificates come to be signed as a matter of routine and not as the consequence of conscientious inspection and check.

Note on the local resources of the Bombay Presidency.

The following are the chief industries of Bombay and the surrounding districts:—

1. Cotton piece-goods.
2. Woollen goods.
3. Engineering manufactures.
4. Metal work products.
5. Chemicals
6. Timber.
7. Furniture.
8. Brushes (undeveloped).
9. Soap.
10. Candles.
11. Glass.
12. Leather goods.
13. Paints (developments expected).
14. Casein.
15. Vegetable oils.
16. Fish oil.
17. Flour.
18. Cement (3 companies have their head offices in Bombay).
19. Roperies and string works.
20. Other industries are developing or could be developed, *e.g.*, potteries, button manufacture, battery plates, etc., etc.

A. L. Hoyle, Esq., I.C.S., Director of Industries, Central Provinces.

This note represents the views of the Director of Industries in a Province whose industries have not yet attained to such a stage of development as to be able to supply the purchasing departments of Government with their requirements except on a very limited scale. Tiles of fairly good quality are produced at Katni in the Jubbulpore District, and these are, I believe, employed to a certain extent by the Public Works Department which, of course, utilises also a large quantity of local bricks. Apart from these articles and the local timber, the supply of which falls naturally rather within the purview of the Forest Department than my own, no local produce suggests itself as being utilized very extensively by any consuming Department in the Province, unless one excepts leather equipment for the Postal Department which is made by small Associations of cottage shoe makers in Nagpur organized by past pupils of the Government boot-making School. These Associations until recently supplied boots to the Police, but the Police contract has now been taken from them as the boots were not considered entirely satisfactory. However, it is to be hoped that our Provincial industries will eventually reach a point at which they can compete successfully for the supply of articles required for the public service, and with this hope in view I am glad to have the opportunity of making a few remarks on the relationship which should subsist between the Director of Industries and the Central Stores Agency.

2. Dealing first with the nature and functions of the Central Stores Agency with which the Director of Industries will have to deal, I am inclined to the opinion that it should not, except in a very limited sense, be a purchasing Agency at all. There is everything to be said for a Central Agency—to be established preferably in my opinion at Delhi-Simla for convenience of communication with other Departments at the Headquarters of Government—which shall act as an information bureau for all Departments of Government, on all questions relating to the supplies required by them, and a means of co-ordinating policy in buying. This Agency should be empowered to enter into running contracts with firms supplying articles required by the consuming Departments at regular intervals on a large scale. It appears to me, however, that in any other sense the setting up of a Central Purchasing Agency in India is undesirable. If it is to be a Stock Holding Agency it seems to me that the cost of the prodigious staff and buildings that would be required, as well as the dubious economy of holding large stocks of commodities which might only be required at long and uncertain intervals, would entirely outweigh any advantages to be gained by whole-sale purchase. If the Agency is not to hold stocks, but is merely to pass and consolidate indents submitted by Local Governments, and to place orders with the supplying firms, it seems to me that even so the project has grave disadvantages in the shape of delays and unnecessary correspondence. I would, therefore, confine the functions of the Central Agency to those suggested at the beginning of this paragraph.

3. Turning now to the Director of Industries, I would say at the outset that I am emphatically opposed to his having anything whatever to do with indents. His interposition between the consuming Departments and the source of supply as an examiner of indents would involve delays for which I can see no justification. It is his duty as Director of Industries to push the sale of the produce of his Province as much as possible, but I see no reason why he cannot do this by keeping the Central Stores Agency regularly informed of the nature and quality of the stores available in his Province and the quantities in which they can be supplied, and the names of the firms or individuals who can supply them. Similarly I hold that the local Departments of Industries should have no sort of responsibility for the inspection of Stores. The consuming Departments know what they require, the Director of Industries cannot. It will be impossible for him to supply any efficient substitute for the inspections performed by the expert officers of the several Departments requiring Stores, unless he is to be provided with an extravagantly elaborate and expensive staff of specialist assistants, quite apart from the experts who are attached to him for the purpose of the development

of particular industries in the Province. Such inspectors as may be appointed should, in my opinion, be an Imperial cadre, have their headquarters with and take their orders from the Central Stores Agency, and be entirely independent of local Directors of Industries.

4. Briefly, then, the functions of a Provincial Director of Industries as intermediary between the consuming Departments and the Central Stores Agency should, in my opinion, be purely advisory.

Memorandum by RAI KANAK LAL BARUA BAHADUR, Director of Industries, Assam.

I am of opinion that a Central Stores Department as suggested by the Indian Industrial Commission is necessary not only for encouragement of local industries by the Government purchase of Home products as far as practicable but also in order to secure Co-ordination in purchase and thereby effect economy. The Central Stores Department should be manned by an efficient staff of experts and specialists for purchase and inspection of stores.

I do not however think that there should be a stores branch attached to each provincial Department of Industries. Large manufacturing provinces may possibly employ suitable provincial experts for purchase, inspection and testing of stores but a small province like Assam where local purchases for Government requirements will be inconsiderable cannot afford to employ a special staff for its stores branch. The provincial Director of Industries in Assam who, it may be remembered, is also the Registrar of Co-operative Societies should have nothing to do with direct purchase of stores through his own staff at least for some years to come. He may indicate local sources of supply to the local Consuming Departments or the Central Department of Stores and may also arrange to forward samples. He should also be in a position to inform local manufacturers about the demand for particular kinds of stores required for Government Departments. If locally available articles are not purchased to any extent he may ascertain the reasons and may, if necessary, bring the fact to the notice of the Central Department or the Local Administration. The purchasing and inspecting agency should therefore be independent of him. The officers of the Central Department may visit the province for purchase and inspection of stores and the local Director will assist them as far as possible. Any expert employed under the Director for development of Industries may however be used, when necessary, for selection of local stores for purchase.

Copies of all indents for stores required by provincial officers should be sent to the Director of Industries who will then indicate the local sources of supply to the Consuming officers and at the same time inform the local manufacturers of the demand for the various classes of stores made in the province. In the same way the Director will recieve from the Central Department a list of stores required. He will examine this list and if it includes any items that can be supplied from local sources he will supply the necessary information indicating the sources of supply to the Central Stores Department.

The above is my personal opinion, I think that until experience is gained the activities of the Provincial Department of Industries in the purchase of stores should be restricted to the sphere outlined above.

Memorandum of the views of THE HON'BLE MR. E. A. H. BLUNT, O.B.E., I.C.S., Financial Secretary to the Government of the United Provinces and formerly Director of Industries, United Provinces.

The United Provinces Government had not formulated any further views on the subject with which the Committee was dealing.

Personally he was doubtful whether a Central Purchasing Agency was the best solution of the problem. He feared that such an agency might become too unwieldy if it attempted to undertake purchases for departments of Provincial Governments as well as for departments of the Government of India. The latter were by far the largest consumers and it was for their purchases that a central agency was most needed. The departments of the Provincial Governments might be permitted to purchase each on their own account subject to such financial restrictions as each Provincial Government might think fit to prescribe. He would treat imported stores as Indian so far as powers of purchase were concerned.

Provincial Governments could seek the advice of the central agency in regard to their purchases but they should be allowed a general discretion to buy where they pleased. He thought that Provincial Governments could be relied on to make use of the central agency for purchase when they saw it was to their advantage to do so.

Now that it had been decided that Industries should be a transferred subject he was most strongly of opinion that the purchase of stores for Government should be independent from the development of industries, otherwise there was a real danger that political influence might be brought to bear to secure orders for unsuitable sources of supply. For this reason he thought that Directors of Industries could have no control over, or connection with, any purchasing agencies which might be established in their province.

In his opinion the use of Government Central Purchasing Agency by Company worked Railways or *quasi*-public bodies would not constitute interference with private enterprise as it seemed immaterial to the vendor who paid him for his supplies.

The more suitable location for the headquarters of the central agency depended on the form of organisation decided on but on the whole with the Government of India seemed best.

Memorandum by THE HON'BLE MR. C. A. H. TOWNSEND, I.C.S., Director of Industries, Punjab.

Below I give, briefly, my views, generally, on the terms of reference of the Stores Committee, and their questionnaire, from the point of view of the Director of Industries of a province which, though not without some potentialities in the matter, is at present industrially backward, and is particularly handicapped by a shortage of natural minerals very poor local coal, and a very long distance from the Bengal coal-fields. I do not discuss each question of the questionnaire. On many of the points in it, I am not in a position to give an opinion of any value.

In the first place, I would emphasise the increasing independence of the provinces of India of the central Government. And industries are to be a "transferred" subject under the Reforms scheme. It is true that we do not yet know whether the purchase of stores will be similarly transferred, or not. But the purchase of stores department must have much to do with industries. The departments of Government in the Punjab, local and imperial, are very large purchasers of stores of all kinds, and the making or marring of many a local

The Hon'ble Mr. C. A. H. TOWNSEND. [*Continued.*

industrial venture especially in its initial stages, depends greatly on the amount of Government patronage it receives. Witness the local hand lamp industry of Lahore. This was started directly, I believe, on the suggestion of the North-Western Railway. The lamps produced seem to give satisfaction. Withdraw the patronage of the Railway, and the industry will, certainly, die. We may, I think, expect increased pressure from the Indian public, in future, on Government departments to make as much use as possible of local manufactures, even though products slightly cheaper may be available in other provinces of India.

I draw a distinction in this matter between departments under local Governments as the Forest and Public Works Departments, and departments under the Government of India, as the State Railways, Post Office, and the Army. It is as regards the requirements of the former that particular pressure; that they should be locally obtained, from local opinion may be expected in future, though such pressure also will not be lacking as regards the local requirements of the imperial departments. Now every province either has now, or will have in the very near future, a whole-time Director of Industries of its own. Every provincial Director of Industries should be called upon to draw up a list of articles that are manufactured inside his province, and with names of the more reliable manufacturers of them. These he would send (*a*) to the heads of all departments under his local Government which might possibly require them; (*b*) to the heads of all imperial departments inside his province, which might require them; and (*c*) to the new, presumably to be formed, central Stores department of the Government of India. I should not, subject to a small exception I make later, make the provincial Director of Industries purchase any stores for intending departments of Government, whether provincial or imperial, from the local manufacturers mentioned in his list. Indenting departments would purchase from them direct. But any complaints these indenting departments had to make as to the quality of goods supplied to them, which they would inspect for themselves, they would bring to the notice of the local Director of Industries, together with any general suggestions they had to make as to improvements or changes they would like to see made in the goods supplied to them. These the local Director of Industries would take up with the local manufacturers, discuss with them, help them to solve difficulties confronting them in meeting these complaints or suggestions, and generally act as an intermediary, helpful to both sides, between Government indenting departments and local manufacturers. The lists referred would of course, be brought up to date from time to time.

Indenting departments under the local Government would be expected within reasonable limits, to get their requirements of articles manufactured within that local government, from within those limits. To provide the necessary check on them in this matter, they should submit to the local Director of Industries periodical lists of such articles, purchased by them since the submission of the last list; the list should show separately articles produced inside the province, which had been purchased inside it, with details of amounts, prices paid, and names of suppliers, and articles produced inside the province, which had however been purchased outside it together with details of suppliers' names, prices paid, and brief reasons as to why the supply had not been obtained inside the province. The provincial Director of Industries would scrutinize the lists, put himself in communication with the consuming departments, on any point in them he thought proper, and bring to the notice of the local Government any case in which he thought supplies obtained outside the province might have been obtained inside it, for any action it thought proper.

I should make myself clearer on this point; it is not my intention that articles produced inside a province should always get preference over articles produced outside the province; price, quality, and the like cannot, of course, be disregarded. But I do think it would be legitimate to disregard small differences of price and quality if it was thought desirable to give a helping hand to some struggling industry inside a province, especially if newly established. Such a helping hand might often take the form of a certain amount of Government patronage. But it would often probably be advisable to warn the industrialist that cheaper articles, of the same quality, were obtainable elsewhere in India, and that this patronage from Government was only being given him as an exceptional case, to help him to put his industry on its legs; that he must not expect Government orders in future, unless his products bore comparison, both in quality and price, with similar articles produced elsewhere in India. It would of course, be very false economy for any local Government to encourage any industry, beyond its struggling initial stages, or in other most exceptional circumstances, if its products could not bear comparison with similar products from other parts of India.

I have already said that the provincial Director of Industries should have nothing to do with actual purchasing. He will have abundance to do in his legitimate work, which purchasing is not, and he will have done as much as he reasonably can be expected to do in the matter if he keeps provincial departments informed of makers inside his and their province, and acts as a peace-making intermediary between the two should any difficulties arise. But there are small cases. I have one before me now in which Government, in many separate departments buys articles (the individual article is generally small and cheap), *e.g.*, blankets, and other articles of clothing, for their menials. The requirements of any one individual department of Government are generally not large but the aggregate requirements of all the departments of any one local Government form a respectable amount. Bulk purchasing is of course cheaper in most cases than the purchasing in small lots of the components of that bulk, and it is possible that some local man would often take up an industry if assured of Government orders to a considerable amount, and that on terms reasonable even when compared with the rates at which similar articles were obtainable elsewhere in India. In such cases the local Director of Industries, in the absence of any more suitable agency, would probably have to collate the requirements of the various departments of his local Government, place the complete order, and distribute the articles when received to the various indenting departments, or at least give the necessary instructions in the matter to the provider.

As regards the imperial departments with their headquarters inside a province, *e.g.*, the North-Western Railway, local Governments have of course, practically no power. But even as regards their requirements, I do not think it unreasonable to expect them to give a certain amount of patronage to local industries, especially in their initial stages. It is difficult to lay down definite rules in the matter; I content myself with saying that the local Director of Industries should keep himself in close touch with the officers responsible for placing the orders for the requirements of those departments, and try to get orders from them for his local manufacturers as far as possible. And the indenting officers of those departments should be given some latitude in the matter.

I have but little to say more. As regards, however, the proposed central purchasing agency, for articles not made inside its province, I should be inclined to leave it optional with local Governments as to whether they should use it or not. There is, I gather, much difference of opinion in this matter. I have already mentioned the increased freedom local Governments will have, under the Reforms Scheme. If the central purchasing agency is efficient, local Governments may be expected after, it may be, sad and expensive experience of purchasing by their own officers of articles not made inside their own province, to make use of the central agency.

APPENDIX I—*continued.*

*ANNEXURE I.

1. The Stores Committee has been created to enquire into the following matters:—

(*a*) What measures are required to enable the departments of the Government of India and Local Governments to obtain their requirements as far as possible, in India, and what central and local agencies for purchase and inspection should be constituted.

(*b*) What should be the relations of such agencies with one another and with the Stores Department of the India Office (or such other purchasing organization in England as may hereafter take the place of that department).

(*c*) What modifications of the Stores Rules will the scheme recommended by the Committee necessitate.

It is not intended that the Committee should deal with the supply of food and forage, but the supply of all other kinds of Government stores comes within its purview.

2. Previous to the war, the supply of Government stores was governed by the Stores Rules of 1913 (*vide* Annexure II). These rules, broadly-speaking, laid down the classes of stores which should be purchased (*a*) in the United Kingdom or (*b*) in India. The restrictions in these rules applied only to the purchase in India of imported stores, and to purchase from England. The purchase of Indian-manufactured stores is limited only by the general financial powers of the purchasing officer, which are not dealt with in the rules, provided that "the quality of the articles is suitable and the price not unfavourable." With certain exceptions, all stores from the United Kingdom were purchased through the Director-General of Stores, India Office, London. No similar purchase agency existed in India and, for the most part, officers were left to make their own arrangements for procuring stores which should be purchased in India. The result was that officers tended to neglect the spirit of the rules and to obtain the bulk of their requirements through the Director-General of Stores, irrespective of whether they fell under class (*a*) or class (*b*) mentioned above. The Resolution constituting the Stores Committee explains the effects on Indian industries.

3. Centralised purchase in India existed only in the case of medical stores (which were supplied from the Medical Stores Depôts at Calcutta, Bombay, Madras, Lahore and Rangoon) and of stationery (which was supplied by the Controller of Printing, Stationery and Stamps, and by the Stationery Departments in Madras and Bombay for those provinces). There were also special rules* regulating the construction of ships for Government.

4. The railways, both company and Government, had of course elaborated schemes for local purchase and maintenance of stocks, but those schemes were devised solely to meet the needs of the individual railways concerned.

5. At the present time, the restrictions laid down by the Stores Rules on purchases in India of imported stores (*vide* paragraph 2 *supra*) are not strictly observed. During the war, it was found necessary to utilise to the fullest extent stocks of imported stores and, for this purpose, the embargo on local purchase of imported stores was removed, and has not yet been completely restored. It is important to remember this in considering the operations of the Indian Munitions Board.

6. It will help the witnesses, in considering the comparative advantages of central and local agencies for the supply of Government stores if some concrete examples or draft schemes illustrating different types of proposals are laid before them.

A.—THE INDUSTRIAL COMMISSION'S PROPOSALS.

"197. Without anticipating the Committee's conclusions as to how individual classes of stores should be treated our own consideration of the question leads us to the view, that the general nature of the future organization should be on the following lines. There should be an imperial Department of Stores and provincial agencies which should form part of the provincial Departments of Industries. This would set free individual officers from the responsibility for the local purchase of most classes of stores, and provide for expert purchase and inspection. The Imperial Department of Stores should have at its head a Controller-General of Stores, with his headquarters at Calcutta; it would purchase and inspect stores, and deal with indents received from provincial Directors of Industries. In each provincial Department of Industries, there should be a Stores branch, for the control of which, in the major provinces at any rate, an experienced officer would be required, who should be responsible for local purchases, and should utilise the staff of the department, as far as possible, for inspecting and testing the goods supplied through him.

All indents for stores required by provincial officers should come to the Director of Industries in the first instance. He would examine them and arrange for the local purchase and inspection of those items which could suitably be dealt with in this way. The Director of Industries would receive information, as explained below, from the Controller-General of Stores, which would enable him to form an opinion as to the possibility of obtaining more favourable tenders for such articles from another province, and it might be considered advisable in such cases for him to arrange for purchase and inspection through the local Director of such province. The balance of the indents would be forwarded to the Controller-General of Stores, who would again examine them and issue orders for the purchase of the remaining items which, in his opinion, could be advantageously obtained in India. He would, as we have already indicated, in some cases, enter into running contracts, in pursuance of which Directors of Industries would be able to purchase from contracting firms without further reference to him. In certain cases it would be best for him to effect purchases himself, whether under running contracts or as isolated transactions, where the articles could not conveniently be dealt with by provincial agency. Experience of local and imperial sources of supply would soon show what are the respective capacities of these for meeting orders; and, in practice, no delay would be involved in deciding what items would have to be obtained through the buying agency in England, which must, for some time to come, continue to be the Stores Department of the India Office. All railway indents, which are at present sent to the Stores Department of the India Office, would be passed through the Controller-General of Stores, who would deal with them in the same way as with other indents. Orders on the firms of any province,

* Annexure III.

whether from another provincial Department of Industries or from the Controller-General of Stores, would ordinarily go through the local Director of Industries, though, where centralised purchase is necessary, it would be in some cases desirable for the Controller-General of Stores to deal with local firms direct. Under this system the manufacturers of each province would be given the opportunity of supplying their own Local Governments, so far as they were able to do so, as well as those of other provinces in which similar manufactures have not been established. With the Controller-General of Stores would rest the responsibility of deciding whether indents are to be transmitted to London or local manufacture undertaken. Only in the case of heavy machinery and constructional iron work is there likely to be any difficulty in coming to a decision. In these cases much depends on the designs and specifications, and very highly-specialised experience is required to ensure satisfactory results. This has hitherto been obtained in London through the agency of the consulting engineers employed by the India Office, and a similar technical agency will have to be created in India, if full advantage is to be taken of the increasing capacity of the country to turn out heavy work. The annual report of the Controller-General should include a classified statement of the articles obtained in India and abroad and the prices paid.

198. Inspection of local purchases would be carried out by the staffs of the local Departments of Industries, where they include suitable experts. But the range of Government requirements is so wide and involves the expenditure of such large sums, that the experts required for the assistance of provincial industries will be quite inadequate to inspect all the articles purchased locally; moreover, to require them to do so, would, in some cases, cause delay and interfere with their ordinary work. The urgent necessity of securing economy and efficiency in the expenditure of the vast sums of money spent on the purchase of Government stores requires a very efficient and reliable staff of imperial inspectors, including a varied range of specialists, and we wish to point out that, though this staff may appear at first to be expensive, the cost of its maintenance will be small compared with the risks involved in purchasing stores without expert check. The activities of these officers would form one of the most valuable sources of industrial intelligence, and if, therefore, they are organised by an enlightened departmental head and are exchanged from time to time with officers employed under Local Governments in the encouragement of local industries, there is no doubt that the entertainment of this staff will be a real economy, both directly in the saving of money on purchases, and indirectly in the development of new industries. We contemplate that an arrangement will grow up of a kind that would prevent undue interference with the provincial directors in the purchase of local products and that consequently, while the right to inspect may exist, it will be exercised with judicious discretion and not in officious detail.

