

BULLETINS OF INDIAN INDUSTRIES & LABOUR



No. 5

PROCEEDINGS

OF THE

**SECOND CONFERENCE OF DIRECTORS OF
INDUSTRIES**

Held at Cawnpore on 1st, 2nd, 3rd and 4th November 1920



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NOTE.—The prefatory notes which are printed in the Proceedings are not to be understood as expressions of opinion by the Government of India.

BULLETINS
OF
INDIAN INDUSTRIES AND LABOUR.

No. 5.]

1921

January.

PROCEEDINGS OF THE CONFERENCE OF DIRECTORS OF
INDUSTRIES.

Held at Cawnpore on the 1st, 2nd, 3rd and 4th November 1920.

PRESENT.

1. The Hon'ble Sir Thomas Holland, K.C.S.I., K.C.I.E., F.R.S.,
President.
2. Mr. A. C. Chatterjee, C.I.E., I.C.S., Member, Board of Industries and Munitions.
3. Sir Henry Ledgard, Kt., Hony. Adviser to the Government of India on Boot Production.
4. The Hon'ble Mr. E. A. H. Blunt, O.B.E., I.C.S., Financial Secretary to the Government of the United Provinces.
5. The Hon'ble Mr. J. C. Nelson, I.C.S., Revenue Secretary to the Government of the United Provinces.
6. The Hon'ble Mr. A. Y. G. Campbell, C.I.E., I.C.S., Director of Industries, Madras.
7. Dr. D. B. Meek, M.A., D.Sc., I.E.S., Director of Industries, Bengal.
8. Mr. P. H. Swinchatt, Offg. Director of Industries, United Provinces.
9. Mr. E. A. Scott, O.B.E., Director of Industries, Punjab.
10. Mr. B. A. Collins, I.C.S., Director of Industries, Bihar and Orissa.

11. Mr. H. R. Crosthwaite, C.I.E., C.B.E., Director of Industries, Central Provinces.
12. Rai Kanak Lal Barua Bahadur, B.L., Director of Industries, Assam.
13. Mr. G. Findlay Shirras, I.E.S., Director of Statistics to the Government of India.
- *14. Dr. E. R. Watson, M.A., D.Sc., Principal, Research Institute, Cawnpore.
- *15. Mr. N. Heard, A.R.C.A., Principal, Government School of Arts and Crafts, Lucknow.
16. Rai Sahib M. M. Sinha, M.B.E., Deputy Director of Industries, United Provinces.
17. Captain G. N. Frankau, Deputy Director of Industries, Central Provinces.

* Dr. Watson attended the conference on the 1st and 4th November and Mr. Heard on the 4th November.

PRESIDENT'S OPENING SPEECH.

Sir Thomas Holland opened the conference by referring to the contribution made by Cawnpore industries to munitions of war in cotton goods and tents, leather articles, chemicals, brushes, and woollen goods, and a great deal of machinery. The most satisfactory feature in Cawnpore supplies was that everything was manufactured on the spot and not imported, and Cawnpore was thus, from the point of view of industrial assistance to the country, the most satisfactory of our areas.

He then proceeded to describe the measures taken in the way of revising and reorganising the official machinery. In this, two text-books were followed, one the Report of the conference in April, and the other the Report of the Industrial Commission. The record of the April conference had been followed faithfully as our guide, supplementing or sometimes superseding the Industrial Commission's Report. In this connection, he referred to the action taken to round-up the war activities of the Munitions Board and the creation of an organisation to dispose of the stocks of war stores, accompanied by the adjustment of official machinery necessary to undertake the Government measures for the inauguration of the new industrial policy, having in view the amalgamation of the industrial and commercial heads of business under one Member of Government in April next. When the sudden collapse of the war occurred in November 1918 every department was in full activity, and necessarily so; for any attempt to slack off, as our enemies showed signs of yielding, would have resulted in a prolongation of the struggle. We were left with enormous stocks of war material here and in the various war fields; those firms who had been engaged in the manufacture of munitions had similarly engagements for the acquisition of their necessary raw materials, and, with the disappearance of the war spirit, not unnaturally looked on their commitments from the commercial rather than the patriotic point of view.