There is always a natural reluctance on the part of local purchasing officers to undertake the responsibility for quality. This feeling has, in fact, been one of the reasons why they have indented on the Stores Department instead of obtaining their requirements in India. We feel sure, therefore, that provincial purchasing officers will welcome the intervention of an imperial inspecting staff.

As we have stated above, we consider that one great advantage of the inspecting staff would be the transmission of information from one province to another regarding sources of production and improvements in manufacture, thus enabling each province to learn by the experience of others and facilitating more uniform progress in all parts of India. We propose that the Controller-General of Stores should work in close contact with the Director of Commercial and Industrial Intelligence. The arrangements for securing this object will be explained in Chapter XXII.

For the purposes of their estimate the Industrial Commission were constrained to conceive a centralised agency only and the following paragraphs set forth their proposals:—

347. The purchasing would be carried out by the following staff:—

(*a*) One Deputy Controller, with three Assistant Controllers, dealing with the following groups:—

1. Electrical and mechanical appliances, hardware, implements and metals	. One Assistant Controller.
2. Railway materials	. Two Assistant Controllers.

(*b*) One Deputy Controller, with three Assistant Controllers, dealing with:—

1. Textiles	. One Assistant Controller.
2. Leather and articles of leather	Ditto.
3. Miscellaneous articles	Ditto.

(*c*) One Deputy Controller, with one Assistant Controller, dealing with oils, paints, varnishes and chemicals.

It should, however, be possible to effect a considerable degree of delegation to provincial departments, especially in respect of certain types of machinery and tools, textiles, miscellaneous articles, oils and paints. The work of the above staff would consist mainly of fixing contracts; casual purchases could probably be best effected in most cases by the provincial Directors. In addition a Supervisor of Stores contracts, who should unite business and legal experience, would be required, to ensure contracts being drawn in due form and containing the proper provisions needed to secure the interests of Governments.

348. The senior inspecting officer should each possess expert knowledge regarding a particular class of materials. In all we anticipate that six inspectors and 20 assistants will be required. This staff should be under a separate Deputy Controller (Inspection), to ensure their independence of the purchasing branch.

Table "A" gives details as to the superior staff and clerical and subordinate establishment which, we think it would be necessary to employ. It will be seen that the total estimated cost of the department amounts to Rs. 8,56,000.

349. Associated with this Stores Department would be the present Government Testing House at Alipore. It would necessarily require extension, both as regards personnel and laboratory accommodation. Fees are now charged for tests and, if this system be continued, the Testing House and its establishment should be self-supporting.

350. We assume that the Controller-General, in addition to this general supervising functions, would be responsible for the transmission to the India Office of all indents which cannot be complied with in India. We have provided for the equipment of the Imperial Stores Department with a full staff of experts; but it will be for the Committee whose appointment we have proposed to say to what extent the work of this department should be decentralised. As suggested in Chapter XII, the Controller-General of Stores should arrange for the centralised purchase of certain articles, such as the products of Indian iron and cement works, which require inspection by highly-qualified experts;

APPENDIX I—*continued.*

he might also make running contracts for the supply of classes of goods which are required on a large scale, such as certain kinds of textiles and oils, and the local Directors of Industries would make their purchases under these contracts. By this means competition between provincial Governments would be avoided, and manufacturers would be placed in a more favourable position for dealing with Government orders. The provincial Departments of Industries would be equipped with a purchasing and inspecting staff capable of dealing with a fair proportion of the local engineering and miscellaneous manufactures.

The Provincial Stores Departments would have to deal with indents the value of which would be roughly proportional to the provincial revenues. The work of Provincial Stores Departments would not be confined to the purchase of stores required locally. Excepting stores purchased by the Controller-General, all supplies required by provinces should be purchased by the stores agency of the province in which they are produced. The volume of business handled by these departments would, therefore, depend to some extent on the manufacturing capacity of he province.

351. Our present estimate involves an annual cost of eight and half lakhs of rupees and we think that purchases are not likely to fall short of 4½ crores, and may considerably exceed that figure. The resulting incidence is thus less than two per cent. and, though decentralisation, if efficiency is to be maintained, is bound to add to the cost of purchase, some increase is possible without raising the incidence to an unduly high figure."

TABLE A.

			Monthly.	Yearly.
			R	R
		Controller-General (R2,750—3,000) .	2,916⅔	..
Purchase	Engineering . .	Deputy Controller	1,750	..
	Textiles . . .	Ditto	1,500	..
	Chemical Industries .	Ditto	1,500	..
	Inspection . . .	Ditto	1,500	..
Purchase	Railway Materials (2) . Textiles . . . Chemicals and Oils . Machinery . . . Leather . . . Miscellaneous .	Seven Assistant Controllers; R800—1,200. (Average R1,000) . .	7,000	
	Inspection . . .	Six Inspectors, R800—1,200. (Average R1,000)	6,000	..
		20 Assistant Inspectors, R450—700. (Average R600)	12,000	.
		Supervisor of Stores Contracts . . .	1,500	..
		TOTAL .	35,666⅔	..
		Travelling allowance	7,250	..
			42,916⅔	..
		Say R43,000 .		5,16,000
		Establishment .		2,50,000
		Office rent, contingencies and depôt expenses .		90,000
		TOTAL .		8,56,000

B.—THE INDIAN MUNITIONS BOARD.

The primary object for which the Indian Munitions Board was formed was to arrange supplies from India to the armies overseas (and in India) without unduly inflating local prices and thereby relieve the strain on British manufacturers and shipping. In course of development and to prevent competitive purchasing, the Board undertook supplies also to Government departments and railways, which chose to invoke its assistance or were compelled to do so in order to obtain controlled materials. It did not supply food and forage nor medical stores. In dealing with demands for stationery it made use of the existing machinery controlled by the Controller of Printing, Stationery and Stamps.

It was an important function of the Board to prevent demands being placed on the United Kingdom for stores which were procurable in India, whether of indigenous or English manufacture. This necessitated temporary relaxations of the Stores Rules which prescribe that imported articles must be purchased through the Director-General of Stores.

The Board was thus on the one hand a centralised purchasing agency for the Army, willing also to undertake purchase for civil departments, but not interfering with the localised purchases of these latter, except where such purchases might enter into serious competition with the Board's purchases; on the other hand, it controlled all demands on the United Kingdom and eliminated those which could be supplied in India so as to conserve materials, labour and freight in the United Kingdom and to encourage the development of Indian manufactures.

It should be added that as the organisation was evolved under war conditions, it was necessarily imperfect. In particular, it lacked sufficient expert staff; it was unable to maintain a proper record of prices; and it had no specialised organisation for inspection.

APPENDIX I—*continued.*

I.—Purchase of stores and utilization of Indian Resources.

The Indian Munitions Board was organised in the following Branches for the purposes of supply of stores and control of indents:—

1. Home indents.—Scrutinised indents on the Director-General of Stores as explained above.

2. Indents distribution.—Distributed all demands among appropriate supplying branches. The Controller also dealt with certain special cases of supply, *e.g.*, pig iron and cement.

3. Timber supplies.—Dealt with supplies of timber and forest produce.

4. Textiles.—Supplied cotton, wool, silk goods and Army boots.

5. Jute manufactures (Calcutta).—Arranged supplies of jute fabrics.

6. Munitions Manufacture.—Arranged supplies of articles which required to be specially manufactured, especially ordnance stores not produced in Government factories.

7. Electrical and Mechanical (Calcutta).
8. Oils and Paints.
9. Hardware and Metals (Calcutta).
10. Miscellaneous Stores (Calcutta).

} The names are self-explanatory.

Each Branch consisted of a Controller at headquarters (Simla or Calcutta) with Deputy and Assistant Controllers at the various centres which afforded facilities for purchase.

II.—Stock.

At first, purchases for stock were avoided. Later, as sources of supplies became depleted, it was found necessary to open depôts and to stock stores in anticipation of urgent demands.

III.—Inspection.

Rails and steel from Tatas were inspected by the Metallurgical Inspector, Sakchi. Tests and analyses were made at the Government Test House, Alipore. Ordnance stores were inspected by the already existing Inspectors under the Director, Ordnance Inspection. It was the intention of the Board to create a separate inspection branch, but this intention was never carried into effect; and supplying officers had generally to undertake inspection themselves. It was never settled as a general principle to what extent inspection should be the function of the consuming department or should be undertaken by the purchasing agency.

IV.—Information.

The Controller, Industrial Intelligence, collected and disseminated information to the Branches. Records of prices paid for various articles were maintained in and published by the Accounts Branch; but it would be found impossible to publish these in time to serve as a guide for making fresh contracts. Generally it may be said that no uniform system of record was evolved and that Controllers were left to make their own arrangements.

C.—SCHEME FOR A STORES ORGANIZATION PREPARED BY MR. A. C. COURBOUGH, CONTROLLER (HOME INDENTS AND PRIORITY), INDIAN MUNITIONS BOARD, FOR THE USE OF THE INDIAN INDUSTRIAL COMMISSION.

(*Note on the establishment required to control the purchase of engineering plant, materials and stores after the war.*)

In arriving at an estimate of the cost of a Government Purchasing Department, it is necessary in the first place to consider the broad lines regulating the operations of such a Department.

There is at present no similar organisation either in India or in the United Kingdom, which one could take as a guide in the formation of the proposed new Department. In India, the Public Works Department, the Railways and other large purchasers of engineering materials and stores have organizations of various kinds which deal with the obtaining of stores either by purchase in India or by purchase through the Director-General of Stores, India Office. In the India Office, the Director-General of Stores has a large branch dealing with the purchase of materials required by all Government Departments in India. He has under his control purchasing officers, inspecting officers, shipping officers and also officers in charge of materials stored prior to shipment. The proposed new Department would combine the duties both of the purchasing officers in India and of those under the direction of the Director-General of Stores. It would, however, have duties of a considerably wider and more general character.

It is assumed in dealing with this question that the present restrictions on the purchase of machinery in India from representatives of British manufacturing concerns will be abolished. On this assumption, the duties of the Government Purchasing Department will consist not only in the purchase of Indian manufactures, imported hardware and consumable stores generally, but in the purchase of plant and machinery to meet the ever-increasing needs of India.

The work of the proposed Purchasing Department will, therefore, consist of:—

(1) the purchase of materials manufactured in India from indigenous products;

(2) the purchase of materials manufactured in India from imported raw material;

(3) the purchase of materials from stock in India, such materials having been imported from Great Britain, other parts of the British Empire or foreign countries;

(4) the placing of contracts in India with representatives of British manufacturing firms for engineering plant and materials or stores manufactured or sold by these firms;

APPENDIX I—*continued.*

(5) the administration of the rules under which purchases are permitted by officers in the service of Government, together with the preparation of proposals for such amendments to these rules as may be required from time to time;

(6) the control of the storing of imported materials in anticipation of demands and the subsequent distribution of these materials as required;

(7) the control of the inspection of all materials purchased on Government account, whether imported or manufactured in India;

(8) the control of such factories as are owned or administered by Government and produce articles for use by other Departments of Government;

(9) the control, to whatever extent may be required of private factories producing materials for Government use; and

(10) the preparation of suggestions for the development of industries directly connected with mechanical engineering or allied work, including the placing of contracts with private firms to meet estimated demands from various Government Departments.

In considering the operations of the proposed new Department, it is well at first to consider what immediate changes it will involve. The most important and most vital of these changes is the alteration of procedure so far as the India Office is concerned. The practice existing at present and regularised by the Stores Rules requires that all purchases of materials not available from stock in India or exceeding certain fixed amounts in total value shall be purchased through the Director-General of Stores at the India Office. This procedure necessitates the compilation of hundreds of indents yearly in India, the transmission of these indents to the Director-General of Stores, lengthy correspondence in many instances in regard to the character of the material required in fulfilment of these indents, still more lengthy delays in the execution of the contracts, a complete system of inspection of the material in the makers' works or before delivery from Home and arrangements for shipment by Government of materials so purchased. The new procedure would eliminate in a short time the greater part of the work of the Stores Department of the India Office. In spite of the drawback which India has hitherto possessed from the British manufacturers' point of view in that Government under existing rules could never become a supporter of British enterprise in India, many British engineering firms have established themselves in India, and are equipped with competent trained staffs capable of preparing estimates, advising on engineering problems and undertaking the erection, testing and putting into working order the plant which they supply. With the adoption of the proposed new procedure, not only would the operation of such locally established British firms be supported, but other firms at present unrepresented in India would find it to their advantage to set up offices in the centres where Government purchases were being made.

The second important alteration which the new procedure would involve is the setting up of Government stores of a general and comprehensive character. Hitherto, not only each Department of Government, but practically each indenting officer has had to arrange for the storage of the materials which he required for the carrying on of the work under his charge. State Railways have each their own large Store Depôts. The Public Works Department has innumerable stores, large and small, all over the country. The Army Department (Ordnance Factories, Supply and Transport Branch, etc.) have their own stores scattered all over India. In all these stores, many articles in common daily use are found stocked in quantities, large and small. Moreover, many of these articles are imported. The time taken for the receipt of a consignment after the indent is prepared is so long that large stocks of certain consumable stores are necessary.

The consequence of the multiplication of small store depôts and the time taken to meet demands is that the total quantity of any particular article held in stock in all the various depôts throughout the country is proportionately very great compared with the annual consumption. The new procedure proposed of holding stocks of consumable stores, whether imported or manufactured in India, at convenient depôts for distribution throughout India, would obviate the above mentioned excessive accumulation. Imported articles would naturally be stocked in the main ports, Calcutta, Bombay, Madras or Rangoon. Manufactured articles would mainly be stocked in depôts near the place of manufacture. By the adoption of such a system, the total amount of State money outstanding at any particular time in the shape of consumable stores would be greatly reduced. Moreover, there would be an equally efficient gain in the rapidity with which any article in connection with works in progress could be provided.

In regard to the personnel necessary for carrying on the work of the above outline Department, the attached sheet shows in graphic form the scheme of control. Under the direction of a Controller-General with a Deputy and an Assistant, would be three Controllers, one in charge of stores, the second in charge of purchases and the third in charge of the work of inspection and intelligence. The duties of the first named are sufficiently definite to make long explanation unnecessary. He would be responsible for the stocks of material held in the Government Central Depôts and would also be kept informed of the stocks of materials held in departmental or provincial depôts under the more direct control of other indenting officers. He would be responsible for maintaining the stocks in the Central Depôts up to a level sufficient to meet requirements of all indenting officers, who have authority to draw on the Central Stores or their supplies.

The duties of the Controller of Purchases would comprise the supervision and scrutiny of all indents prepared by Government officers throughout India. All indents for the purchase abroad of imported articles either through the Director-General of Stores, India Office, or direct manufacturers abroad would pass through his hands. He would be responsible for advising the Controller-General regarding the deletion of any articles proposed to be purchased abroad for which a suitable Indian substitute could be obtained. He would be responsible for providing the Controller-General with summaries of the purchases of imported articles, so that the position in regard to the future manufacture in India of suitable substitutes might be gauged.

Other Deputy Controllers would be appointed to supervise the purchasing in India of certain specialised classes of material. It is suggested that in the first instance four such Deputies should severally have under their control the purchase of (1) plant and machinery, (2) oils and paints, (3) hardware and metals, and (4) miscellaneous stores. These officers would have under them assistants located in various centres of industry, who would arrange the details of contracts and supervise the arrangements for the transport of materials purchased by them to indenting officers or to the various Central Stores Depôts.

The Controller of Inspection and Intelligence would be responsible to the Controller-General for the inspection of all materials purchased on Government account. He would have Deputies with headquarters in the various manufacturing centres, who would be constantly in touch with the manufacturing activities of the country. It would be the duty of these officers not only to report on the position of work in progress, but on the development of industries generally and on the possibilities of the extension of manufacturing facilities in their responsible districts.

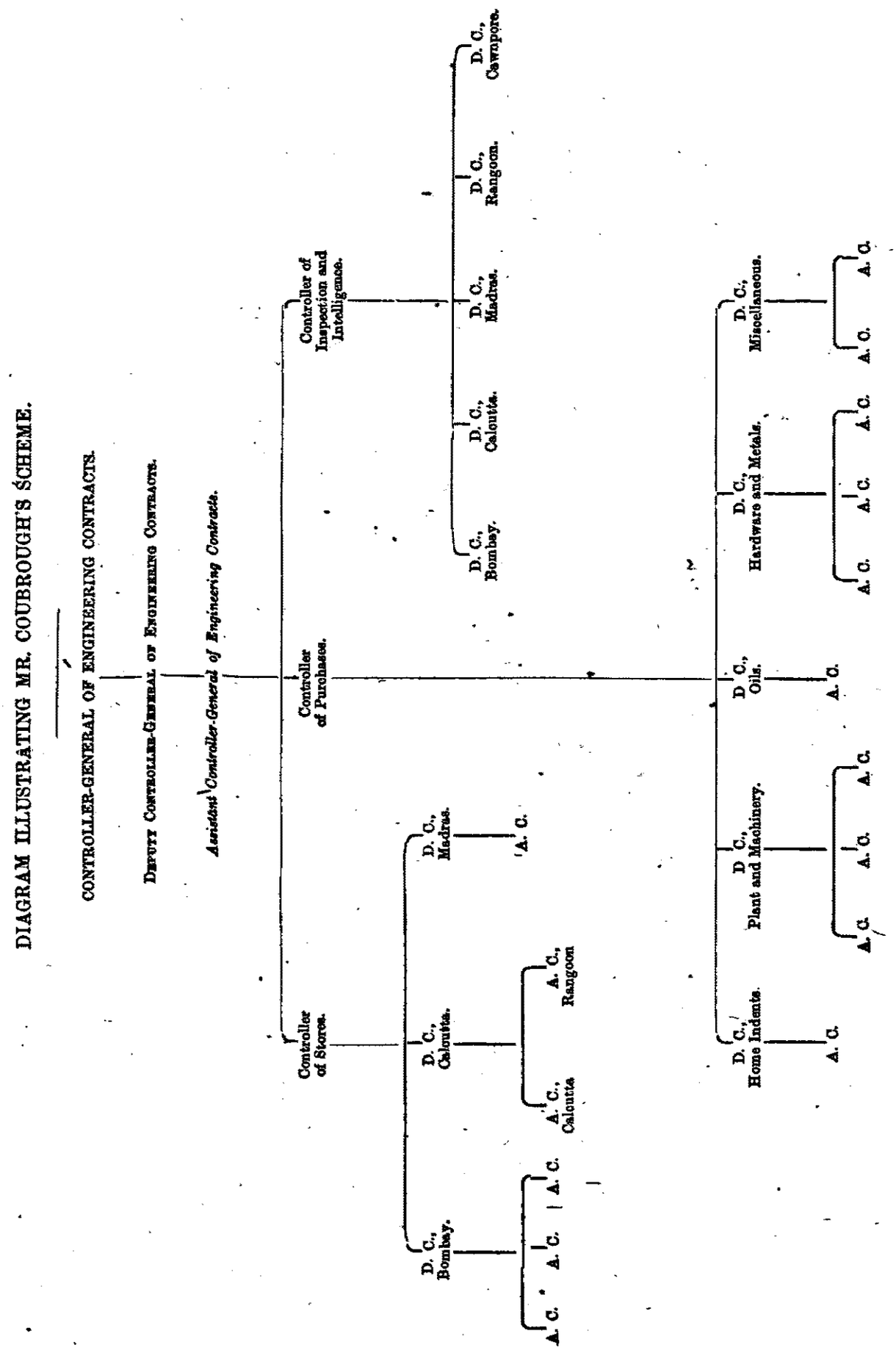
APPENDIX I—*continued.*

In regard to the cost of the proposed establishment, the following figures are submitted as a rough estimate:—

	R	R
Controller-General	4,000	..
Deputy Controller-General	2,000	..
Assistant „ „	1,200	..
Subordinate staff	..	3,000
Controller, Stores	2,000	..
3 Deputy Controllers, Stores	4,500	..
6 Assistant „ „	4,800	..
Subordinate staff	..	15,000
Controller, Purchases	2,000	..
5 Deputy Controllers, Purchases	7,500	..
10 Assistant „ „	8,000	..
Subordinate staff	..	15,000
Controller, Inspection and Intelligence	2,000	..
5 Deputy Controllers, Inspection and Intelligence	7,500	..
Subordinate staff	..	5,000
Total	45,500	38,000
	38,000	
GRAND TOTAL	83,500	

APPENDIX I—*continued.*

DIAGRAM ILLUSTRATING MR. COUBROUGH'S SCHEME.