Sir Thomas Holland then referred to the embarrassment caused by the desire of the officers, who had given up civil engagements

for war work, to get back to their ordinary business before they were supplanted by those who had managed to evade the call to service, and those who were likely to be of most service in the clearing up of problems were those most anxious to secure demobilisation. Those who had worked most were tired out at the end of the war, whilst those whom the war left in ready for more activity were the slackers, the critics and the vultures: the sudden appearance of people of this sort seemed to defeat what Huxley called the law of abiogenesis.

He then pointed out that the April conference helped to make a very definite and noticeable step in the direction of mutual understanding regarding many of the problems to be faced in the attempt to design the Government machinery required to assist private effort in industrial enterprises, and invited the Directors to relate to the conference what had been done in the provinces in the way of bringing their machinery into conformity with the policy. He then reviewed some of the points that had been followed up as a result of carrying out the recommendations of the last conference.

Since April the Stores Purchase Committee's report has been published, and it should be possible now to construct the machinery necessary to turn the pious but futile phrases of the old stores rules into active measures for the benefit of Indian manufacturers. With the appointment on the 1st October of Sir William Meyer as High Commissioner, we could count on the Stores Department in London being an active helper to our efforts to extend our purchasing and, therefore, manufacturing activities in India.

With regard to the question of an all-India service, he said that, as in the case of stores, our problem had been to provide opportunities for amalgamating the requirements of local Governments without trespassing on the rights of the new ministers and without restraining the natural and healthy tendency of the provincial spirit. At the same time it was necessary to form a service of such a kind that we should be able to supply the wants of provinces as and when they required help. The rights of the old services were safeguarded in the reformed constitution, and ministers would be requested to keep this fact in view in administrative actions. We could not justifiably thrust new all-India services on the ministers without their wishes. We

had considered the question of an all-India Industrial Service and Professor Thorpe's committee had recommended an all-India Chemical Service; but the employment of officers belonging to these services would be purely optional. Ministers should be able, if they wished, to appoint their own industrial and technical officers, either as members of separate provincial services or as temporary specialists. Although certain advantages were obtainable by central recruiting, there were some compensating advantages in the development of provincial patriotism: there would naturally be a tendency for the local Governments to provide opportunities for their own young men in their provinces. The employment of temporary specialists, however, incurred the obvious danger that the term of their employment might be used as a period of "prospecting" for private business ends. Relatively junior members of a permanent service could be profitably deputed on study-leave with a hope of turning their newly acquired information to account on behalf of a province, but the temporary employé so improved would naturally realise his increased market value when renewing his term of agreement. Sir Thomas Holland pointed out the importance of deputing, for inquiries in foreign countries, a *specialist* as against a man of general ideas, as it was much easier for the former to chum up with men of his own caste in foreign countries, and he could come out equipped with better information than could be obtained from mere published reports: and this a commercial attaché or an embassy attaché could not. Temporary specialists could sometimes be borrowed from the English services, but more easily and advantageously from the all-India services, and it was because most provinces could not afford to maintain such specialists in the early stages of their development that it was proposed to maintain a stock to draw from as and when the Provincial Minister wished.

Similarly, in regard to stores, advantages were obtainable from the amalgamation of orders and the institution therefrom of running contracts for several years at very favourable rates; but the direct saving in prices might sometimes be set off by the advantages of encouraging local industries. A minister would thus be free to make his demands from the central Stores Department or purchase locally as he thought most desirable. The freedom of the minister in these respects did not remove the necessity for either central Stores or central services; nor would the creation of these force any province to use either of them.

In this connection, Sir Thomas Holland referred to what the Industrial Commission described as Imperial Technological institutions. Provinces could not be expected in the early stages of their development to provide for more than local technical institutes intended to train, except in special subjects, subordinate supervisors. The small requirements of each of the provinces were insufficient for the maintenance of the high class institutions necessary to train officers or to undertake special research, and these, therefore, should be undertaken by the Central Government on behalf of all provinces, but, as stated at the last conference, these, if suitably placed, might be taken over later by the Governments of the provinces in which they occur.

REVIEW OF THE ACTION TAKEN ON THE DECISIONS OF THE CONFERENCE HELD IN APRIL 1920.

1. All-India Industrial Service.

With regard to the first subject, the all-India Industrial Service, the President said that replies had been received from all local Governments with the exception of Madras and Bombay; these replies would now be discussed by the Government of India before the Secretary of State was addressed. The Hon'ble Mr. Campbell stated that the reply from the Madras Government would probably be received by the Government of India very shortly.