APPENDIX I—*continued.*

D.—EXTRACT FROM A NOTE BY MR. D. L. MCPHERSON, CONTROLLER (MUNITIONS MANUFACTURES), INDIAN MUNITIONS BOARD, ON THE PROPOSED GOVERNMENT STORES ORGANISATION.

* * * * * *

8. *The degree of control which may be given to Local Governments.*—Presumably, whatever provincial control is granted to Local Governments, the executive exercise of it will be vested in the Directors of Industries. As far as I understand the situation, it is agreed that an Imperial purchasing organization is the only one which can be established in India for the many reasons given in the Industrial Commission's Report including those of economy of public funds and efficiency in making purchases and the means thereby secured of building up the industrial development of India.

On the other hand, Local Governments do not wish to be directed as to how their internal requirements are to be dealt with, and the wish is that they shall retain a certain measure of control over their own affairs, particularly as regards local purchases.

The only solution, to my mind, is that of *attaching* purchasing officers belonging to an Imperial organization to the staffs of Directors of Industries in each province, whose duties shall be those of purchasing within those provinces only at the request of the Director of Industries or under the orders of the Controller-General of Stores. In all establishment and administrative matters, these purchasing officers shall be under the control of the Director of Industries in each province, but apart from the grant of certain freedom of action, they shall be responsible to the Controller-General of Stores in all executive matter.

The main effect of this proposal is that, in each province, an Imperial officer shall exist who will purchase the products of, or imports into, that province only. These purchases would be made against demands received from officers within that province through the Director of Industries; as well as against those coming to him from the Controller-General for other parts of India for stores obtainable only in that province.

It may be said that this does not enable the Director of Industries to entirely control all purchases being made within his province; but on the other hand, he entirely controls purchases made for his own provincial officers, in stores obtainable within his province. He is also thus provided at his right hand with a unit of an organization which is in a position to meet his demands for stores unobtainable within his province either from other parts of India or from the Director-General of Stores. He is independent of the good will of another Director.

9. *Inspection.*—Purchases cannot be made anywhere without inspection, or guarantee of quality. The solution of this problem is, therefore, in my opinion, *more* dependent upon the correct consolidation of arrangements for inspection than those for purchase. In the event of each Director arranging for the purchase of certain stores in a foreign province, he is entirely dependent on the interest taken in his purchases by the inspecting officer in that province. No standard specification of quality can thus really be worked to, nor, do the means exist for the direction of industries along universal lines as to quality, etc., applicable to the whole of India.

It seems obvious, therefore, for these and many other reasons touched upon in the Industrial Commission's Report, that the inspection of purchases on behalf of Government Departments must be in the hands of an entirely Imperial organization which it will be found, I have no doubt, in course of time, will become the chief bureau of information on which the Industries Department will be enabled to tackle the whole of the four categories of stores referred to in paragraph 2.

In other words only one Department of Government shall be responsible to all provincial Directors, and through them to indentors, for the quality of stores being supplied and for the details already referred to in this note connected with specifications, etc.

In addition, therefore, to the appointment of a purchasing officer attached to each Director, I would add that of an Inspecting officer of similar standing and direction and having equal responsibilities; both under the one Imperial organization headed by the Controller-General of Stores. The measure of control by Local Governments in the work of both these officers will be the same, with the added advantage that the Inspecting officer in each province will be provided with details as to type, quality, pattern, etc., of all work being inspected by the Imperial Organization throughout India which it will be seen will be of immense importance to Directors in their efforts. It would not be possible for this to be obtained with anything but an Imperial Inspection branch.

10. With this proposed solution in view, we may now consider briefly the functions which will have to be performed by Directors in developing industries and the manner in which this solution may be said to fit in with the desire for provincial control. Broadly speaking, these functions will be three-fold:—

(*a*) to enlarge, even-up, consolidate, or standardise those industries already established,

(*b*) to initiate or encourage the wholesale production of articles not fully established and only partly attempted, and,

(*c*) to originate the production by private or Government pioneering, of articles which cannot at present be made, in India, but are vital to the needs of the country in the obvious necessity for it to become independent of imports.

It will be observed that these functions, though exercised parochially, must, however, conform to a universal policy; such that Directors and their work in all provinces shall proceed along certain fixed lines. This will be laid down by the Government of India through whatever organization is created. In other words there must be the free exchange of ideas, methods, results, and so on, between provincial Directors.

But, as development and results must cease, or chaos result, if production is not according to certain standards or specifications, laid down by those responsible for inspection, to suit consumers, obviously, this must be created and rigidly adhered to. Similarly, purchases cannot be made unless the stores conform to the standards, etc., laid down.

Again, as consumers' requirements can be more or less the same all over India for the same class of stores, *e.g.*, engineers in Madras and Lahore can use the same class of piping for the same work—a stage can be reached where one specification will suit a store used in all provinces, particularly as regards ordinarily imported stores of standard design.

It will hence be recognised that, in course of time when standards and specifications are drawn up and approved and drawings have been filed, the necessity for the supply of multifarious details by consumers or Directors at time of indent will more or less cease. Therefore applying this generally, the necessity for control over such specifications by a provincial Director will cease and he will, in fact, welcome the provision made for his officers by one in touch with such details in other provinces. Hence, as the results from the detailed performance of the above functions by

APPENDIX I—*continued.*

Directors are entirely dependent in each province upon the efficiency and completeness of the Inspection branch of the Imperial organization, the purchasing branch becomes, *ipso facto*, as it were, an engine deriving its power from the Director of Industries, and its lubrication from the Inspection branch. The one is useless without the other two.

Finally, applying this rather apt simile, in the solution proposed, we have an engine up to the required capacity made by an experienced firm (who have supplied similar engines to other provinces and who stock the necessary "spares"—a point of great importance in this connection) supplied to a Director who has full local knowledge as to working conditions and what his will must produce. In performing the above functions, as to the results from his mill, he controls the valves giving the power—inlet in, say, air or petrol. He can increase or decrease both power and speed or both at his mill, but his first consideration, before his engine will work, must be that his lubrication is correct and assured. The lubrication, it may be noted, has also been tested and proved by the same firm who made the engine to be the best for the purpose, and the only anxiety on this account which a Director need have is as regards supply—the quality is assured.

I think, therefore, it may be safely assumed that very full measure of control over their own affairs is thus assured to Local Governments consistent with efficiency of purchase and of inspection.

11. *Proposals for the Imperial Organization.*—We may now proceed to the detailed consideration of the appointments proposed in this as shown in Diagram "A". The designations given against the posts are self-explanatory but in the case of three, some further explanation is necessary.

The Inspector-General of Stores will be entirely responsible for drawing up, registering and issue to Chief Inspectors of Stores in the provinces of all specifications and drawings for the correct sealing and approval of samples and the supply of all particulars necessary to guide manufacture to Directors of Industries or to control purchase to purchasing officers.

Under the administrative control of this officer and executive control of the Chief Inspectors of Stores in Bengal and Bombay, two Test Houses are proposed in which physical tests, chemical analyses, and experiments, etc., are carried out.

It will be seen that Receipt, Inspection and Despatch Depôts are proposed for each province, and these are shown as under the Chief Inspectors. The object of this is manifold but chiefly so that:—

(*a*) there can be no tampering with supplies once accepted;

(*b*) bills can be signed in token of receipt of goods at once;

(*c*) the industrial Department Advisers can examine and report on supplies to the Director in the case of disputes;

(*d*) samples, specifications, drawings, etc., can be made and maintained for issue to all concerned;

(*e*) the purchasing branch officers can settle disputes with suppliers to the spot; and

(*f*) direct despatch by Government officers and not by firms or contractors can be made *after* acceptance to all consumers enabling standard forms and methods covering despatches to be adopted throughout India, allowing also the "pooling" consignments and thus a saving in wagons.

The Assistant Inspectors in these depôts, who carry out the actual inspection, will be appointed with regard to their technical training and suitability for the work to be inspected. For example, electrical stores will be inspected by the Assistant who has had training in this branch of engineering, and it will also be preferable if his appointment is made with the concurrence of the Electrical Engineer Adviser in each province, and so on for the various classes of stores. The Depôts would for purposes of inspection, thus be suitably divided up into sections.

The Deputy Controllers-General for manufactures and purchases. The intention is to split up indents such that one officer deals with stores which have to be ordered for manufacture and with running contracts, *i.e.*, those which are not immediately available for purchase, keeping such apart from those which can be purchased at once. It will be seen that the first appointment (stores manufactures) will be that which will form the link between the Controller-General and the Directors of Industries in dealing with categories (ii) and (iii) of paragraph 2, which is also referred to as the link required in paragraphs 4 and 5.

The Ordnance or Military Liaison officer.—This appointment is, I consider, of great importance. Ordnance factories, as at present constituted, cannot meet the demands of the Army even in peace times. The Supply and Transport Directorate will doubtless be debarred from obtaining many of their requirements from petty contractors usually paying middle-men's profits—as at present. Other branches of the Army will probably have to fall in line. Private sources of supply will, therefore, have to be recruited by the Industries Department to meet both peace time and war requirements. At present, no war reserve in such exists. It is presumed that it is not the intention of Government to equip Ordnance Factories and Arsenals, so as to make them independent of "outside" assistance to maintain an Army in the Field. The object of this appointment, therefore, is that all Army demands should be received by the Controller-General of Stores through this officer in peace times, and secondly, that he may be able to build up a war reserve of manufactures and sources of supply of stores which can be set in motion by the proper authorities in the event of war.

12. *Proposals for the Provincial Organisation.*—It is impossible to consider this without entering into details of the probable provincial industries' organization. Reference is invited to Diagram "B".

It will be seen that I have departed from many of the proposals contained in the Report of the Industrial Commission. It appears to have been the intention that in many directions Directors of Industries should make their own purchases and that the Engineers and other experts attached to the staff of the Director should be employed on this work in addition to their normal functions as Advisers. I am entirely against this.

If industries are to be properly organised and developed, this can only be done by officers qualified to tackle the problems created by the various classes of industries to be developed. It may not be so at the commencement but after a time, it will be found, I believe, that the time of such officers will be fully taken up in concentrating their whole energies on the details connected with the industries, of which they are in charge. They will have no time to argue with contractors, regarding tenders, contracts, shortage of supplies, details of delivery, arguments with inspectors, losses of railway receipts and other such items of everyday correspondence between purchasing officers, contractors, consignees, etc. That is, a specialist or expert should not be required to buy anything, and I think this will be borne out by the experience of those who have been through it during this war. He should, I consider however, be used to the fullest capacity in helping to draw up specifications, indicating sources of supply, guiding purchasing officers in drawing up the technical details of contracts, assisting the Director in matters connected with his charge, undertaking consulting work for firms wishing to develop factories, and so on. That is, work for which he is specially

qualified. These remarks apply to the whole of the first five appointments shown in Diagram "B" under the Deputy Director.

My proposal, therefore, is that neither the Director nor any of his staff shall purchase anything. Their functions should be development and that only, and, for many years I consider they will have all their time taken up in this pursuit. The purchasing of the results of their work may be well left in the hands of an experienced Stores officer having knowledge of the local market and good business capacity.

To make my meaning clearer, we may now consider:—

13. *Methods of working* between the purchasing and Industries' branches. To commence with, one need not consider urgent demands in peace time. Normally, there should be no such thing, but the organization should be elastic enough to cope with such demands when they arise. We may, therefore, consider the matter where demands are in the nature of forecasts over periods. I suggest that indents should ordinarily be received quarterly for completion by the end of the following quarter. That is, indents, which it may be stipulated have to be in the hands of the purchasing officer by the 1st April, shall be for stores to be supplied by the end of June covering the indentor's estimated consumption from July to the end of September.

Indents will be sent direct by indentors to the Director of Industries within a date to be fixed by him. These will then be examined and the following essential action taken:—

(*a*) Items which cannot be obtained in that Circle either by purchase or manufacture will be transferred direct to the Controller-General, the local purchasing officer being advised.

(*b*) Items which can be manufactured in that Circle, whether ordinarily imported or not; the Director's Adviser or Advisers, in charge of the industries concerned, will receive and transfer these to the purchasing officer indicating against the items the firm or firms who should be dealt with, and a maxima and minima price, wherever possible, to be paid. Also any other information likely to be of service to the purchasing officer in dealing with the demands and to avoid a return reference.

(*c*) If it is known or thought as a result of the periodic exchange of information between Directors that items which can be manufactured in that province can also possibly be obtained cheaper or better in any other province these shall be transferred to the Controller-General giving such suggestions and advising the local purchasing officer. These will be dealt with in the Controller-General's office by the Deputy Controller-General (Stores manufactures).

(*d*) Items which can be purchased within that province will be at once transferred to the local purchasing officer, advices being sent to the Controller-General, the Inspector-General of Stores, and the local Chief Inspector of Stores.

(*e*) Items which it is necessary to import and which cannot be manufactured in India should be dealt with only by the Director's Advisers in the first instance. From the nature of the items, they will know if suitable substitutes exist or can be produced. They should, therefore, carry on the initial correspondence with indentors, and on completion of such, transfer the items either to the Controller-General for import—with advice to the local purchasing officer—in the event of failure to satisfy the indentor or, alternatively, to the local purchasing officer, indicating full details of the suitable substitute which will be accepted, from where obtainable, price, etc., and

(*f*) In *all* cases, and irrespective of what action is necessary as above on items, fresh consolidated indent shall be made out in the office of the Director of Industries and submitted to those officers indicated by the dates fixed.

The above describes generally the work which will be performed by the channel through which indentors are put in touch with sources of supply, and, as that is an organization entirely under the orders of a Local Government, a close examination of the details of actions suggested will indicate, I think, that a greater measure of control over their own affairs could hardly be given to, or required by, Local Governments.

Also, from the way in which the Local Advisors or experts are put in touch with the demands requiring their knowledge and advice, on which their subsequent actions regarding development will be based, and, as the original indents are always on record in their own branch, the reasons for my suggestion above, that provincial Advisers and experts should do no purchasing, will, I think, be apparent. Again, the time of these Advisers is not taken up in examining items on indents which are irrelevant to their particular charge, as it will be seen, such do not come to them from the Director. It may be as well to cite one example. An indent may be received for 100 gallons of cylinder oil, 100 pairs of Army Boots, 100 electric switches, and 100 taps, wrenches, etc. Each item will be transferred by the Director's office to the experts concerned if direct purchase is not possible, if import is necessary, etc., etc. The oil expert will not see the item for electric switches, and similarly, the Industrial Engineer Adviser will not see the item for Army Boots.

If the Leather Expert is, however, to spend his time calling for tenders, examining samples fixing contracts, and so on, his expert knowledge is not being turned to proper account. If he controls his charge correctly, he should at once be able to indicate, against the item for boots, the firms to be dealt with, maxima and minima prices, and all other such details and let the purchasing officer do the remainder. The same remarks apply equally to the other items.

14. *Action on indents* by the purchasing organization. The Controller-General will receive actual indents from Directors of Industries. Some of the items will be for import, some for manufacture, and some for purchase in provinces other than those from which indents are received. He will also receive copies of direct purchases ordered by Directors in each province on the purchasing officer. Several items will be of the same class and many to similar specification.

If purchase of the same item is being arranged in more than one province, he will use his discretion (being guided by price, delivery, etc), whether to cancel one and increase the other, or allow such to proceed. In the case of indents received for items not purchasable in one or more provinces—say, jute canvas—but being purchased in another—say, Bengal—, he would be in a position to order the sum of the indents to be purchased in that province by the purchasing officer concerned.

In all these cases, a date factor must be adhered to in order to permit of "pooling" of items to be arranged and, also, it is important that advice of such action should be given to the Inspector-General of Stores, who will advise his provincial Chief Inspector to expect calls for information and inspection, etc.

APPENDIX I—*continued.*

In the case of articles to be manufactured in any other part of India than the province from which the demand arises, somewhat similar action will be taken except that the indents will go to the Directors of Industries for production, the purchasing officer and the Chief Inspector of Stores being advised. The action to be taken on stores for import has already been dealt with in paragraph 3.

Provincial purchasing officers will thus receive indents for direct purchase only, of items which he knows can be obtained in his Circle both from his Director and added quantities of the same item from the Controller-General. He will receive these by a certain date on which he will know that, normally, further demands need not be expected for three months. He will have ample time to watch the market and buy when most favourable.

He will be given full information by the Director of Industries enabling him to place out orders for manufactures, his function being the formalities only at the commencement, and the work of watching deliveries and subsequent completion and despatch.

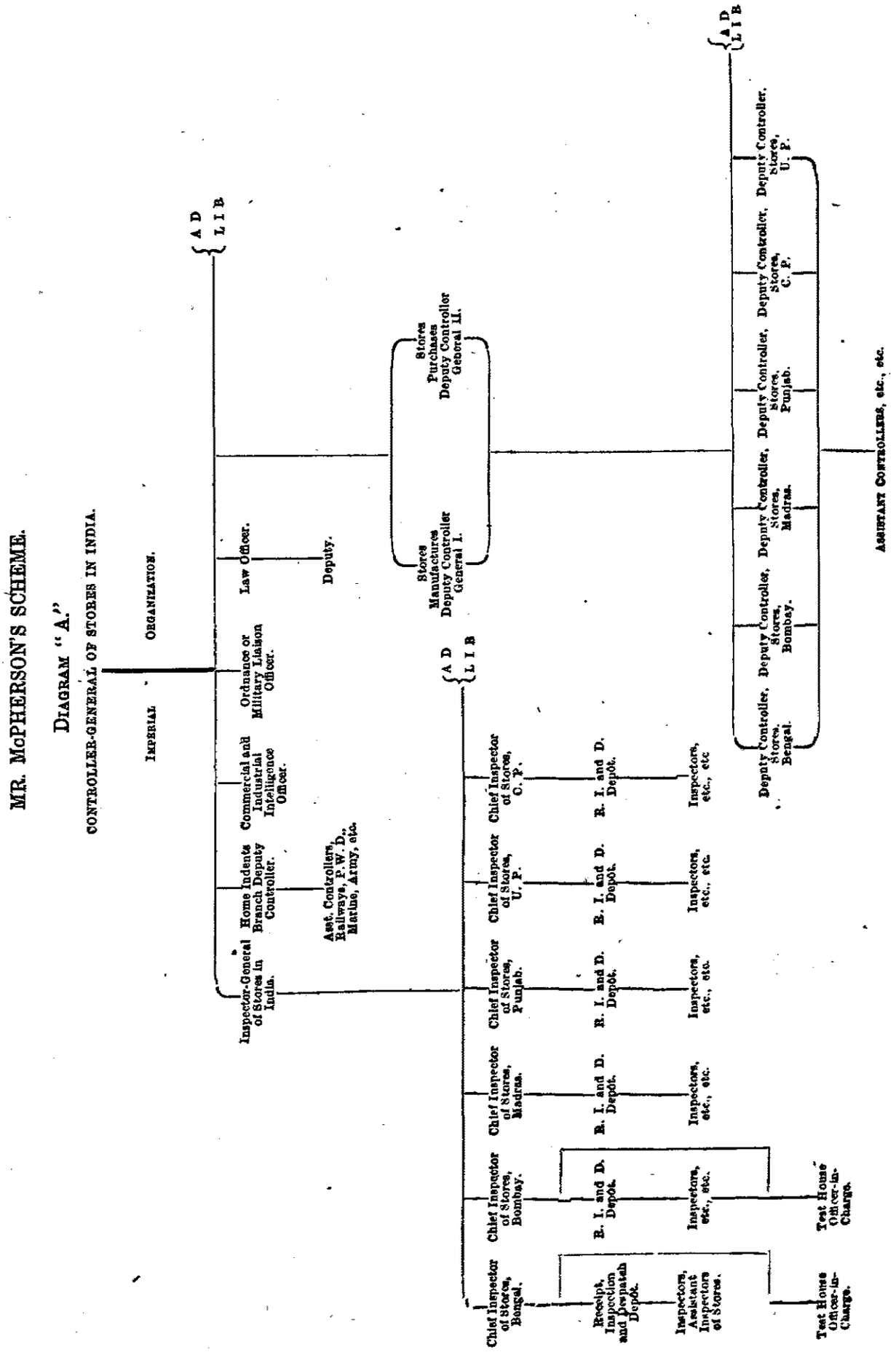
In all cases, copies of his contracts and details of supply will be given to his *vis a vis* the Chief Inspector of Stores on whose shoulders will rest the receipt inspection and despatch into and from his Depôt.

APPENDIX I—*continued.*

MR. McPHERSON'S SCHEME.

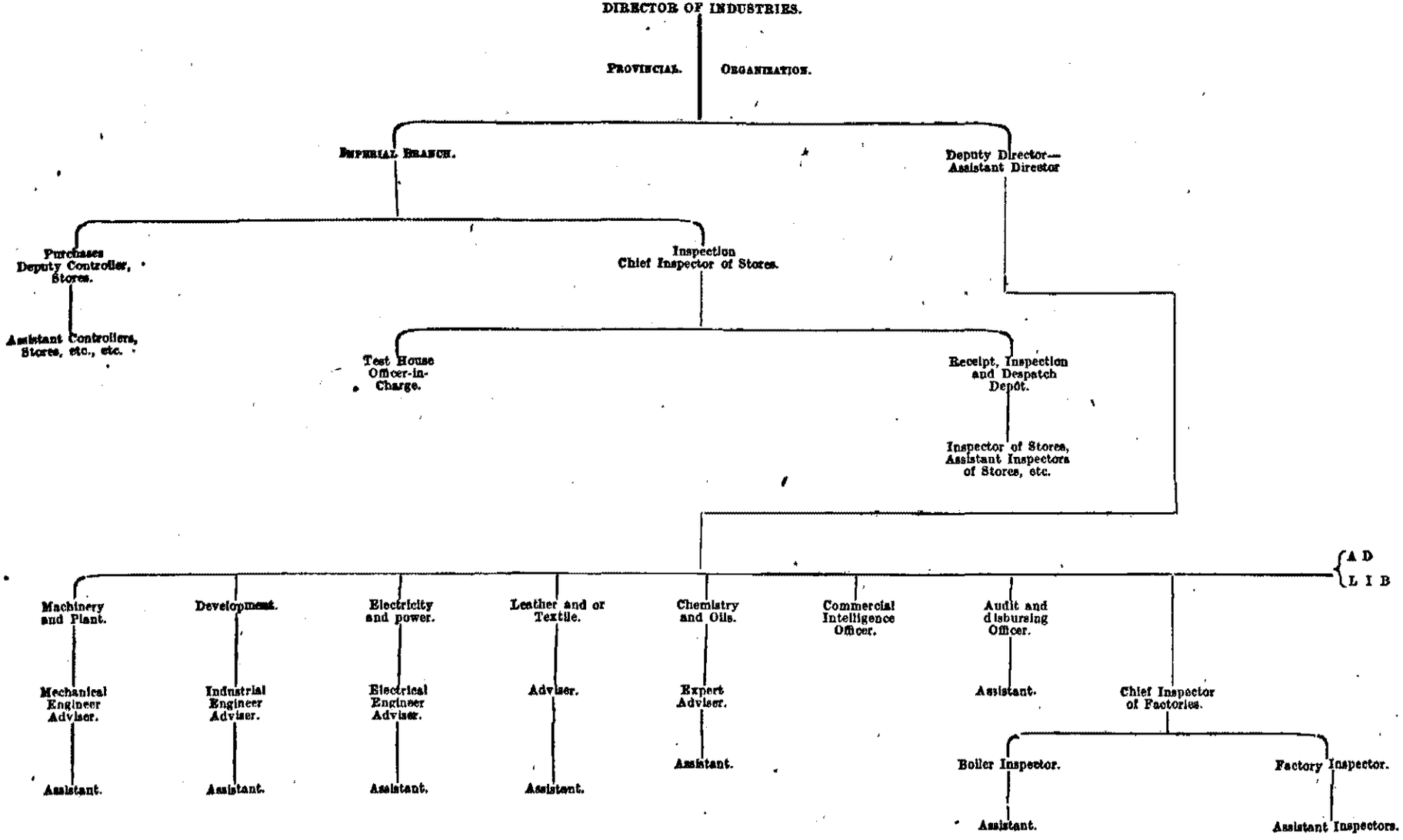
DIAGRAM "A."

CONTROLLER-GENERAL OF STORES IN INDIA.



MR. McPHERSON'S SCHEME.

DIAGRAM "B."



ANNEXURE II.

RULES FOR THE SUPPLY OF ARTICLES FOR THE PUBLIC SERVICE.

Subject to the provisions of the General Rules specified below, and to any instructions regarding specific articles which have been, or may be, issued by the Government of India from time to time (*e.g.*, those relating to the supply of stationery), the following are the rules relating to the supply of articles required for the public service. These rules supersede all previous orders which are not explicitly continued.

RULE 1.—*Articles manufactured in India from Indian materials.*

All articles which are produced in India in the form of raw material, or are manufactured in India from materials produced in India, should, by preference, be purchased locally, provided that the quality is sufficiently good for the purpose, and the price not unfavourable.

RULE 2.—*Articles manufactured in India from imported materials.*

All articles manufactured in India from imported materials should, by preference, be purchased in India subject, however, to the following conditions:—

(*a*) That a substantial part of the process of manufacture of the articles purchased has been performed in India.

(*b*) That the price is as low as that at which articles of similar quality can be obtained through the India Office.

(*c*) That the materials employed are subjected to such inspection and tests as may be prescribed by the Government of India.

Note.—The term "a substantial part of the process of manufacture" in clause (*a*) means that a substantial part of the preparation of the finished article must be performed in India, whether from raw materials or from component parts obtained in a finished state from other sources.

RULE 3.—*Articles which are not manufactured in India.*

Articles which are not manufactured in India should be obtained by indent upon the Store Department of the India Office, except in the following cases:—

(*a*) When the articles are already in India at the time of order, and their price and quality are not unfavourable as compared with those at which similar articles could be obtained through the India Office, and the cost of the supply does not exceed the limits prescribed at the end of Rule 13.

(*b*) In the case of important construction works let out on contract, articles not manufactured in India required for the construction of such works may be supplied by the contracting firm subject to the following conditions:—

(*i*) That the firm is approved by the Government of India and is included in the list of firms so approved —*vide* Schedule B, Appendix 30, P. W. D. Code, Volume III.

(*ii*) That the materials are subject to the current specifications and tests prescribed by the Government of India.

Note—Articles of clothing and equipment of European manufacture required for the Burma Police Department may be procured for the present without the intervention of the India Office.

RULE 4.—*Articles which should be purchased in India.*

The following articles, whether manufactured or produced in India or not, should be purchased in India, provided that they comply with the current specifications, are of the requisite quality, and can be obtained at a not unfavourable price:—

(*a*) Those of a perishable nature.

(*b*) Explosives.

(*c*) Block tin.

(*d*) Wines and spirits and English bottled beer for the use of Government hospitals in India.

(*e*) Kerosine oil.

(*f*) Plant and materials for electric installations intended to take current from existing centres; and small electrical power and lighting plants of not more than 25 kilowatt capacity, which involve the provision of generators and cables for distribution, provided they comply with the current specifications and tests prescribed by the Store Department of the India Office.

(*g*) Australian timber.

(*h*) Australian copper.

(*i*) Italian marble.

(*j*) British Columbian timber.

(*k*) Plant and materials for small gas installations the cost of which does not exceed ₹ 15,000.

(*l*) Cheap articles of common use required in small quantities only.

(*m*) Such other classes of articles as may from time to time be prescribed by the Government of India. All such cases should be reported to the Secretary of State for his information.

RULE 5.—*Special purchases in India.*

When serious inconvenience to the public service would be caused by waiting to obtain an article from England through the Director-General of Stores, or when, owing to the greater promptitude of supply, an economy can be effected

APPENDIX I—*continued.*

by purchasing in India articles which, under the foregoing rules, should be obtained through the Store Department, the purchase may be made in India, subject to Rule 13, provided that the articles are already in India at the time of order; but in such cases, if the value of the articles exceeds Rs. 750, the sanctioning officer should place on record the reasons which make the local purchase desirable. This record shall be available for the inspection of the Examiner of Accounts or the Supervising Officer when required.

RULE 6.—*Inter-departmental purchases.*

Nothing in the rules is to be deemed to prohibit the purchase of stores of European manufacture by one Department or Railway from another.

RULE 7.—*Method of obtaining stores not purchased in India.*

All articles which, under the foregoing rules are not to be bought in India, should be obtained by indent on the Store Department of the India Office, except any which the Secretary of State may have specially authorised the Government of India or its officers to purchase direct outside India. Such purchase is at present permissible in the case of the following articles:—

(*i*) Seeds.

(*ii*) Cinchona bark.

(*iii*) Articles for experimental or research purposes required by officers approved by the Government of India from time to time. A list of the officers thus approved is given in Appendix A.

(*iv*) Excise instruments and apparatus required by Provincial Excise Departments for experimental or research purposes.

(*v*) China, glass, cutlery, plate, crockery and perishable fabrics, including linen for residences which are furnished by Government.

(*vi*) Australian timber.

(*vii*) British Columbian timber.

(*viii*) Australian lead.

(*ix*) Such articles as Superintendents of Vaccine Depôts may require for the preparation of vaccine lymph (*e.g.*, lanoline and glycerine).

(*x*) Chemicals and scientific instruments which do not require careful inspection and testing or which are of standard description usually quoted by well-known firms, provided that the articles cannot be procured from the Medical Store Depôts.

(*xi*) Articles required for Viceregal residences in special and urgent cases.

Note.—Payments for stores purchased under this rule should be made direct to the suppliers by the purchasing officers.

GENERAL RULES.

RULE 8.—*Forecast of requirements which should under the rules be complied with by indent on the India Office.*

All requirements should be fulfilled locally in accordance with the provisions of the Resolution No. 4941—4988-102, dated the 14th July 1909, provided that quality and price are not unfavourable and provided that such purchase does not violate any of the instructions contained in these rules. In cases, however, in which stores have to be obtained through the India Office, every effort should be made to foresee requirements so that the indents may be despatched in ample time. Persistent failure of any officer to make such efforts should be brought to notice by the Local Government or other authority which may, at its discretion, cancel or reduce the power of sanction entrusted to the officer at fault.

RULE 9.—*Time required to obtain Stores from England.*

It may be assumed that the time required from the transmission of an indent upon the Secretary of State to the receipt of the stores is:—

Urgent telegraphic indents, not less than three months.

Ordinary indents, six to ten months, according to the articles demanded.

For special stores, *e.g.*, large girders, rolling stock, etc., up to one year in ordinary times.

NOTE.—When ordinary stock articles conforming to well-recognised standards are required within a shorter period than three months, and the purchase has, under the rules, to be made through the India Office, the indenting officer shall, if he desires that the procedure indicated in the Resolution in the Department of Commerce and Industry No. 6822-6869-37, dated the 13th September 1911, be adopted, state the fact clearly in his telegraphic indent.

RULE 10.—*Method of comparing prices.*

In all cases in which the selection of source of supply depends upon comparison of prices, the procedure to be adopted for such a comparison is as follows:—

(*i*) A reference should be made to Home prices as shown in the Rate Lists, and freight should be added at the lowest rates paid by the India Office together with 13*s.* 4*d.* per 100*l.* for interest, 2*s.* 2*d.* per 100*l.* for insurance, and 3*d.* per ton for freight brokerage.

(*ii*) In cases of important contracts, the prices ruling in the English market should be ascertained by telegraphic reference to the Director-General of Stores.

(*iii*) In cases where the necessary information as to Home prices is not available from the Rate Lists, the purchase in India shall be subject to the condition that the price is not unfavourable.

APPENDIX I—*continued.*

(*iv*) In order to arrive at the market value at an Indian port of the article imported from England, the following charges shall be included:—

(*a*) Landing, wharfage, and port charges as shown in the Rate Lists.

(*b*) Customs duty, as shown in the tariff to be applicable to the article in question, to be calculated on its cost *plus* the additional charges mentioned in the earlier part of this rule.

(*v*) The cost of carriage to site from port or place of manufacutre, as the case may be, shall be taken into account.

RULE 11.—*Tests.*

Any articles purchased in India which should be tested are liable to the specifications laid down from time to time by competent authority, with the approval of the Secretary of State in Council, and should be required to pass the tests prescribed for such articles.

RULE 12.—*Firms from which iron and steel may be bought in India.*

Important iron and steel work, if purchased in India, should only be obtained from firms approved by the local Government or Administration and entered in a Schedule as corrected from time to time by the Government of India. A list of approved firms is given in Appendix B.

Note.—By "important iron or steel work" are meant articles of iron or steel, which form important components of the project in hand, *e.g.*, bridge girders and roof trusses, built up in the firm's workshops and supplied, ready for erection, in such sections as may be convenient, and rolled steel beams, rails or other sections cut to length or otherwise prepared at the firm's workshops to suit the indenting officer's requirements. The intention of the rule is to ensure that part, the accurate preparation of which is essential to the security of a project, shall be obtained only from firms which possess workshops and appliances capable of turning out work of the desired standard. The raw materials used may be either imported or of Indian manufacture, subject to the usual specifications.

RULE 13.*—*Financial limits on powers of officers to make purchases in India.*

In the case of purchases made under Rules 1, 2, and 4, an officer's powers of purchase extend to the ordinary limits to which he is empowered to enter into contracts: but in the case of purchases made in India under Rules 3(*a*) and 5, the limits for expenditure on any one article or on any number of similar articles purchased at one time are as follows:—

(*a*) *Civil Departments.*

	R
(*i*) Heads of Departments, Commissioners of Divisions, other officers of or above the rank of Collector whom the Local Government may select, and Principals of Colleges and Inspectors of Schools in Bengal, Bihar and Orissa and Assam	250
(*ii*) Other officers authorised to incur expenditure	50
(*iii*) Controller of Printing Stationery and Stamps	1,000
(*iv*) Local Government or Administration:—	
1. In case of purchases made under Rule 3 (*a*)	3,000
2. In case of purchases made under Rule 5.	Full powers.

The powers of a Local Government are also exercised by the following officers:—

Surveyor-General of India.

Agricultural Adviser to the Government of India and Director of the Agricultural Research Institute, Pusa.

Director-General of Observatories.

Director-General, Posts and Telegraphs.

Political Resident, Persian Gulf.

Superintendent of Port Blair.

(*b*) *Public Works Department.*

	For purchases made under Rule 3 (*a*).	For purchases made under Rule 5.
	R	R
(*i*) Executive or Assistant Engineer holding charge of a Division	200	500
(*ii*) Superintending Engineer or Superintendent of Works	1,000	2,500
(*iii*) Local Government or Administration	3,000	Full powers.

(*c*) *Railway Department.*

(*i*) Executive or Assistant Engineer holding charge of a Division on a line under construction or survey	200	500
(*ii*) Engineer-in-Chief holding charge of a line under construction or survey	1,000	2,500
(*iii*) Agent of an open line	1,000	2,500
(*iv*) Railway Board	3,000	Full powers.

NOTE.—Agents of open lines may delegate to their Engineers-in-Chief, Executive Engineers, or Assistant Engineers holding charge of a Division, such power of purchase as they deem fit up to the limits specified for lines under construction, and to their chief Store-keepers up to the limits specified for Executive Engineers.

* This rule is in abeyance for the period of the war.

APPENDIX I—*continued.*

(*d*) *Army Department.*

	For purchases made under Rule 3 (*a*).	For purchases made under Rule 5.
	R	R
(*i*) Director-General of Military Works	3,000	Full powers.
(*ii*) Divisional Commander	3,000	5,000
(*iii*) Officer Commanding an independent brigade; Director-General of Ordnance;* Director, Royal Indian Marine; Director-General, Indian Medical Service (for medical store depôts); Director, Army Clothing; and Director-General, Army Remount Department	2,500	2,500
(*iv*) Officer Commanding a brigade, other than those included in (*iii*); Director of Ordnance Factories; Director of Ordnance Inspection and Director of Ordnance Stores	1,000	1,000
(*v*) Superintendent, Army Clothing Factory; Supply and Transport Officer on special duty in Kashmir; and Deputy Director, Royal Indian Marine	500	500
(*vi*) Chief of the General Staff; General Officer Commanding, Northern and Southern Armies; Adjutant-General in India; Quartermaster-General in India; Director, Medical Services, Army Headquarters, India; Military Secretary to His Excellency the Commander-in-Chief; Military Accountant-General; Controllers of Military Accounts; and Controller of Military Supply Accounts	250	250
(*vii*) Officer Commanding a station; Superintendent, Army Remount Department; Superintendent, Ordnance Factory; Government Inspector of Army Boots Factory, Cawnpore; Assistant Directors of Ordnance Stores; Inspectors (Ordnance Department), the Assistant Inspector in charge of General Stores and the Proof and Experimental Officer, Balasore; Medical Store-keeper; Commandant, Indian Staff College; Assistant Director of Supplies; Assistant Director of Transport and Assistant Director of Grass Farms	200	200
(*viii*) Officer Commanding a unit (including a hospital); Senior Medical Officer, Indian Medical Service, of a station; Recruiting Officer for Gurkhas at Gorakhpur; Officers (Ordnance or Departmental) in charge of depôts; Assistant Inspectors (Ordnance Department) with the exception of the Assistant Inspector in charge of General Stores; Officer-in-charge of Supply Reserve Depôts; Commissioned Officers Commanding Depôt Transport Lines, Officer in charge of Supplies and Chief Chemical Examiner		20

(*e*) *Indian Munitions Board.*

(*i*) Metallurgical Inspector, Indian Munitions Board, Jamshedpur	500	500

NOTE 1.—The financial limits imposed under this rule in respect of purchases made under Rules 3 (*a*) and 5 do not apply to the purchase of articles required on mobilization or during the continuance of military operations.

NOTE 2.—These powers are subject to the rules of the budget system. No sanction may be given which will involve expenditure from the budget grant of any future year. The powers extending to each sanction, whether against Army, Military Works, or Marine funds.

In the case of the Ordnance, Medical Store and Remount Departments, the Divisional Brigades and Station Commanders are not competent financial authorities.

RULE 14.—*Power to sanction departures from the rules.*

The Government of India have power to sanction departures from the rules in cases in which such departure is absolutely unavoidable, [subject to a report to the Secretary of State if the expenditure exceeds R10,000.]

[ ] Suspended for the period of the war.

LOCAL PURCHASE RULES.

APPENDIX A.

List of officers referred to in rule 7 (*iii*), who are authorised to obtain direct from manufacturers or dealers in England, America, Japan, or other foreign countries such articles as they may require for experimental or research purposes.

Superintendent, X-ray Institute.

Chemical Examiners.

Superintendents of Vaccine Depôts.

Principals of Medical Colleges.

* The Director General of Ordnance has full powers of local purchase under Rule 5 in cases where the purchases are required to meet urgent field service requirements or to replace issue from mobilization reserves for the equipment of troops suddenly ordered on field service.

APPENDIX I—*continued.*

Superintendents of Medical Schools.
Directors of Bacteriological, Pathological or Research Laboratories, including officers in charge of Divisional and Brigade Laboratories.
Principals of Arts Colleges.
Principals of Technical and Industrial Institutes.
Directors of Industries.
Directors of Fisheries.
Sanitary Commissioners.
Director, Madras Cinchona Department.
Principals of Training Colleges.
Principals of Veterinary Colleges.
Officer in charge of the Experimental Sewage Installation at Poona.
Surveyor-General of India.
Inspector-General of Forests.
Director-General of Observatories.
Director of Botanical Survey.
Agricultural Adviser to the Government of India and Director, Agricultural Research Institute, Pusa.
Imperial Bacteriologist, Civil Veterinary Department.
Imperial Agricultural Chemist.
Imperial Mycologist.
Imperial Entomologist.
Directors of Agriculture.
President of the Imperial Forest Research Institute.
Principal of the Imperial Forest College.
Director, Geological Survey of India.
Railway Board.
Directors of Public Instruction.
Chief Malaria Medical Officer, Punjab.
Chief Conservator of Forests, Burma.
Director of the Zoological Survey of India.
Inspector of Science and European Schools, Central Provinces.
Metallurgical Inspector, Indian Munitions Board.

APPENDIX B.

List of Firms referred to in Rule 12. (Not printed.)

ANNEXURE III.

SHIP-BUILDING RULES.

(APPENDIX VI TO MARINE REGULATIONS, INDIA, VOLUME III.)

Rules defining (i) the procedure to be observed in respect of the provision of new vessels other than launches for the Royal Indian Marine, Departments of the Government of India and Local Governments and Administrations, and (ii) the financial powers of Local Governments and Administrations in regard to the construction and repair of vessels required for inland navigation, and for use at ports, etc.

(i) Procedure governing the provision of new vessels, etc.