2. Advisory Boards of Industries.

Sir Thomas Holland then passed on to the question of Advisory Boards of Industries. It was understood that the Governments of the United Provinces, Bombay, and the Central Provinces had already constituted Boards of Industries. The Bengal Government have also very recently done the same, and the Madras Government were considering the question. Mr. Meek informed the conference that the Bengal Board had already begun their sittings. Mr. Campbell said that the Madras Government had invited certain gentlemen to serve on the Advisory Board of Industries. Mr. Scott stated that in the Punjab they had Boards for districts and divisions which were proving useful. The idea was to constitute a Provincial Board after further experience had been gained of the

local Boards. There was also in the Punjab a separate Board for technical education. In Assam also, Mr. Barua said, the local Government had approved of the idea of an Advisory Board but orders had not issued yet.

So far all the Boards were more or less of an advisory nature. Definite powers of control had not been given to these Boards. The Director of Industries was Chairman of the Board in each case. It was also understood that with the exception of the United Provinces there were no separate committees for industrial and educational questions under these Boards. In Bengal the Board had decided to begin work as one body, and later on, if necessary, they would constitute separate committees. In the Punjab the members of the local Boards were appointed by the provincial Government. Mr. Crosthwaite stated that it had not been clearly laid down whether the Advisory Board in the Central Provinces should only deal with cases referred to them by the local Government, or whether the Director could ask for the advice of the Board. The President thought that the Director would always have that power.

3. Means of securing co-operation between Provincial Departments of Industries both mutually and with the Imperial Department.

Passing on to the next subject that was discussed at the April conference, the President said that, in pursuance of the recommendations then made, the Imperial Department of Industries contemplated the issue at an early date of a monthly publication (which would be for the use of officials only), containing among other matters, reports received from Directors of Industries on various subjects including items relating to labour unrest, and also the publication of a journal entitled "The Journal of Indian Industries and Labour." This journal would be issued four times a year, and would contain articles of general interest, which it was hoped would be of use to officials as well as to the public. It was further intended to publish Bulletins from time to time embodying papers and monographs which were either too long for publication in the Quarterly Journal, or which were fairly complete in themselves. For instance, we were now receiving notes with regard to the trade aspects of Indian minerals from Mr. Coggin-Brown, an officer of the Geological Survey of India who was attached

Publication of monthly circulars, journals and bulletins.

to the Imperial Mineral Resources Bureau in London. Notes on manganese, magnesite, corundum and monazite have already been received and are being printed in the form of Bulletins.

4. Organisation of the office of a Director of Industries.

The various Directors then described the organisations they had adopted, or were adopting, for their offices. The Directors have furnished short notes on the subject which have been printed as Appendix A of the report of the proceedings.

5. Method of dealing with applications for posts in the Local or Imperial Department of Industries.

With regard to the question of applications for posts in the local or central Departments of Industries, Sir Thomas Holland said that steps had been taken in the Government of India for registering applications received through Directors of Industries, and information would be made available to any local Government or private employer who might ask to be put in communication with persons seeking employment.

6. Technical and Industrial Education.

The representatives of the different provinces then briefly described the steps that were being taken in the provinces for the development of technical and industrial schools. It was understood that, in practically every province now, technical and industrial education had been placed under the supervision and control of the Director of Industries. It was decided* to discuss at a later stage during the present conference the method of disseminating information regarding the progress in the establishment of technical and industrial schools that was being made.

7. The British Institute of Industrial Art.

With regard to the subject of the British Institute of Industrial Art, the President informed the conference that in accordance with the recommendation of the April conference, the Indian Trade Commissioner in London had been told that it was doubtful whether any Indian province would participate, at any rate for the present, in

* NOTE.—This was not discussed for want of time.

the organisation of the Institute. Sir Thomas Holland added that he had received a representation from a certain quarter questioning the decision that had been arrived at. He intended to obtain further information which, if necessary, would be circulated to Directors, and if there was any feeling in favour of a revision of the decision, steps would be taken.

8. British Empire Exhibition.

The conference was then informed that the Government of the United Kingdom had decided to hold the British Empire Exhibition in 1923, and that arrangements would be made by the Board of Trade instead of by a private organisation. This would give us time to mature our arrangements with greater deliberation. The subject would come up later on in the course of the agenda of the present conference.

9. Labour questions and the development of the census of 1921 on the industrial side.

Turning to the next item that had been discussed at the April conference, namely, labour questions and the development of the census in 1921 on the industrial side, Sir Thomas Holland said that the Census Commissioner had already prescribed the industrial schedules which had been discussed in April, and that necessary instructions had been issued to provincial Census Superintendents.

Passing on to the labour questions that had been discussed in that connection in April, the President referred to the subject of legislation on the lines of the United Kingdom Industrial Courts Act. Most of the local Governments had expressed the opinion that such legislation would be premature in view of the existing conditions in India. Some provincial Governments had suggested the constitution of Boards of Conciliation, or of Arbitration. It appears that some local Governments have already taken action in this direction. Boards of Arbitration or Conciliation, had done good work in several cases in Madras, and similar action had apparently been taken with success in a recent instance in Burma. In Bombay also quite recently a labour dispute of the Great Indian Peninsula Railway had been referred to two arbitrators selected by the parties. It was

Boards of Conciliation or Arbitration.

also understood that the Government of Bombay were considering the question of the constitution of a permanent Board. The main difficulties, Sir Thomas Holland said, were in enforcing the decision of the arbitrators. In the present condition of labour organisations in India it was not possible to make the decision binding on either party. However, experiments were being made in different ways in different provinces, and the results of such experiments would be awaited with interest.

Some discussion followed as to whether arbitration should be resorted to before a strike actually took place, or whether it should be adopted only after a strike or lockout had been declared. Mr. Chatterjee said that the main utility of arbitration was to create public opinion in favour of one or the other party in order that pressure might be exerted for the settlement of the dispute. He also referred to the opinion that had been recently expressed by Mr. Murray in the Legislative Council that arbitration by outsiders generally left a feeling of soreness, whereas if the parties come to a settlement by negotiation, the subsequent results were far more satisfactory. It was the general feeling of the conference that the time had not yet arrived for any definite legislation for the whole of India.

Referring to the question of the selection of delegates and advisers for the International Labour Conference the President said that the next meeting of the International Labour Conference would take place at Geneva on the 4th April 1921. The Government had selected two delegates to represent the Government, and a communiqué had been published in the press inviting suggestions from organisations of the employers and the employed for the nomination of suitable delegates to represent their respective classes. It was hoped that the employers would be able to form a federation capable of suggesting a delegate as well as advisers. With regard to the workers, Sir Thomas Holland hoped that the Trades Union Congress, now being held in Bombay, might be able to make some useful suggestion.

The President then referred to the question of the collection of figures relating to the cost of living and of wages, that had been discussed in April last. Directors of Industries had been addressed in May on the subject. Replies from some were still awaited. We had also received figures relating to wages paid to workers employed in

International Labour Conference.
Statistics of wages and the cost of living.

the principal industries in India on or about the 1st of October 1919 and again in April 1920. The subject will come up for further discussion during the course of the conference.

The President next referred to the question of reports on strikes.

Reports on strikes. It appeared that with the exception of one province, reports were now being received on labour disputes as they occurred in the provinces. But there was considerable variation with regard to the information supplied, and also to the promptitude of the reports. The Directors agreed unanimously that in view of the desirability that the Government of India, and where necessary the Secretary of State, should be furnished with very early information regarding important strikes or lockouts, local Governments should authorise their District Magistrates to send telegraphic reports of important cases immediately they occurred to the Government of India and similarly to the provincial Directors of Industries. Full reports could come subsequently either from Directors of Industries or from local Governments. Sir Thomas Holland said that the Government of India would address local Governments again on the subject.

Reference was then made to the question of a special organisation in the provinces for the collection and collation of information relating to labour matters. It was understood that a Labour Commissioner had been appointed in Madras, and there was an Industrial Intelligence Officer under the Director of Industries in Bengal. The Punjab Government had appointed a Board of Economic Enquiries. The Bombay Government were obtaining the loan of an officer from the Ministry of Labour in London for a temporary period. That Government also intended establishing a Labour Bureau, but apparently no definite steps had been taken. It was understood that no other local Government had yet moved in this matter.

10. Industrial policy of local Governments and the method by which the Imperial Government can best assist them.

11. Financial and other forms of assistance to new industries.

Sir Thomas Holland then passed on to the next point that had been discussed at the April conference, namely, the Industrial Policy of local Governments and the method by which the Imperial Govern-

ment can best assist them. This subject was to come up again as an item in the present conference. The same was the case with regard to the subject of the financial and other forms of assistance to new industries that had been discussed in April last.