1. The following procedure has been laid down in order to ensure that the designs of vessels should embody the latest and most economical improvements introduced in ship-building in the United Kingdom, it being considered desirable that, with a view to obtaining the best results, the same procedure should be followed by all departments in India.

2. When a Local Government or Administration, or a Department accepts the necessity for the construction or purchase of a new vessel, it should send the necessary design of the vessels to the Director, Royal Indian Marine, who will forward it to the Director-General of Stores, India Office, for reference to the Consulting Naval Architect at the India Office, with full particulars of all requirements which the new vessels should meet, and with the request that the Director-General of Stores may send out a specification, drawing and estimate of cost of the proposed vessel.

3. On the receipt of the above Director, Royal Indian Marine, will if he considers that there are any points which require modification, return the specification and drawings to the India Office with his remarks.

4. When the points at issue have been settled, the accepted specification and drawings will be returned by the Director, Royal Indian Marine, to the Local Government or Administration, or Department concerned, with an intimation whether the proposed vessel can be built with advantage and economy at either of the Royal Indian Marine

APPENDIX I—*concluded.*

Dockyards at Bombay and Calcutta. Final orders as to the construction of the vessel will then be issued by the Local Government or Administration or Department in question, or the sanction of the Government of India obtained should such be required [see (*ii*) below].

5. The procedure laid down above will not be applicable in the following cases :—

(*a*) Sea-going vessels of 120 feet length and under, irrespective of the method of propulsion. Proposals for such vessels will be sent to the Director, Royal Indian Marine, who will use his discretion as to the necessity for reference to the Director-General of Stores, India Office.

(*b*) All vessels for inland water, except such special ones as dredgers, or those in which there is novelty of design or construction, either in hull or motive power. The procedure in respect of such special vessels will be that laid down in clauses 2-4.

6. The Director, Royal Indian Marine, will, however, be at liberty to refer any case he may consider advisable to the Director-General of Stores, India Office, for reference to the Consulting Naval Architect for plans, specification and estimate.

(ii) *Financial powers of Local Governments and Administrations in regard to the construction and repair of vessels, etc.*

7. Local Governments and Administrations are empowered to sanction the construction or purchase at the cost of Provincial revenue of all vessels that may be required for inland navigation and for use at ports, provided :—

(*a*) That, without the previous sanction of the Government of India to be obtained through the Marine Department, the cost shall in no case exceed Rs. 1,00,000.

(*b*) That the advice of the Director, Royal Indian Marine, as regards the type and cost of the vessel shall invariably be obtained, and shall be adopted on all material points.

(*c*) That without the previous sanction of the Government of India in the Marine Department no vessel shall be built otherwise than at a Government Dockyard.

8. The preceding rules do not apply to non-sea-going vessels of any kind other than those driven by engine power.

9. The Railway Department (Railway Board) of the Government of India are allowed a free-hand in the matter of having vessels constructed at the Government Dockyards, subject to the condition that, when new types of river steamers are required for use in connection with State Railways worked, or under construction by the State, the Railway Board, before concluding a contract for their purchase, will ascertain, from the Director, Royal Indian Marine, what would be the cost of obtaining similar vessels from the Royal Indian Marine Dockyards.

10. Local Governments and Administrations have full power, without any limit to cost, to sanction expenditure on repairs to all vessels required for inland navigation and for use at ports.

(iii) *General.*

11. All communications from Local Governments and Administrations, relating to works of construction or repairs to be undertaken for them in Government Dockyards should be addressed to the Director, Royal Indian Marine, if the work is to be done at Bombay, and to the Captain Superintendent, Royal Indian Marine, if at Calcutta.

Estimates for Imperial Marine Works to be undertaken in the Kidderpore Dockyard, costing over Rs. 1,000 are to be forwarded to the Director, Royal Indian Marine, who will deal with them as laid down in paragraph 8 clause (*i*).

12. In all estimates for new works submitted to the Government of India due allowance is to be made for contingencies, and the estimate is to be carefully scrutinized to ascertain whether it has been made out in good faith and correctly shows the expense that is likely to be incurred. Once the work is sanctioned and a specific sum allotted for it the amount should not be exceeded without the previous sanction of the Government of India.

APPENDIX II.

Extracts of evidence relating to the Terms of Reference of the Stores Purchase Committee recorded by the Public Works Reorganization Committee.

From Volume II.

K. S. FRAMJI, Esq., Executive Engineer, Kolaba District, Bombay.

Pages 13-14—

(*Written.*) *61.* . . . Further decentralization in the Public Works Department itself would appear desirable by giving new or increased powers in the following respects:—

* * * * * * *

(*b*) Executive Engineers may be given more latitude in the matter of local purchase of articles of European manufacture, the rules in force at present are unduly rigid;

G. WITTET, Esq., F.R.I.B.A., Consulting Architect to Government, Bombay.

Page 21—

(*Written.*) 121. . . One of the difficulties in this country is to keep abreast of the improvements in fittings and appliances connected with the building trades. At home agents regularly lay all new developments, their firms bring out, before people interested in the building and allied trades, and either exhibit samples, or arrange for the person interested to visit show rooms or works in which the article has been installed. Under the existing system there is very little inducement for firms or their agents to approach Government officers in India who deal with buildings. If the powers permitting the local purchase of materials imported into the country were extended and greater freedom allowed in placing orders with local agents, instead of having to indent on the Stores Department, it would encourage firms in the country and local agents of home firms to bring samples of new or improved goods to the notice of possible buyers and also to keep stocks in this country.

Pages 23-24—

(*Oral.*) 136. . . The witness complained that his operations were hampered by the rules regulating the local purchase of stores and that he was not allowed sufficient latitude in the matter of purchasing such stores from England. He did not see enough of novelties from home, because no encouragement was offered to agents of English firms to bring them out to India. He considered that more elasticity should be allowed to officers and that they should be authorised to exercise discretion as to buying locally or indenting upon the India Office.

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143. . . In regard to the question of the local purchase of stores, the witness was asked whether he thought it would be feasible for the Government of Bombay to appoint a government buyer who would reside in Bombay and obtain tenders when required, either in India o from England. The tender would be accepted and the stores obtained by this officer, who would be paid a certain percentage on the amount of the order but would receive no commission of any sort from the seller. The witness was afraid that this system would bring no new materials to the notice of the architect. When, however, it was pointed out to him that the buyer would be in close touch both with the office of the witness, and with the building trades elsewhere, and would be responsible that all goods delivered were in accordance with specifications, the buyer receiving only a small percentage, say three per cent. on an engine and 1½ per cent. on a simple order for pipes or girders, the witness admitted that this would be at least a step in the right direction and a great improvement on the present system, besides being much more expeditious than indenting on the India Office. There were all sorts of improvements continually going on at home in such details as window fittings, etc., which he never saw out here, and even if he found them in a catalogue it was hardly possible to indent on the India Office for a small quantity. If, however, they were obtainable from a firm in India merely the required number could be ordered. It was with this object in view that he had suggested a Buildings' Trades Exhibition.

W. F. STUART-MENTETH, Esq., M.I.E.E., A.M.I.C.E., Electrical Engineer to Government, Bombay.

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(*Written.*) 186. . . We could, however, effect greater economy which would at the same time encourage local enterprise if restrictions on local purchase were removed. We find it very difficult to work an estimate when purchasing through the Director-General of Stores. There is no question that local firms would welcome and benefit by the withdrawal of these restrictions. It would also encourage British firms to open branch offices in India which is a great want that I have been striving for in connection with this presidency. (Attention is invited to the instances quoted at the end of this statement.)

187. . . (3) To encourage local electrical enterprise we must encourage "turn over," that is, sale of material, in the first instance, by local purchase and by standardising pressures of supply so that stocks are not too varied. Local firms only undertake contract work with a view of selling their material, they prefer to sell the material direct rather than undertake the erection of it.

APPENDIX II—*continued.*

(Written.) Cases of loss and delay in ordering material through the Director-General of Stores.

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Page 30—

1. In February 1915 we indented on the Director-General of Stores for laboratory equipment estimated to cost £1,229. The indent comprised electrical plant, switch boards and instruments. The Director-General placed the whole order with a firm that manufactured electrical plant only; this firm then sub-contracted the rest of the order with a firm that made switch boards only; this firm in turn again sub-contracted with an instrument manufacturer for the supply of the instrument portion; the result was that the Director-General's quotation amounted to £2,610 exceeding the cost of supply by a local firm by £1,139; that is, it doubled the cost of the work; the material has not yet been supplied.

2. Batteries of a certain make were ordered in 1912. The Director-General supplied batteries of another make which could not be utilised and contended that these batteries were identical in all respects with those that had been ordered but afterwards admitted and regretted his mistake. Batteries were then ordered and supplied locally which involved government in a loss of nearly Rs. 4,000 and several months' delay.

3. Switch boards ordered through the Director-General of Stores in May 1912 arrived broken and 1½ years expired before their replacement was effected.

4. A Cooper Hewitt printing machine was ordered from the Director-General of Stores; on arrival, one lamp was broken, the cost was borne by this office; a new lamp which was then ordered was again broken and the cost again borne by this office. Lamps were then ordered from a local firm and supplied intact within three months. A delay of nearly two years occurred through this order being placed with the Director-General of Stores.

5. A motor pump estimated to cost £60 was ordered through the Director-General of Stores; intimation was received that the cost would exceed the estimate by £165; the pump was purchased locally for £62.

6. Motors for printing machines estimated to cost £41 were ordered through the Director-General of Stores; a cable was received intimating that the cost would be £108; the motors were then purchased locally at half the Director-General's cost, namely £54.

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(Oral.) 197. . . Referring to the rules regarding the purchase of stores, the witness stated that it took much longer to get stores through the India Office than to get them direct from firms in England. In the latter case they could be obtained in two or three months, while if the India Office were indented upon there were indefinite delays. He instanced the case of an indent which had been sent two years ago and had not yet been complied with, thereby stopping a most important work. It was true that the war had delayed matters, but a local firm could have obtained the material in a much shorter time. He did not attach much value to the inspections done by the India Office. When he was at home he had made inquiries at the office of the Director-General of Stores regarding inspections, and had found no case in which any examination or inspection had been carried out by the Stores Department which could not equally well have been carried out in India. Firms in India not only supplied exactly according to specification but also undertook the responsibility that what they supplied was in order, whereas, in the case of materials or plant obtained direct from England, there was always considerable trouble in replacing anything broken *en route*. Increased local purchases of stores would certainly tend towards the establishment and development of firms in India. At present the Director-General placed all orders for electrical materials with certain firms in England; if local purchase were encouraged those firms would have to come to India to get their work. There was, he considered, sufficient scope in India to admit of competition among electrical firms, as work of that nature was developing rapidly.

C. J HANSOTI, Esq., Superintending Engineer, Bombay.

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(Oral.) 378. . . He had not experienced any difficulty in the purchase of stores through the Director-General of Stores. He thought that the suggestion that the Director-General of Stores should be located in India was a good one, and if such a course were adopted he did not think that it would lead to a rise in the prices of stores.

H. D. GILL, Esq., Partner, Messrs. Richardson and Cruddas, Bombay.

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(Written.) 430. . . The chief direction in which private engineering enterprise can be encouraged is by relaxation of the present rules relating to the local purchase of engineering stores and materials and, considering the importance of having in this country ample stocks of these things as well as a flourishing engineering industry, not only to meet the pressing military requirements in times like the present, when shipping facilities are becoming more and more restricted, but also in times of peace for the development of the vast agricultural and mineral wealth of the country, I submit that any measures having this object in view merit the serious attention of Government. This, however, and the safeguards necessary in order to protect British Imperial interests are perhaps matters which more strictly come within the scope of the Indian Industrial Commission now sitting.

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(Oral.) 435. . . * * * * *

He was of opinion that one of the directions in which change should be effected in the present system, in order to give encouragement to private enterprise, was the relaxation of the rules relating to the local purchase of stores. He thought that private enterprise should be encouraged rather by developing existing firms than by creating new ones. He went on to say that Rule 1 of Appendix 30, Public Works Department Code, which related to the purchase of articles manufactured in India from Indian materials read quite satisfactorily, but he thought that Rule 8 nullified it to some extent. This rule, he suggested, was an inducement to officers to err on the safe side, and to send an indent through the Secretary of State for materials, which they were, in reality, authorised to purchase locally if they exercised their powers. As regards Rule 2, he considered that if imported articles could be supplied by firms in India at the same rate as that at which they were imported through the Stores Department, they should be purchased locally, a procedure which would give such firms as his own an opportunity of stating whether they could produce such articles. This system, he added, would, if enforced for some time, encourage local manufacture. As regards Rule 3, he advocated that, although an Indian firm might not have a particular article in stock, yet if they could quote cheaper rates than the Stores Department in

APPENDIX II—*continued.*

England, the article should be ordered from the Indian firm. He believed that this system worked satisfactorily in the case of large municipalities, *e.g.*, Bombay which had adopted it. He considered that the local purchase of stores was the main item in regard to which the Public Works Department could do more to encourage private enterprise.

436. In connection with the criticism on the Public Works Department that it did not encourage, as much as it might, the use of indigenous materials, as for example lime and cement, he had not noticed any tendency of this sort. It was, however, a subject on which he was not competent to speak. His firm was mainly concerned with iron and steel. They had used Bengal pig-iron for many years and accepted the steel turned out by the Tata Iron Works so long as it came up to the British standard specification. He could not say whether there was any tendency on the part of the Public Works Department to adhere too rigidly to the use of imported materials. His firm had a large experience of Public Works Department contracts in connection with steel and iron-work, which was not confined merely to the supply of materials but extended to the construction of bridges and other structural work. Some of the bridges supplied by them were erected by the Public Works Department and others by his firm. With the exception of the local purchase of stores he had no suggestions to make as to improving and encouraging private enterprise, and thought that the Public Works Department had given sufficient scope to private enterprise in other respects.

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439. . . He would not advocate the transfer of the Director-General of Stores to India all at once, as he considered that there was a possibility that such a move might prove a failure. It was rather a big question and he was not prepared to say that all his difficulties would be removed if the Director-General of Stores' Office were located in India.

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442. . . He was not in a position to say where the Director-General of Stores would have to be located were he transferred from London to India. He thought there would be difficulty in effecting this transfer.

443. He did not think it would be a feasible scheme for a local Government, *e.g.*, the Government of Bombay, to have a "buyer" for the purchase of stores, who would not be an official but a business man and who would obtain tenders, lay them before the local Government for selection, obtain the goods, do the testing, make the payments, and receive a commission from the local Government, because an Executive Engineer would much prefer to place his orders direct as he knew best what he wanted. He foresaw difficulties in adopting this system of a "buyer," and thought that the whole question was a matter for the Public Works Department themselves to decide, as it involved internal organization. He considered, however, that plenty of firms could be found who would be willing to take up the post of "buyer," though, from an industrial point of view, it would not be desirable to empower this "buyer" to purchase stores from England. There were several firms in India similar to his own, which were confined to India and were not branches of a firm in England. It was necessary to keep in close touch with home manufacturers as many articles, such as engines, could not be obtained in India and hence had to be imported, although he thought that they would, in course of time, be made in India. He thought that, if one firm were appointed as "buyer" other firms would express dissatisfaction, and that this "buyer" would have to give up private practice and be a government official rather than a whole-time man engaged for the purpose. Such a man, being a government official, would be liable to get into a groove, and the amount of work which would have to be done would eventually require a whole department rather than a single man to cope with it, as was now the practice on railways where there were store-keepers and a regular stores department.

J. W. MACKISON, Esq., M.I.C.E., Executive Engineer, Bombay Municipality, Bombay.

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(*Oral.*) 531. . . The Bombay Corporation found it necessary to supply large contractors with the materials required for construction, as for example, cement, etc., as the latter found it difficult to obtain the quality specified by the Corporation, and were not to be trusted to obtain such materials themselves. The Corporation obtained the materials they required through the agency of the municipal central stores. About seventy schedules for various materials were issued every year. All the pipes, machinery and a portion of the cement required were obtained from England. Some cement, however, was obtained locally. The purchase of materials from England was entrusted to supply firms who had agents in Bombay, but special machinery and plant were secured direct from the latter country. This procedure had been found quite satisfactory.

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(*Oral.*) 545. When special stores were required by the Bombay Corporation they engaged the services of Sir John Wolfe Barry. It was difficult in Bombay to obtain information regarding all the recent improvements taking place in England, although the Corporation kept themselves fairly up-to-date by taking in all the best engineering papers published in England and America.

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(*Oral.*) 547. . . The Bombay Corporation was not bound and had never found it necessary, to obtain materials from the Director-General of Stores at the India Office. The rates paid by the Bombay Corporation for stores were not, he thought, very different from those paid by the Public Works Department and the former were often supplied with copies of the Public Works Department and Improvement Trust rates. He could not, however, say for certain whether stores were supplied by the India Office at cheaper rates than those at which the Corporation obtained them. The latter had their own specifications, which were much the same as the British standard specifications. The Bombay Corporation had a central stores which arranged for the supply of materials to all its departments. The storekeeper in charge fixed the rates, but the witness was unable to give detailed information in this connection.

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(*Oral.*) 558. The materials, *i.e.*, stores and machinery obtained by the municipality from England were both inspected and tested there by Sir John Wolfe Barry, who was their consulting engineer.

G. T. MAWSON, Esq., M.SOC.C.E., M.C.I., General Manager, Messrs. Marsland, Price and Co., Ltd., Bombay.

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(*Oral*) 677. Private enterprise was generally encouraged by the Public Works Department, although more support might be given if all work were let out on contract, instead o being done departmentally, and if

APPENDIX II—*continued.*

the present restrictions on the purchase of European stores were removed.

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(*Oral.*) 681. If the Director-General of Stores was located in India and ordered materials direct from local firms he thought that his firm would get better patronage and would be in a position to compete with firms in England. It was rather doubtful whether this would encourage local manufacture in India, but it would tend indirectly to keep more money in the country. If iron and steel were more extensively purchased in India it would lead to the establishment of further iron works in that country. His firm did not deal in machinery except as importers.

F. J. PRESTON, Esq., M.I.C.E., Chief Engineer, Great Indian Peninsula Railway, Bombay.

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(*Oral.*) 692. The railway company obtained most of its stores from England except small articles which were purchased locally. The stores purchased in England were not procured through the India Office, but through the railway company's home board, to whom indents were sent from India by the railway officers. He did not agree with the contention that it would be of great benefit to India as a whole if the local purchase of imported stores were encouraged to a greater extent than at present, and considered that the most economical system was the present one of obtaining stores from England through the home board.

G. L. THOMSON, Esq., Superintending Engineer, Nagpur.

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(*Oral.*) 870. He believed that the rules regarding the purchase of stores were unpopular in the Central Provinces, but did not wish to criticise them as the present system seemed to work all right. The rule under which certain stores had to be obtained through the Secretary of State did not hamper the working of the Department, as the engineer was given fairly wide discretion as to local purchase provided prices were favourable. The existing rules were, he thought, sufficiently liberal and he did not desire that they should be relaxed.

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Page 100—

(*Oral.*) 900. It was only by applying to firms that it could be ascertained, before indenting on the India Office, whether any particular article of indigenous manufacture was obtainable in India. Beyond such application there was really no guide as to whether articles were obtainable in India or not.

901. He approved of the suggestion that the Director-General of Stores should have his head office in India instead of in England, and considered that this would expedite matters, and would still enable such articles to be obtained from England as could be got cheaper there. Though it might cost more to have the Director-General of Stores in India, he thought it would be more economical in the end. He had sometimes found that firms supplied materials to the India Office in England at a cheaper rate than they would supply them to an individual in India direct, and it would hence be advantageous if the India Office representative were located at Bombay.

J. M. VACHA, Esq., Executive Engineer, Central Provinces.

Page 128—

(*Oral.*) 1107. He considered that the present system of getting stores from the India Office was quite suitable and that no alteration was required in the procedure. He preferred getting stores from England to buying locally, because they were of better quality and much cheaper. Four years ago he had got cement through the India Office which was of much better quality and cheaper than any cement obtainable in India. He did not think that the system involved any unnecessary delay.

F. A. A. COWLEY, Esq., Chief Engineer and Secretary to the Government of Bengal, in the Marine and Irrigation Branches.

Page 180—

(*Oral.*) 1397. The whole of the rules regulating the local purchase of stores required complete revision from the beginning. He saw no reason why everything should be obtained from the Director-General of Stores. There were eminent firms in England who had branches in Calcutta, and although these branches might quote even lower rates than the Director-General of Stores could obtain for the supply of a certain article from England, it was not possible to purchase such an article locally. He advocated the abolition of the rules altogether and the abolition to a great extent of the Director-General of Stores, as very little benefit was derived by buying an article through that officer especially when the difference of cost to government might be as little as 1½ annas per hundred weight, and involved the wastage of a lot of time and paper.

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Page 181—

(*Oral.*) 1409. In connection with the rules relating to the local purchase of stores he remarked that his experience was that officers who, after obtaining technical sanction to works, foresaw what they would require sufficiently early, indented for the articles on the Director-General of Stores, India Office, but if they were pressed for time they purchased the articles locally. His impression was that the local purchase of stores in Calcutta had not decreased, but had, on the contrary, rather increased in amount. Firms which supplied the Director-General of Stores with materials and which had branches in India tendered at the same rates in Calcutta for the articles as they did in England. The only difficulty experienced by purchasing locally was the absence of the test made by the Director-General of Stores, which was not available in India but, he added, if an article broke at the first, second, or even fifth time of usage, no firm of any standing in Calcutta would hesitate to

replace it. Rule 8 of the Stores Rules did, he thought, tend to make officers write to England for materials instead of purchasing them locally as they interpreted the rule to lay down that if it was foreseen sufficiently early that an article was required it should be obtained by indent on the Director-General of Stores, unless it was manufactured and could be bought in India.

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Page 182—

(*Oral.*) 1418. As it was necessary to keep up the standard of materials, and also to have one officer responsible for them, he approved of the suggestion that the Director-General of Stores Office might be transferred to Bombay or Calcutta.

G. G. DEY, Esq., Superintending Engineer, Public Works Department, Calcutta.

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(*Oral.*) 1474. . . Certain stores had to be obtained from Europe, but the witness was unable to say whether there was any method of ascertaining whether the price and quality were favourable in comparison with the quotations of the Director-General of Stores. He had not had frequent occasion to indent for European stores, and articles were usually obtained in India unless there was ample time and it was possible to foresee sufficiently far ahead what stores would be required. Since the war there had been difficulty in regard to the purchase of steel.

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1476. . . His experience of obtaining stores by indent from the India Office was very limited. The only large indent which he had sent home was for materials for a bridge which he was certain were not obtainable in India. He had no means of ascertaining what articles of indigenous manufacture were available in India except from the ordinary list, which was perhaps obsolete.

A. K. TAYLOR, Esq., A.M.I.C.E., M.I.E.E., A.C.G.L.I., Executive Engineer, Electrical Division, Calcutta.

Page 199—

(*Written.*) 1573. . . The Public Works Code is, I consider, unduly restrictive as regards electrical work—probably because it was framed to deal with buildings and not mechanical and electrical engineering works. These restrictions, of course, depend to some extent on their interpretation by the Accountant-General, Bengal, who, of course, is not an engineer, *e.g.*, the conditions governing the local purchase of European stores appear to be unnecessary. The present limitations are wasteful and cause delay. If reliable firms knew that government orders would be placed with them, lower rates would be obtainable than are possible at present: these will, in all probability, be at least as low as those obtained by the present method of home indent. All responsible firms will guarantee their materials, nor need any which are damaged or below specification ever be accepted. If facilities for local purchase had existed before 1914 much of the exasperating delay in obtaining machinery of all kinds in this country on the outbreak of war would never have occurred. It is clearly to the public advantage that the government should encourage British engineering firms of good standing to establish themselves in the country; and the engineers of these firms will have a better knowledge of local conditions and requirements than any official in England.

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Page 200—

(*Oral.*) 1588. In explanation of his complaint regarding the supply of European stores, he stated that, when he was first appointed as Electric Inspector, he indented for a particular class of apparatus, but the Stores Department objected to its supply and substituted one of another make; to this he naturally objected. On the general question regarding the suitability of the Stores Rules he stated that he could obtain certain electrical stores from the firms with whom he placed contracts. For maintenance work, for example, he was permitted to purchase small fittings, bulbs, etc., but there were occasions when special apparatus was required which could not be purchased locally under the rules. The rules also prohibited the purchase of plant above a certain size for the generation of power other than through the Director-General of Stores, and he did not think this restriction was necessary. Broadly speaking, he was not, however, particularly hampered in the purchase of stores.

The Hon'ble Mr. F. O. LECHMERE-OERTEL, A.M.I.C.E., F.R.I.B.A., Chief Engineer and Secretary to the Hon'ble the Chief Commissioner of Assam.

Page 209—

(*Oral.*) 1680. The rules for the supply of European stores were in his opinion cumbersome and inapplicable to the Buildings and Roads Branch of the Public Works Department, as the quantity of European stores used by that branch was comparatively small. He therefore advocated for this branch the removal of the present restrictions and the free purchase in India of all descriptions of stores of European manufacture. The rules in their relation to railways were on a different footing; their demands were on a large scale and could be obtained more economically through the India Office. The services of the India Office would still be available for special requirements, if desired, when these could not be obtained locally. He added that his proposal would act as an encouragement to local engineering firms. The quality of the stores obtained through the India Office was good; his complaint chiefly related to the delays involved. There would be no danger in the concession, since the recognised firms in India were already listed and only approved specifications would be permitted. As an additional precaution arrangements could be made for testing stores at centres such as Calcutta and Bombay. This proposal did not necessarily involve the maintenance of a separate Stores Department in India, as the machinery for the purpose was already available there and was used for testing local manufactures, but there was no good reason why its activities should be confined to this alone. In Calcutta materials were, witness thought, tested at the Sibpur College.

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Pages 210-211—

(*Oral.*) 1693. . . Improvements had been introduced in the rules for the local purchase of stores, but a provision still existed under which the submission of reports and explanations was inevitable if articles other than those specified were obtained locally. This, the witness thought, was a restriction which could well be abolished. It was possible to effect a comparison in the prices of some of the stores obtainable in England and in

APPENDIX II—*continued.*

India from the returns of the Railway Department which specified the average prices paid. The Public Works Department was guided by those returns as a rule, and, in the absence of tests, it insisted on the supply of articles manufactured by certain recognized firms. The requirements of the Buildings and Roads Branch of the Public Works Department in Assam were not complicated, and if English-made girders of a particular make, for instance, were needed, there would be no difficulty in procuring them locally. Rolled steel girders were manufactured in India, but the firm which turned them out was at present requisitioned for war work. The existing rules for the supply of European stores were in his opinion too cumbrous and involved, with the result that an officer sometimes ran counter to one rule when complying with the requirements of another, and engineers were afraid to exercise the discretion given them under the rules.

J. W. MEARES, Esq., M.I.C.E., M.I.E.E., Electrical Adviser to the Government of India.

Page 218—

(*Oral.*) 1751. The operation of the rules in regard to the local purchase of stores was more restrictive in the case of the Electrical Branch than in that of other branches, as there were electrical firms in India which could supply all that was required. He thought it would be infinitely better to buy things from local firms representing home firms as articles could then be tested in the country before payment was made, and, in the event of their being unsatisfactory, payment of the bills could be withheld. In obtaining stores through the Director-General of Stores the difficulties lay in the facts that that officer supplied what he chose and that the tests made in England were useless. He could say from personal experience that the India Office tests were exceedingly perfunctory.

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1758. Indents for the purchase of stores were not submitted through him unless the stores were intended for the Government of India, although it was possible for a department to indent for an obsolete instrument, since electricity was a rapidly developing industry.

Rai Bahadur KRISHNA CHANDRA BANERJEE, Superintending Engineer, Public Works Department (retired).

Page 240—

(*Written.*) 1916. . . The rules of the Public Works Department Code should in my opinion be relaxed in regard to the local purchase of stores as long as the schedule rates of the Department are not exceeded.

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Page 241—

(*Oral.*) 1939. He knew the rules in connection with the purchase of European stores very well, and thought that when there was not sufficient time to obtain stores direct from England for the construction of buildings they should be purchased locally. A good many government officers preferred buying their stores from England as materials so bought were of better quality and cheaper.

OSWALD MARTIN, Esq., Partner, Messrs. Martin and Co., Engineers and Contractors, Calcutta.

Page 244—

(*Oral.*) 1962. . . On the presumption that the changes he had recommended were introduced, the reduction in establishment in India and in the purchasing and inspecting staff in England, which was referred to in his written statement, would be brought about by the purchase direct by contractors of the European stores which were at present obtained by the Department through the India Office. It was true that the rules permitted the local purchase of stores and that those rules covered nearly everything that was required in India, but the rules were very seldom followed as it was very much easier for an Executive Engineer to indent for what he needed, inasmuch as he was required to furnish reasons for each local purchase he effected and shoulder the responsibility for the suitability of the materials. It was not his opinion that the Public Works Department considered that the materials in India were not good enough, as steel joists of well known brands for instance, could be obtained from firms in Calcutta and Bombay, identical to those purchased by the India Office in England. It was certainly the general impression that stores locally purchased were more expensive than those obtained by indent on the India Office, but he did not think that this was really the case, though he could not prove it. His reason for thinking so was that purchases in India were made direct and not through an intermediary.

1963. He approved of the suggestion that a buyer should be appointed either for the whole of India, or separately for each province, if such a scheme were found practicable. Personally, he had not considered the point, but mentioned that it had been discussed at great length by the Indian Engineering Association in whose hands he desired to leave the matter. This body had held numerous meetings and discussed the matter with the Member for the Commerce and Industry Department. In his opinion such buyer should be a whole-time government official, and it would perhaps be necessary to appoint more than one for the whole of India, though certain provinces might be linked up such as Bengal and Bihar and Orissa for instance. Probably it would be best to have a buyer at each of the important centres, *viz.*, Bombay, Calcutta and Madras. It would not, however, be possible to abolish the India Office entirely, as certain indents would still have to be sent forward to England for compliance.

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(*Oral.*) 1973. . . His personal opinion was that government were not really able to purchase articles cheaper than through the agency of master-contractors, but the question was a difficult one to prove either way. A firm could buy materials more cheaply than government because it was able to purchase at times when it suited manufacturers to sell, whereas government approached suppliers and middlemen just when they required any particular material and hence had to pay more. Besides, a private firm stocked a particular article for use and bought it at a cheaper price than government because its purchases were made at wholesale and cheaper rates. His firm, for example, had a London branch which purchased just what manufacturers were disposed to sell and shipped the material to Indian branches to stock. In the case of steel joists, the firm obtained from the manufacturers so many hundred joists at a time of stock length, and these were

APPENDIX II—*continued.*

utilized in the buildings undertaken by the firm after being cut to size in the firm's own yards. As a concrete instance, he cited the case of the Patna and Allahabad High Courts the plans of which were similar. In the case of the former, the rate for fixing the joists supplied by his firm was Rs. 8-8-0 a hundredweight, whereas the Public Works Department estimated rate for the Allahabad High Court was Rs. 11 for large sections and Rs. 10 for small sections, and after allowing for the difference of freight and for duty paid the rates were, Martins, Rs. 8-12, Public Works Department, Rs. 11 and Rs. 10. The joists for the Allahabad High Court were obtained direct from the Director-General of Stores, but by utilising his firm for the Patna High Court the Department saved very considerably. Mirzapur and Porebunder stone could also be obtained at cheaper rates than the Public Works Department as the firms employed an agent who went round the quarries, made bargains on their behalf, and despatched the stone. It was true that such agent gave advances, but that was the ordinary way of doing business. He was aware that the Public Works Department could not do so, as they were prohibited by rule from granting advances. If a special kind of lime such as Katni was specified he admitted that his firm would probably not be able to obtain it cheaper than the Public Works Department did, but considered that the difference between the two rates would be small.

J. HARPER, Esq., General Manager, Messrs. Marshall, Sons and Co., Ltd., Calcutta.

Pages 247-248—

(*Written.*) 2001. . . It has long been advocated that considerable economy might be effected by the various government departments having fuller powers to purchase their requirements locally. Some concessions in this respect have been made, but in my opinion do not go far enough to ensure the real benefits that might result from a more complete organized system. The present *modus operandi* of sending indents through the India Office must frequently mean considerable delay, retarding important works, and sometimes resulting in engineers not having their exact requirements fulfilled. It is also believed that a substantial saving would result from the introduction of an efficient purchasing department on this side.

(2) It must be borne in mind that facilities for obtaining locally a large portion of the required supplies are yearly becoming greater. As examples, I would point to the Tata Iron and Steel Works, and the excellent quality cement that is now being manufactured in the country, so that there would be the further advantage of government assisting in a marked degree many local industries, were some organization, as suggested, brought into being.

(3) As regards road rollers, portable engines, disintegrators, etc., which are in frequent demand by the Public Works Department these could invariably be procured on the spot, as most of the leading English makers have agents in the leading centres, who, in normal times, stock such machinery, and my own Company, who are contractors to all departments of the Government of India, lay themselves out to keep a varied assortment of such machinery at their branches at Calcutta, Bombay, Madras and Lahore.

(4) What is suggested would entail a separate purchasing department controlled by a responsible competent officer, but the system should enable the departments to procure their requirements more economically than by the present routine, and avoiding the drawbacks previously referred to.

(5) I regret time will only permit of my touching upon the finger of this important subject, but should any innovations, at any time, be contemplated, my humble services are at the disposal of the authorities. In this case, my offices might be considered of some use, as my experience goes back some years, and includes the arranging of contracts with the India Office and Indian State Railway departments in London, supervising the progress of contracts through our works in England, and the tests required by the specifications, in the presence of the inspecting engineers.

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(*Oral.*) 2009. The rules relating to the local purchase of stores were not strictly adhered to, and, as a sequence, articles were not purchased in India to the fullest possible extent. He had examined the rules, but was not able to indicate any particular restrictions from his point of view. He asserted, however, that the freer local purchase of stores in India would result in a saving in the expenditure incurred on their direct importation. Although he had not been resident in England for the past thirty years, he thought that similar conditions still prevailed in this respect. In his opinion, government could not purchase stores cheaper in England than in India because it had, perforce, to resort to middle-men. It would be better to purchase direct in India such stores as were supplied by his firm to the India Office as the expenses in England were very heavy. In his firm's works for example, he did not think there was any department without an inspector. It was true that the system of direct purchase from England ensured good supervision and the efficient testing of materials. Such supervision and testing was necessary for materials manufactured by some firms, but was hardly necessary in the case of firms of high reputation, *e.g.*, boiler manufacturers. For India boilers were made by his firm to government specifications and complied with the Boiler Commissioners' regulations and rules. These rules were really equivalent to the Board of Trade rules, and hence boilers manufactured for India ought to suit anybody.

2010. The establishment, in India, of a government purchasing department was desirable but the head of such a department should possess some knowledge of mechanical engineering, and might be a high government official vested with powers in keeping with the importance of his position. The new department would act as an incentive to local industry and lead to the freer purchase of Indian manufactured articles, and the same tests as were in force in England, might be applied to such materials as iron and steel, cement, etc.

2011. The appointment of a supervisory officer to check indents submitted by the Public Works and other Departments, and to refuse to forward to the Secretary of State indents for articles that might be procurable in India would also be an advantage, but purchases from England could not be stopped suddenly, and would have to be abandoned gradually. A large number of articles of equally good quality at present indented for from England, could be obtained in India and departmental works were often held up pending the receipt of an article from England that might probably be obtained locally.

2012. The increase in the local purchase of stores would eventually lead to the Stores Department of the India Office being transferred to India, but this change could not be introduced immediately as the classes of materials produced at present in India were comparatively small and it was not possible to procure in India everything that was required. It would, however, be possible for a buyer in India to buy as satisfactorily as the Director-General of Stores, London. The best course to adopt, in the circumstances and as a preliminary step, would be to empower a competent government official in India to purchase such articles of indigenous manufacture as were required as also European stores stocked by manufacturing firms in India, and to give such an official the necessary staff.

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APPENDIX II—*continued.*

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(*Oral.*) 2016. If a buyer was appointed in India with plenary powers, all the large manufacturing firms in England would naturally have representatives in India. Materials might be purchased at a cheaper rate in India through such representatives, in spite of the fact that the commission they would demand would be an addition to the value of the materials. Workshops in England were put to a great deal of trouble and expense consequent to the visits of inspectors and accordingly added a certain percentage to the price of materials to cover such expenditure. Firms like his own would be in a position to keep on hand a larger amount of stock to meet government demands, and this would be of advantage to private industries. In India his firm usually had about £200,000 to £250,000 worth of machinery on stock at their various branches and if a buyer were appointed in India his firm would not only be able to supply machinery from this stock, but would also maintain a larger stock to the advantage both of the country and of the firm itself.

J. M. LACEY, Esq., A.M.I.C.E., Superintending Engineer, Public Works Department, Madras.

Page 262—

(*Oral.*) 2097. Structural steel was obtained by direct indent on the Secretary of State as the supply from this source was found to be cheaper and better. The conditions at present were exceptional, but he could produce figures in support of his assertion. None of the firms in Madras manufactured structural steel and it had been his experience that he had always been obliged to pay at a higher rate when he had run short of requirements and had purchased steel in the open market. He admitted, however, that if the ordinary requirements of the Department were supplied by firms, that the rates would possibly be reduced, but even then they would be subject to great fluctuation.

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(*Oral.*) 2124. Under the rules articles could only be indented for when they were not procurable in India, and inquiries were always made as to the local rates of supply prior to the despatch of an indent. In cases where steel had been purchased locally it had been found uneconomical. The quality, however, was good.

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2130. He did not agree with the argument that a business firm could purchase stores cheaper as they purchased articles when the market was most favourable whereas the Department effected purchases only when articles were needed and accordingly had to pay whatever price was demanded, as he considered the fact that the Department purchased stores in greater bulk enabled them to obtain them cheaper. The Stores Division in Madras stocked a considerable quantity of stores for departmental requirements, and the amount of the reserve limit was fixed by government.

Rai Shaib R. A. SRINIVASA AIYENGAR AVARGAL, Executive Engineer, Public Works Department.

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(*Written.*) (11.) There is one obstacle at present for the free encouragement of private enterprise, which is also the cause of delay complained of in various cases, and this is the restriction regarding the local purchase of certain articles. Under the present rules even though a contractor may undertake to do the whole of a work on a contract, he is precluded from buying and supplying certain materials locally unless he happens to be one of the firms approved by the Government of India. If he does not happen to be one of such firms the materials have to be bought by the officers, whose powers are restricted. The rules should be so modified that he may be allowed to buy the materials locally, so long as he gets them from one of the firms approved by government and the materials satisfy the current specifications and lists prescribed by the Government of India.

W. HUTTON, Esq., A.M.I.C.E., Sanitary Engineer to the Government of Madras.

Page 272—

(*Written.*) 2192. . . (2) In the matter of the construction of waterworks or other important sanitary works, the present practice in the Madras Presidency is for the Public Works Department division concerned to supervise the work, the execution being done by private agency for the work of buildings and earthwork and the laying of pipes. The pumping plant, water pipes and other materials, are obtained by the Sanitary Engineer to Government on indent from the Director-General of Stores, under the existing rules, and are not supplied by the private agency. They should be supplied by private agency and this same or other private agency should be employed, as a rule, to erect the plant and to lay the pipes, under the general inspection of the Public Works Department engineer concerned. Only in this manner do I consider any modification of the system of execution of works by the Public Works Department desirable, and the modification is required because the existing system was founded before the execution of sanitary works, on a modern scale, was introduced into India. The present system, it seems to me, subject to the above suggested modification has grown up as the result of years of experience and no radical alteration is necessary or advisable.

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(*Written.*) 2195. . . The Public Works Department Code is unduly restrictive especially in the two important points of—

(*i.*) the obtaining of European stores through the India Store Department, London; and

(*ii.*) * * * * * *

In regard to the obtaining of European stores through the India Store Department, London, I venture to suggest that this results in delay in the execution of works and therefore extra expense. The stores obtained from the India Store Department, London, are excellent in quality, in my opinion, and no complaint can be made on that score. They are also cheaper, as a rule, than stores obtained in India and consequently in every way more satisfactory. But firms in India could undoubtedly by their system of code telegram obtain stores from the

manufacturers much more quickly than they can be obtained now under the system of indenting on the India Store Department. With suitable precautions such as insisting on only stores of British manufacture being obtained from local firms, and standard specifications with necessary testing centres (one at Madras), it would be desirable in the interests of industrial growth in India to permit the Public Works Department to obtain all stores in India from local firms, while at the same time the India Store Department might be maintained, at any rate for some years to enable Public Works Department engineers to obtain stores from the India Store Department, London, if circumstances made this at any time necessary or desirable. In other words I would venture to suggest that instead of Public Works Department engineers being obliged by strict rules to obtain European stores from the India Store Department, and under certain special circumstances from local firms, the rules should be reversed making it possible for Public Works Department engineers to obtain generally all stores of British manufacture from local firms in India, with the option of indenting on the India Store Department in exceptional circumstances. This suggestion if carried out would not, I think, result ultimately in increased cost of stores, as local firms would soon realize that if their prices were unsatisfactory the contract would be lost to them and indent placed with the India Store Department, London. The adoption of this policy would result in the keeping of a minimum stock by the Public Works Stores, Madras, and other Public Works stores, and the consequent saving of interest charges and depreciation on stock and surplus stores. It would in all cases be advisable for these Public Works stores to keep in stock, for immediate use, engines and pumps and other construction plant, with the necessary workshops for repair purposes, for issue as at present to the Department or to private agencies undertaking work on contract.

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Pages 274-275—

(*Oral.*) 2203. In the matter of the local purchase of European stores he was of opinion that the existing rules should be revised so as to empower an engineer to purchase locally imported articles of European manufacture if he considered such a course more economical. He did not agree that there was any force in the contention that such permission would place the local officer entirely in the hands of local firms and thought that his position would be no worse than it was now. In his opinion, sanitary appliances could be purchased locally at a reasonable price, though perhaps not quite as cheaply as in England, but in view of the expeditious manner in which they could be obtained, he deemed it expedient to permit their local purchase.

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(*Oral.*) 2216. He did not approve of the proposal to transfer the office of the Director-General of Stores to India as he thought the Department would continue to labour under the same difficulties. Nor did he approve of the suggestion to appoint an official buyer in the capital of each province. He added that if it was intended to encourage Indian industries the best and simplest course, in his opinion, was to abolish the European stores rules altogether.

The Hon'ble Sir FRANCIS J. F. SPRING, K.C.I.E., M.I.C.E., M.I.M.E., MEM. AM. SOC., C.E., Chief Engineer and Chairman, Madras Port Trust.

Page 300—

(*Written.*) 2410. . . It seems to me that so long as the India Office Stores Department has got to be kept up—and I am convinced that the time has not come for abolishing it—the busier it is kept the better. Moreover if you abolish it you are absolutely bound, in order to avoid disastrous failure of materials, to keep up testing and inspecting agencies in India of at least equal efficiency, and probably in at least four separate centres. If I require a bar of steel, to lift a 33-ton concrete block and to go on doing it a hundred times without risk of killing my best diver or my best foreman, I don't go into an Indian shop and buy that bar. I go to the India Office Stores Department, or to my own and equally reliable London Agency, and say plainly what I need the bar for, or 100 of them, and am quite certain that I shall get what I want, I do not want to tell tales out of school, but I know absolutely what I am talking about in this matter. If I am in a hurry I go to the nearest Public Works Department stock depôt and choose my bars—if they will part with them from their India Office heap. And the same with most things of importance. By all means start a similar agency in India and let them pick and choose and test from the stocks in the yards of the firms operating in India. But I must have what I want and I must be certain of getting it. All the same I am still of the opinion to which I have given strong expression off and on in the last quarter of a century, that we ought to try, as a matter of general policy, to deal directly, more and more as years go on, with Indian firms of repute and reliability—as indeed we are doing all the time. But we shall not be justified in so doing if such a policy costs us more than a fair percentage over and above corresponding English prices, say 5 per cent., not 25 per cent., which is I think now-a-days what such an altruistic policy is mostly apt to cost us. I do not know who the people are, who started this inquiry, but I rather suspect that they are the sort of people who think that anything spelt "steel," or "cement" is steel or is cement, which, as every practical engineer knows is very far from being the case, and the worst of it is the practical engineer in the mofussil will usually not have access to the means of knowing whether what he buys is or is not the thing that he wants to buy.

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(*Oral.*) 2421. The decision whether to import European stores or to purchase them locally for the Port Trust Works, was made according as to which of the two courses was more economical and met his requirements in the matter of time of supply and so on. For instance he had obtained about 1,000 tons of steel well-curbs from firms in Madras, Bombay and Calcutta. On the other hand, he required a couple of thousand tons of steel for some new warehouses under construction and had endeavoured to induce Indian construction firms to tender for Tata's steel, in the hope of thereby helping a nascent Indian industry. But the firms in question failed to quote within 25 per cent. of the price at which he actually obtained the structural steel in question delivered at Madras from England. He had, from time to time, purchased structural steel-work from three firms in Madras who stocked the unmade up material and, as above stated, had constructed certain work for him, under his supervision.

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2423. With regard to the suggestion that as stores were purchased largely by Public Works officers by indent on the Secretary of State, such stores could equally well be purchased through the representatives in India of practically the same firms from which they were at present obtained from home, he was of opinion that there were advantages in employing only a single purchasing agency, as at present instead of several.

2424. He was inclined to the belief that too large a stock was kept in the Public Works Department's depôts,

APPENDIX II—*continued.*

and that it could be reduced, thus paving the way for the freer local purchase of stores. One of the complaints of the engineering firms in Calcutta, which was perhaps justified to a certain extent, was that, owing to the India Office being indented on for certain classes of stores, firms in India were handicapped in respect to the importation of such stores, and that if the practice of indenting through the India Office were discontinued, these firms could expand their business and indeed perhaps manufacture some of such materials. As regards this complaint he felt that he had a right to express an opinion, having personally been connected with the initial movement which had resulted in the placing of larger orders for the local manufacture in India of small railway girders not in excess of 150 feet in length, as well as of railway wagons. Indeed he had himself drafted the letter from a certain firm to the Government of India which had led to its obtaining large additional orders for the manufacture of railway girder work. Ordinarily speaking, however, he would not hope to obtain as cheap and as good materials from Indian firms as he could obtain by indent on England. Manufacturing firms in India stocking large tonnages of bars and plates, not necessarily manufactured to the India Office specification, could scarcely be expected to inform their constituents of the inferiority of their materials, and it was not every Public Works engineer who was in a position to get reliable testing done, perhaps 1,000 miles away from his work.

Page 302—

(*Oral.*) 2425. He was in favour of the appointment in India of an official buyer for the purchase of all materials procurable in the country at suitable rates and that indents on the Secretary of State should only go forward for such materials as were not thus available. He understood that the testing laboratory at Alipore was mainly concerned with railway work for the usual needs of the Public Works engineer in the matter of the testing and inspection of materials the India Office was as good as could be desired. He added that for works of any importance the testing of materials was most essential.

2426. He was opposed to the suggestion that, before being forwarded to the Secretary of State, all indents for stores should be scrutinised by a government official who would be empowered to disallow such items as could be obtained in India. Such a scrutinizer would be apt to think of the written name of the thing and not of the actual thing. Thus, take the petty items, sealing wax. There is sealing wax that burns to a cinder before it melts and drops, and there is other sealing wax that melts and drops before it burns. But to the suggested scrutinizer—meaning really one of his babus—both are "sealing wax" all right. Only the former is made in India and the latter in England, and according to orders the former must have the preference.

2427. He considered that an Executive Engineer should make it his business to be aware of the sources of supply of materials. He did not agree with the contention that although local purchase of indigenous articles was permissible in India, yet, for lack of a catalogue or handbook containing the necessary information, it was not possible to ascertain what materials were really manufactured locally or from where they were procurable.

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Page 303—

(*Oral.*) 2443. The question whether it would be expedient to attach, to the office of the Director of Industries, an official buyer who would be able to judge of the relative prices of materials depended on the personality of the Director of Industries for the time being. That officer would probably have very little real knowledge of the work of the official buyer, but he would—or at least ought to—be cognisant of the capabilities of Indian firms and of the suitability of the classes of materials they manufactured. Except at Messrs. Tata's works at Sakchi no firms in India now manufactured steel from the ore. They imported plates and bars and put them together; but it might be worth government's while, for the sake of industrial development, to pay a little more for their steel-work, made from the ore in India.

The Hon'ble Mr. GORDON FRASER, Chairman, Chamber of Commerce, Madras.

Page 305—

(*Oral.*) 2456. He knew very little regarding the Public Works Department Stores Division in Madras, but contended that the Department ought to purchase freely all articles of indigenous manufacture, provided they were suitable, as well as imported materials stocked in India by private firms. The importation of European stores was at present restricted by the European stores rules inasmuch as they allowed only for the purchase in India of such articles as were actually available in the country, and firms could not stock a larger quantity and variety of materials unless they were certain of receiving orders from government at all times, and not only when government had run out of stock of certain materials.

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2463. He did not think that government departments would be in as favourable a position to buy stores as an ordinary business firm, because the latter had a freer hand and were able to select their market, and he stated that he thought government could buy as cheaply from Indian importers as by direct indent. Indian merchants were keen competitors and he had never known, during the past twenty-two years, of any attempt on the part of Indian merchants to combine with the object of increasing rates. On the contrary, they reduced prices in an extraordinary degree, and accepted work for a profit of only 1 or 2 per cent.

2464. . . He did not advocate an immediate closure of the Stores Department as government could not under present conditions be sure of securing all the stores they required locally. He considered, however, that government should make their requirements known in order to enable private firms to stock the necessary articles and renew them from time to time.

HORMUSJI NOWROJI, Esq., A.M.I.C.E., Sanitary Engineer to the Government of Madras (retired).

Pages 311-312—

(*Written.*) 2528. . . Another change by which private enterprise can be encouraged is the relaxation of the rule prohibiting the local purchase of foreign manufactured articles. The conditions of supply of such articles in India have changed. Several English manufacturers of machinery and engineering requisites have opened branches in India; others are represented by local engineering firms. The time has arrived for some change in the rules which govern the purchase in India of articles of English manufacture. Under the existing rules no such article, however small its value, may be ordered out from England either direct from the manufacturer or through local agents by any officers of the Department without the sanction of government. Articles of English manufacture available in India may be purchased only in an emergency, when the work is likely to be seriously delayed by their absence, subject to the limitation that no article of a value exceeding Rs. 2,500 may be purchased without the sanction of the local Government.

APPENDIX II—*continued.*

(2) I would increase the Superintending Engineer's powers of sanction with regard to articles of English manufacture from Rs. 2,500 to Rs. 10,000, and do away with the distinction now observed between articles in stock in India and articles not in stock in India at the time of ordering. It not infrequently happens that, though merchants usually stock the article, they are out of stock at the moment of receiving the order. My experience is that articles of stock pattern can usually be obtained more quickly and at less cost from the local branches and agents than through the India Office. There is also freedom from risks of damage and breakage during transit in the former case, and there would be less difficulty in returning a defective article or one not according to the specification. In the case of large orders for machinery and materials which have to be made for some special purpose and according to a special design or specification and have to be examined and tested before shipment there are obvious reasons for obtaining them through the India Office.

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Pages 313-314—

(*Oral.*) 2538. He had found that the rules for the supply of European stores hampered him considerably when he was Sanitary Engineer particularly in cases where an article was needed very urgently, and considered that an article such as a 10 horse-power engine could be obtained more cheaply and quickly locally, but that for large indents, *e.g.*, an indent for 500 tons of pipes, or an engine for a large water-works, the India Office was the best source of supply. The reason for the latter recommendation was that special engines were required for large water-works, and that they were not at present manufactured in India. He added that no benefit would be derived if large orders were placed with Indian firms as the profits would be absorbed by middlemen.

Memorandum by Government of Bombay.

Page 333—

It would be a great convenience also if the stores rules were so modified as to allow of a great deal more local purchase, seeing there are so many firms, branches of firms and agents now in India who can quote very reasonable rates for the articles in which they deal.

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4. Particular attention is invited to the Stores Rules, noted on in the reply to point (V). It would be a great benefit if the powers permitting local purchase of materials imported into the country were extended and greater freedom allowed in placing orders with local agents instead of having to indent on the Stores Department. It would encourage firms in this country and local branches and agents for Home firms to keep stocks in the country and to bring samples of new or improved goods to the notice of possible buyers. One of the difficulties in this country is to keep up to date with modern fittings and appliances. At Home agents regularly lay all the improvements their firms bring out before people interested in the building trades, but in India there is at present very little inducement for them to do so.

From Volume III.

The Hon'ble Mr. C. H. WOLLASTON, Chief Engineer and Secretary to the Government of Burma, Public Works Department.

Page—

(*Written.*) (*a*) The executive officer in charge of a division should have greater powers than he has at present under the following heads:—

(*i*) advances to contractors;
(*ii*) sanction of allotments under re-appropriation;
(*iii*) local purchase of articles of European manufacture.

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Page 2—

(*Oral.*) 2667. The Central Store Depôt in Rangoon was treated as a sub-division and was in charge of a temporary engineer with the rank of Assistant Engineer. It had recently been found necessary, however, to place an Executive Engineer temporarily in charge, to put the working of the sub-division on a proper basis. The Store Depôt obtained the requirements of the province by indent on the Director-General of Stores and kept them in stock, issuing them to departmental officers according to their needs. He was opposed to the abolition of the depôt and to each division maintaining its own stock, as Executive Engineers were not allowed to indent for stores in anticipation of sanction to estimates and it was possible that a particular division might run out of certain articles at a time when they were most needed. There was, besides, the drawback that the India Office took about a year to comply with indents. Articles of European manufacture, *e.g.*, cement, corrugated iron, etc., were not as a rule purchased locally as they had to be indented for, under rule, unless they were required urgently, and the main justification for the maintenance of a separate stores depôt was the necessity for keeping a certain quantity of particular materials in stock in order to obviate delays.

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Page 5—

(*Oral.*) 2701. . . With regard to the purchase of stores he stated that, though the rules permitted the local purchase of articles which were already in India, at the time of ordering them, provided that their prices and quality were not unfavourable, such permission was only availed of in urgent cases because the preamble to the particular rule on the subject stated that all stores should as a rule be obtained from the Director-General of Stores. He thought it expedient that the Public Works Department should be allowed greater latitude in the matter of the purchase of materials from firms approved by the Government of India, as the present restrictions for the local purchase of stores were not conducive to either efficiency or economy. The tendency in Burma was to restrict indents as far as possible and to effect local purchases of locally manufactured articles with due regard to economy and the saving of time.

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Page 6—

(*Oral.*) 2703. Considerable delays were experienced in obtaining stores from the India Office.

2704. The temporary engineer attached to the Central Stores at Rangoon supervised all departmental indents including those forwarded to the Secretary of State, and every attempt was made to procure either locally or in India such locally manufactured articles as were required by Executive Engineers. He considered the

APPENDIX II—*continued.*

suggestion for the appointment of a local buyer good in principle, but doubted whether such an officer could ever compete with the Director-General of Stores who received indents from the whole of India. In his opinion the present method was cheaper than that of having a separate buyer for each province. Except for delays which had been experienced, the Public Works Department had no complaint to make either in respect to the price or quality of stores obtained through the India Office, especially as it was empowered to purchase articles locally in cases of urgency. The Department was quite prepared to utilize indigenous articles available in India and Burma.

2705. All imported European stores were tested in England prior to their despatch, as Burma did not possess a testing laboratory. Stores obtained from India were tested by a government inspector in India.

H. E. W. MARTINDELL, Esq., M.B.S.I., Chief Engineer and Joint Secretary to the Government of Burma.

Page 8—

(*Written.*) Paragraph (*ii*) So long as the Public Works Department obtains the bulk of its materials and plant through the India Office, private enterprise cannot be encouraged.

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Page 9—

(*Oral.*) 2729. Private enterprise was not encouraged by the present system of indent on the Director-General of Stores for materials. Such materials were obtained at cheaper rates from England than by direct purchase in India. He thought private enterprise could be encouraged in India by government lowering the standard of materials in cases where a high standard was not essential.

B. RAIKES, Esq., Electrical Inspector to the Government of Burma.

Page 13—

(*Written.*) (2) Obtaining material straight from home for government use appears at first sight to be a more economical method of dealing with petty works and repairs. This has been tried and no particular advantage found, either in price or quality, but the storage of large quantities of perishable material has been found to be a distinct drawback.

M. OPPENHEIMER, Esq., Representative of the Rangoon Trades Association.

Page 30—

(*Written.*) . . . . as importers of building materials such as cement, reinforcing materials of sorts, mamooties, pick-axes, shovels, felling axes, crow bars, saws, corrugated iron, steel beams, nails, paints, oils, varnishes, disinfectants and many other articles, I certainly am of the opinion that government would be well advised to make its purchases of these lines locally by inviting public tenders. All goods to be at least equal to a standard maintained in the Central Stores of the Public Works Department. Keen prices would thus be quoted, and I feel sure government would score not only in this respect but also in freshness of stores thus obtained. Waste and loss would be prevented.

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Page 31—

(*Oral.*) 2902. With regard to his recommendations for the freer purchase, locally, of stores, he was informed that it had been put forward in evidence that an average for a specified period, between the cost of articles purchased locally and those obtained by indent through the Secretary of State, showed that the former was 25 per cent. dearer than the latter. He thereupon remarked that this was due to the exemption of government from import duty and the better terms given to the state by shipping companies. For instance, shipping companies generally took the risks that mercantile firms had to insure against, *e.g.*, breakage and shortage of articles, and he expressed the belief that government had secured such advantages through gentle pressure. In his opinion a further reason for the difference and a perfectly legitimate one was that government were able to secure cheaper rates owing to their purchasing stores in bulk. But he added that owing to government purchasing stores locally only when they ran short of their requirements, firms ran up their prices knowing that government would be compelled to pay them.

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2904. He then remarked that the main consideration in the matter of the economical local purchase of stores was competition, and, so long as government could be assured of this, they could confidently look forward to a reduction of 17½ per cent. in the present Indian rates provided the remaining 7½ per cent., which represented import duty, was eliminated from the calculation. In his opinion, the competition in Rangoon was sufficiently keen to effect the desired reduction.

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2906. . . He attributed a portion, 17½ per cent., of the difference between the rates at which stores were obtainable from England by the Public Works Department and private firms, respectively (which remained after the exclusion of 7½ per cent. import duty) to the non-payment of storage duties and interest on the value of goods which latter in the case of firms amounted to 6 per cent., and added that the average period for which goods were thus stored was 60 days.

2907. He maintained that government paid less freight on stores as they were not compelled to secure themselves against breakage to the extent firms had to and added that the reason for the difference in the treatment accorded by shipping companies was that government were their regular customers and dealt with them more largely. A further reason for the difference between the two rates was that a private firm had to allow for its profits, but he admitted that all the reasons he had urged did not account for the entire difference of 25 per cent.

2908. In his opinion a private firm could not hope to compete with government in the matter of the purchase of stores because of its limited resources, and the question whether government paid more or less accordingly did not affect them as acutely as it did a firm. He had, however, been able to supply the Railway Department with certain articles, at cheaper rates.

APPENDIX II—continued.

G. V. CLARK, Esq., Partner, Messrs. Clark and Greig, Rangoon.

Page 36—

(*Oral.*) 2976. . . The Public Works Department could purchase a great deal of stores locally, and there was sufficient competition to keep down the prices. One of the reasons why the Public Works Department obtained their materials cheaper was that they did not pay duty and insurance charges. It was hardly fair to expect firms to keep articles in stock only for occasional purchases by the Public Works Department. If, however, the Public Works Department agreed to purchase all their stores locally the firms would no doubt be willing to stock the necessary stores. He did not anticipate that any firm would be prepared to supply imported articles to government at the rates quoted by the Director-General of Stores, nor for an additional 10 per cents, but considered that firms would be only too glad to supply stores at 10 per cent. over and above the prices at which they themselves could import articles from England, provided such supply covered all the requirements of government.

T. GIBSON, Esq., Messrs. C. R. Cowie and Co., Rangoon.

Page 39—

(*Oral.*) 2995. His firm were importers and dealers in machinery, metals, and articles of hardware, and only undertook petty repairs. They were connected with the Public Works Department in that they supplied that Department with materials and stores.

2996. He suggested the freer purchase locally of European stores and considered a concession in this direction would induce local firms to stock a larger and better supply of materials. The Stores Departments in Rangoon imported English stores, including cement and metal work, to the extent of between Rs. 4 and 5 lakhs annually, and though this amount was not considerable it would form an important factor. He did not agree that the Public Works Department could obtain stores cheaper by direct indent than by purchasing them locally. On the contrary he thought that the reverse was sometimes the case, and that if government apprised local firms of their requirements they would be able to supply stores at cheaper rates than those at which they were obtained at present. Firms were quite cognisant of the fact that the Public Works Department only purchased stores from them when they ran out of stock, hence they based their charges accordingly. As a matter of fact it was the practice for the Department to make enquiries of local suppliers as to the rates for particular articles they required, and to accept the lowest quotation received. Consequently if an article which was required, happened to be scarce and such article was stocked only by one firm, the Department had to pay more for it than they would have had to if a number of firms kept it in stock. The prices of articles were regulated by the demand.

2997. Four or five firms in Rangoon were in a position to furnish quotations for raw materials such as bars, bolts and angles. He did not anticipate that if the present practice of obtaining stores direct from England through the Secretary of State were abandoned it would lead to a combination on the part of firms with the object of enhancing the rates for materials, as competition between them was too keen to admit of it, and they would stock a larger supply of materials for the use of the Public Works Department. In his opinion, if the annual indent which was despatched to the Secretary of State were made over to firms for compliance, they would probably be able to supply the materials at 20 per cent. less than the rates at which they were ordinarily obtainable by government and with greater expedition.

2998. He recommended that local importing firms might be asked to furnish quotations for materials required for Public Works Department work, and thought such a procedure would encourage both importing and engineering firms, in that they would thus have the opportunity of tendering for articles of Indian and English manufacture. If government definitely announced their intention of obtaining certain articles in India it would certainly result in the establishment in Rangoon of works for their manufacture.

2999. His firm supplied the Public Works Department with a considerable quantity of stores, in fact they had direct dealings with several Executive Engineers. But the rule under which these officers could only purchase from the firm such articles as were not in stock required modification.

3000. Cement could be tested in Rangoon without any difficulty, but that obtained from Europe was invariably accompanied by a test certificate. Most of the iron and steel materials were likewise tested by the manufacturers before they were shipped, and steel materials were practically all manufactured by firms who were on the Admiralty list in England. He did not think that government gained appreciably by having all their materials tested in England.

3001. His experience in connection with the local purchase of stores was confined to the supply of materials to the Public Works Department, both through the local Stores Department and to Executive Engineers direct. He had had no connection with building contracts.

3002. . . His firm were not actually supplied with test certificates for the iron bars they imported but a considerable quantity of the bars were purchased from the Lanarkshire Steel Company who did their own testing and guaranteed a certain standard of strength. He did not think that if his firm were required to give a guarantee for the iron bars they supplied it would lead to increased rates because once they knew the requirements they could specify them in their indents and obtain the necessary guarantee from the manufacturer. The Scotch steel bars imported by his firm at present were of a standard specification, but formerly a large percentage of the bars were imported from Belgium and were not of the same quality.

3003. . . His firm sold only the Associated Branch of cement which they imported from England.

R. STANLEY BAKER, Esq., A.M.I.C.E., Executive Engineer, Public Works Department.

Page 48—

(*Written.*) 3063. . . The rules regarding the purchase of European stores need revision. At present such stores may only be purchased from agencies or firms in India when they are actually in the country at the time the order is placed. If they are not in the country an indent has to be sent to the India Office (about 17 copies of each indent are required) and one is lucky if one gets the stores in six months. Even when the stores are in India the sanction of the local Government to each purchase over Rs. 500 has to be obtained.

(2) On the other hand, if a large contractor is employed he may supply European stores up to any limit in the ordinary course of his contract. But if one wants a bottle of ink for venturimeter recorders one has to send indents through the Secretary of State. In many cases correspondence with the makers is essential and dealing through the India Office is impracticable. In such

APPENDIX II—*continued.*

cases the only course is to get the makers to send out what is wanted to some agent in India and then place the order with the agent when the goods arrive. This is a round-about and unsatisfactory method of conducting business.

(3) Another objection to obtaining stores through the India Office is that no matter how damaged or deficient they may be when they arrive, the India Office always says they were in perfect order and perfectly packed when despatched and they have to be accepted and made the best of.

The Hon'ble Mr. E. G. STANLEY, A.M.I.C.E., M.C.I., Chief Engineer and Secretary to the Government of Bihar and Orissa, Buildings and Roads Branch.

Page 57—

(*Written.*) . . . The rules for the supply of stores do not suit present conditions. It is quite unnecessary to indent on the Stores Department of the India Office for most of the materials used by the Department, seeing that large stocks of such materials are held by the numerous firms in the country amongst whom there is sufficient competition to guarantee goods being obtained at reasonable prices.

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Page 60—

(*Oral.*) 3135. The imported materials used in the construction of buildings by the Buildings and Roads Branch consisted chiefly of steel joists and he recommended that the Stores Department in England should be abolished, at any rate so far as indenting on that Department by the Buildings and Roads Branch was concerned, as there was a sufficiency of steel joists in the country to meet all requirements and the market quality of branded steel did not require further testing. Also because competition in this connection was sufficiently keen to secure fair rates. There was no Government Stores Department in the province, and there were only two canal workshops, one at Dehri-on-Sone, and the other at Jobra in Cuttack, which carried out repairs connected with irrigation work. The Railway workshops, as far as he was aware, carried out repairs to the tools and plant of the Public Works Department. The mathematical instruments belonging to the Department were repaired by the Mathematical Instrument Department, Calcutta, and the other requirements of the Department, *e.g.*, steel or iron girders, were of stock pattern, and were bought from large firms in Calcutta.

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Page 62—

(*Oral.*) 3162. No indents for stores had passed through his hands whilst Chief Engineer, but he had, as Superintending Engineer, examined such indents very carefully to see that the conditions of the Code had been satisfied in respect to the materials required not having been available in India. He did not think there was any need for the existence of the Stores Department in England so far as the Buildings and Roads Branch was concerned, as the only imported implements required were steam rollers and electrical machines for which tenders were now invited from the different firms in India.

A. N. McINTYRE, Esq., A.M.I.E.E., Electric Inspector and Electrical Engineer to the Government of Bihar and Orissa.

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Page 101—

(*Oral.*) 3561. All stores required for repair works were purchased from electrical firms in Calcutta, and he did not, as a rule, indent on the Secretary of State for any of such stores. This arrangement was satisfactory and it was possible under it to secure stores as cheaply as they could be obtained from England. One of the advantages in dealing with a local firm was that it was possible to induce them, if anything went wrong, to put things right whereas such a procedure was next to impracticable when dealing with the Secretary of State. In certain cases in which he had indented on the India Office for instruments, his indents had not been satisfactorily complied with, but as he had not had much experience in obtaining articles through the Secretary of State he had not actually effected a comparison between the cost of such articles and those purchased locally.

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Page 102—

(*Oral.*) 3575. All electrical stores were exempt from the rules in the Public Works Department Code regarding the purchase of stores, since everything below a capacity of 10 or 25 kilowatts was excluded.

3576. In spite of the march of progress in all directions and the fact that electricity was a progressive science, he considered that such advances as were made from time to time were not so serious as to point to the necessity of using the agency of the Director-General of Stores in the purchase of electrical stores, and he could keep himself sufficiently informed of the latest developments in the market through the technical press.

P. H. TILLARD, Esq., Superintending Engineer, Public Works Department.

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Page 114—

(*Written.*) . . . The following are a few of the points which need revision.

(1) Purchase of all European stores should be permitted in India; these stores are more generally rolled steel joists, angles and tees, paints, etc., all of which are required urgently as soon as an estimate is sanctioned, and if indented for from England the delay in receiving the articles would almost always prevent a work being completed within the financial year. The orders regarding the indent on England should, therefore, be abolished, and further the Executive Engineer should be given power to sanction the local purchase of all stores up to the provision in the sanctioned estimate.

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Page 116—

(*Oral.*) 3679. Structural steel-work was not ordinarily, but occasionally, supplied to contractors by the Public Works Department as contractors generally supplied their own steel for small works. Though it was intended that structural steel should be obtained by requisition on the Secretary of State the practice had not been adopted for the large number of small works that were ordinarily constructed in the province owing to the

APPENDIX II—*continued.*

fact that it took about six months to get an indent for such material complied with. It would not be possible if the India Office were indented on for all the structural steel that was required for such works to get the latter completed in time. Hence structural steel was ordinarily obtained in India. It was not the general, but only the occasional, practice to give out a separate contract for structural steel-work.

F. LISHMAN, Esq., F.R.I.B.A., Consulting Architect to the Government of the United Provinces.

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Page 160—

(*Written.*) 3958. . . Whether the cramped system of indenting for goods from England can be widened or swept away entirely I do not know, but in ordering special goods it would be a great advantage if the Architect could get into direct touch with the firm from which the goods may have to be ordered.

Khan Bahadur MUNSHI HIRE KHAN, District Engineer, Agra.

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Page 169—

(*Written.*) (2). The district engineer or sub-divisional officer has no power to purchase articles of European manufacture in India. This is a great hindrance and causes unnecessary delay in the execution of work and repairs. This point deserves consideration. The facility of work demands that district engineers should have powers to purchase building materials of European manufacture in India on sanctioned estimates without any limit. Of course large orders for heavy machinery, etc., should be placed with the Director-General of Stores as hitherto.

4016. . . The rules regarding the purchase of articles of European manufacture in India are unduly restrictive and, in my opinion, should be relaxed to enable quicker execution of work. The prices of Indian firms now compare favourably with those at which articles are obtained through the Director-General of Stores and the restrictions imposed by the rules are unnecessary.

T. GAVIN JONES, Esq., Empire Engineering Co., Ltd., Cawnpore, Representative of the Upper India Chamber of Commerce.

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Page 176—

(*Oral.*) 4069. He recommended that stores should be purchased solely in India, that the Stores Department of the India Office should be abolished and that government should rely on the Indian firms or British firms with offices established in India for the whole of their requirements.

W. BELL, Esq., Electrical Inspector to the Government of the United Provinces.

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Page 201—

(*Oral.*) 4245. Electrical stores were as far as possible purchased from firms in India and the supply had been found satisfactory. There was no necessity for indenting for such stores on the India Office. He had not much experience of stores purchased by indent on the Secretary of State, but was aware that there was always considerable delay in procuring the stores. When a machine was bought by indent in India final payment was not made until the machine passed a test at site, as it was possible that it might pass the test in England and might when tested in India turn out to be unsatisfactory. He himself was not in a position to carry out tests of stores locally purchased as he had neither an electrical laboratory nor the instruments for the purpose. If he were supplied with the instruments, however, tests could be made equally well, or even better, in India than by the India Office in England.

4246. He had made a comparison of the cost of purchasing stores in India and in England, and had found that electric lamps could be had cheaper in India than in England. He was therefore of opinion that no economy would result from effecting purchases through the India Office. In the case of the Mussooree hydro-electric scheme, the cost of which was about Rs. 16 lakhs, all the stores were purchased locally through the agents of English firms which had their offices in Calcutta or Bombay and no direct purchases were made from England.

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4252. His statement that electrical stores could be purchased cheaper in India than in England was based on a comparison of the real rates and not on the catalogue rates of firms.

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4261. The fact that the price of electrical stores in Calcutta compared favourably with prices in England was a normal occurrence. It was not at all due to the war as there was a combination in England to keep up prices. For reasons unknown to him, the firms at home did not work up their agents in India to level up the prices in India, but this was not due to American competition as the American articles were cheaper than in England. The practice of the Electrical Branch was to obtain articles of British manufacture only.

C. H. WEST, Esq., Sanitary Engineer to the Government of the United Provinces.

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Page 204

(*Written.*) There are two points on which the restrictions made hamper the execution of work.

(*a*) The restriction with regard to purchase of European stores in India.

APPENDIX II—*continued.*

A. R. ASTBURY, Esq., A.M.I.C.E., Sanitary Engineer to the Government of the Punjab.

Page 213—

(*Oral.*) *4339.* There was no necessity so far as the Buildings and Roads Branch was concerned for indents for stores to be made on the Secretary of State as in the large majority of cases such articles of European manufacture as were required could be purchased in India in the open market. Only occasional articles, *e.g.*, a ventilating fan, which were not ordinarily stocked in India should be obtained through the Secretary of State. He expressed himself as willing to recommend that the system of indents on the Secretary of State should be abolished altogether and that Executive Engineers should be allowed to make their own arrangements for the purchase of such stores of European manufacture as they might require.

Rai Bahadur KANHAIYA LAL, Executive Engineer, Public Works Department.

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(*Written.*) (22). It is very difficult to comply with the rules and regulations and certificates required for obtaining stores of European manufacture, so I would suggest that a special qualified officer with adequate staff be appointed in an important or a central place in India, like Bombay or Calcutta or Delhi, to receive indents of all officers and to scrutinize whether the articles indented for are obtainable in India from any Indian manufacturing firms or from surplus stores of various departments, and then to arrange for the supply of the same from Indian sources or through the India Office.

C. C. T. EASTGATE, Esq., M.I.E.E., Electrical Engineer and Electrical Inspector to the Government of the Punjab.

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(*Oral.*) 4478. All his electrical stores were purchased in India, and as he had never indented on the Secretary of State for stores, this arrangement was satisfactory. He had not made a comparison of the prices at which electrical stores could be obtained from England and in India, respectively, and hence could not state whether the local stores were more economical. The purchases generally effected were inconsiderable and did not amount to more than Rs. 10,000 a year.

F. W. K. YEOMAN, Esq., Superintending Engineer, Public Works Department.

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(*Written.*) The rules which require stores of European manufacture to be ordered through the India Office, perhaps, in some cases, lead to the employment of small contractors instead of firms with considerable capital. No doubt there were adequate reasons for these rules when they were framed, but since that time conditions have changed altogether. These rules, although they have been made somewhat more elastic in recent years, should be still further relaxed or abolished entirely. It should be permissible to purchase all materials and stores of European manufacture required for all ordinary purposes direct from firms having branches or agents in India. All that is required is that there should be sufficient guarantee for the quality of what is purchased and that prices paid shall be reasonable. If purchasing officers were permitted to order all stores from firms whose names were on a government list this would probably be a sufficient safeguard for the quality of stores supplied, as only firms with a reputation would be on the list. This change in the rules would, to a certain extent, be an encouragement to private enterprise in the country, but would make little or no local difference.

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4423. * * * * * * * *

(*f*) The rules for the local purchase of European stores, Appendix 30, Public Works Department Code, Volume III, appear to be unduly restrictive and complicated. Superintending Engineers may be given increased powers and Executive Engineers permitted to purchase stores from recognized firms up to the limit of their powers of sanction for works.

The Hon'ble Mr. J. CURRIE, President, Punjab Chamber of Commerce.

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(*Oral.*) 4681. . . It could not generally be asserted that when the Public Works Department bought materials from outside merchants they were charged from 20 to 25 per cent. more than they would have been had they purchased such materials from England. If the practice of obtaining all materials from England were adopted and the Department purchased articles from firms in India only when they ran short, he did not think that the firms in question would put up their prices on that account. They would probably only add to the cost of the materials their charges for storage, railway freight and a reasonable profit. A charge of 25 per cent. more than that for which materials could be obtained from England was very extravagant, particularly in normal times, as with the available railway facilities there was not a point in India in which it was not easy to obtain quotations from at least half a dozen markets. He could only explain the fact that the charge of 25 per cent. in question had been made over and above the sum paid for such materials in England by classifying the man who quoted such a price as a rapacious individual. Probably the man had not been in the habit of receiving orders from the Public Works Department, had not sufficient turn-over and made the most he could out of the opportunity. Such a procedure on the man's part was dead against the interests of the country.

APPENDIX II—*continued.*

BAWA BUDH SINGH, Executive Engineer, Sha'pur Provincial Division. Representative of the Punjab Engineers Association.

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(*Written.*) 4722. . . . * * * * * *

As regards the purchase of materials of European manufacture I think the rules may be relaxed a good deal and more powers delegated to executive officers. More firms might with advantage be brought on the Public Works Department list in order to have a healthy competition. Manufactures of well known firms, *e.g.*, Dorman Long's steel joists or Gillingham Brand cement might be allowed to be purchased from any respectable firm irrespective of the fact whether it is borne on the Public Works Department list or not. In this respect I would like to suggest that every local Government may have a central stores bureau, which should help the executive officers in making purchases of materials of European manufacture. The Executive officers should send their requisitions to the bureau, and make no direct purchases except under exceptional circumstances. I think it would be really useful if such a bureau, as suggested above, could also undertake the manufacture and storage of standard sizes of doors and windows and other departmental requirements. Manufacture of Public Works Department requirements in India should be encouraged, except proper safeguards should be taken to see that the quality of such manufactures does not deteriorate. I think the Government is already much interested in the matter.

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(*Oral.*) 4732. The present rules regarding the local purchase of stores should be revised and the powers of Executive Engineers should not be restricted to purchases only from recognised firms when articles of the same quality were procurable elsewhere. He did not desire that the rules in this connection should be abolished altogether but that Executive Engineers should be given further powers to purchase stores locally. He therefore advocated an extension of the limit from Rs. 500 to Rs. 2,500.

H. T. KEELING, Esq., C.S.I., A.M.I.C.E., Chief Engineer and Secretary to the Chief Commissioner in the Public Works Department, Delhi Province.

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(*Written.*) 4749. . . . * * * * *

(4) Restrictions on the local purchase of plant stores and material should be removed entirely and Chief and Superintending Engineers in charge of works should be given full powers to deal direct with manufacturers applying to an authority, preferably a technical one at the India Office for assistance in inspection whenever required. In my experience practically the only advantage obtained under the present system is a reduction in the price of material such as cement, steel and so forth, when purchase is made in large quantities. In the case of manufactured articles of plant and machinery, it is in my opinion more economical and quicker to permit the indenting officer to do business direct with the manufacturer without the intervention of a third party

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(*Oral.*) 4761. He had personally found that it was preferable to deal with manufacturers direct. Hence he adhered to the view in his written statement that, in so far as the Buildings and Roads Branch of the Public Works Department was concerned, there was no need to indent on the Secretary of State for plant of European manufacture. In his opinion an engineer in charge of a building could obtain such plant as was required sooner and more economically by purchasing direct from the manufacturers. The tests undertaken by the India Office were as a rule carried out on the material during the process of manufacture. For instance, if a steam navvy were being manufactured, test pieces were attached to certain portions of it and as each such portion was made it was cut off and sent to the laboratory. On the result of such a test the materials for the making of the steam navvy were either accepted or rejected. Most reliable firms in England carried out their own tests, and these were sufficient for the ordinary articles that were usually indented for.

4762. There was no necessity for the maintenance on a large scale of Public Works Department workshops, provided there was healthy competition among private firms. To dispense with government workshops in the absence of such competition, however, would practically induce monopolies, and these should always be avoided if possible. Though adequate public competition might be secured in places like Bombay and Calcutta, he was doubtful whether the output of the government workshop in Madras was such as to induce firms other than those already established in that presidency to set up workshops. He was here informed that the government workshop in Madras was at present an extensive one, and stated that he had not seen it since 1912 but that he knew it was proposed to increase its extent at that time as it had been found that cheaper work could be carried out in it on the whole than it was possible to obtain from the few firms in Madras which were in a position to quote prices. He agreed that cheapness was not the only element to be taken into consideration in connection with the question of the abolition or retention of Public Works Department workshops, and that the industrial advancement of the country had also to be considered, and repeated that it was only necessary to maintain government workshops in the absence of healthy competition.

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(*Oral.*) 4813. The possibility of dispensing with the India Office by appointing a buyer at each provincial headquarters, either to purchase stores for all officers, or to supervise indents and instruct officers where to purchase specific articles, depended on the nature of the operations in each province. It was a little difficult to obtain such information in Delhi and he was the only officer who effected purchases there, but such was not the case in other places. The ordinary *mofussil* Executive Engineer would undoubtedly find a centrally situated buyer or adviser located in a presidency town of great use and assistance. Such an officer might be located at Bombay for the Bombay Presidency, at Madras for the Madras Presidency and at Calcutta for Upper India and Bengal.

4814. The rules regarding the purchase of stores of European manufacture restricted officers of the Public Works Department very considerably. Though it was possible to purchase almost anything through a contractor there were certain local orders that had been issued in regard to the purchase of stores which frequently interfered with this power, and he had known contractors who had purchased inferior articles. He recommended that purchases from the representatives of firms in this country, but not from agents, should be encouraged, as it was desirable to encourage manufacturers in England to establish branches in India and at the same time to encourage indigenous industries; also that unrestricted purchases might be made from branches of firms established in India. It was true that such branches would generally be English branches, but Indian firms which

APPENDIX II—*concluded.*

dealt in similar articles usually manufactured them in the country in some instances at a cheaper rate than it was possible to procure them from England. Articles of indigenous manufacture might not be up to the quality of English manufactured articles, they might suffice for the purpose for which they required and it was preferable in such cases to encourage purchase of indigenous articles.

Memorandum by the Government of the United Provinces.

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(5) *Stores.*—There should be an efficient purchasing agency for valuable imported materials of all kinds at the chief ports and none should be allowed to go outside this without approval of the Chief Engineer. The present testing establishment at Calcutta could be expanded to suit. Officers responsible for the execution of works should be empowered to use this agency, subject to safeguarding limits.

CALCUTTA
SUPERINTENDENT GOVERNMENT PRINTING, INDIA
8, HASTINGS STREET

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2003-04