12. Pioneer and Demonstration Factories.

It was also explained that the question of pioneer and demonstration Factories, which had been only partially discussed at the April conference, had also been placed on the agenda for the present conference.

13. A Sugar School for India.

With reference to the discussion regarding a Sugar School for India, that had taken place at the April conference, the President explained that the recommendations then made would be considered by the Government of India in the Revenue and Agriculture Department in connection with the Report of the Sugar Committee, which was expected to be submitted very shortly now.

14. Relative spheres of the Imperial and Provincial Departments in the matter of research.

Sir Thomas Holland then referred to the question of the relative spheres of the Imperial and Provincial Departments in the matter of research which had been discussed in April. Since then the Chemical Services Committee's Report had been published, and the Government of India had addressed a circular letter to local Governments with respect to the establishment of research institutes in every Province. He enquired whether Directors of Industries could give any information regarding any active measures taken in their Provinces. Mr. Meek (Bengal) said that the question was being discussed, but no definite decision had been arrived at. Mr. Campbell (Madras) stated that they were considering to what extent the Institute of Science in Bangalore could be utilized for the purpose of a research institute for the Madras Presidency. The President stated that the question of the constitution of the Bangalore Institute of Science was likely to come up for the consideration of the Government of India in the near future: he understood that representations on the subject were likely to be made to the Government

of India by authorities having a considerable interest in the Institute. The question whether the Institute could be utilised, either by the Government of Madras or by the Government of Bombay, or by both, in addition to the Government of Mysore was likely to be considered if any such enquiries took place. A decision could not, therefore, be arrived at very promptly. Sir Thomas Holland then

**Cawnpore Techno-
logical Institute.**

enquired what was the present position with regard to the Cawnpore Technological Institute. Mr. Nelson (United Provinces) said that the question had been raised whether the Institution should confine itself exclusively to research, or should also undertake teaching. A Committee had been appointed by the local Government (which would probably assemble very shortly), in order to examine this question and make recommendations. Dr. Watson (Principal, Cawnpore Research Institute), said that plans of the buildings had been prepared, and it was hoped that the work would be started very soon. A small portion of the staff had already been recruited. The recruitment of the rest of the staff was contingent on the decision of the Committee appointed to consider the scope of the Institute. The President asked whether it would assist the local Government or Mr. Watson, if Directors of Industries discussed the question of the scope of the Institute and formulated their suggestions. Mr. Nelson (United Provinces) and Mr. Watson accepted the suggestion, and it was resolved to discuss the question later on in the course of the conference.

15. Central experimental workshop for handloom weaving.

Sir Thomas Holland next asked Mr. Swinchatt (United Provinces), whether the local Government had come to any decision on the reference that had been made to it regarding the recommendation made at the April conference, about the extension of the Central Weaving Institute at Benares for the purposes of carrying out experiments in different branches of handloom weaving for the whole of India. It was stated that the Principal of the Benares School was at present away on leave. Mr. Swinchatt had, however, prepared a scheme, but no final decision had yet been arrived at. The conference generally agreed that there was room for a Central Institute to work out problems for the whole of India: if necessary, artisans could be sent from other parts of India to Benares in order to test the results arrived at there.

16. Standardisation of machinery and plant.

Another subject that had been discussed at the April conference, namely, the standardisation of machinery and plant with a view to their manufacture in India, had also been put down in the agenda of the present conference, and would come on for fuller discussion later on.

17. Laws and regulations relating to boilers.

Sir Thomas Holland stated that, following the recommendation made at the April conference, regarding the unification of the laws and regulations relating to boilers, and the abolition of the law in certain Provinces compelling persons in charge of boilers to possess certificates, the Government of India had decided to appoint a small Committee consisting of:

Boiler Laws Committee.

Mr. F. D. Ascoli, I.C.S., Bengal;

Mr. R. P. Adams, O.B.E., A.M.I.E., Chief Inspector of Factories, Bengal; and

Mr. D. R. MacIntosh, Chief Inspector of Steam Boilers, Bombay, to go into the matter. The Committee would probably assemble at the end of this month; and, when their report was received, the Government of India would be in a position to consult local Governments about the definite action to be taken.

18. Apprenticeship schemes.

With regard to the subject of apprenticeship schemes, that had been discussed at the April conference, Sir Thomas Holland said that it was hoped that when the Monthly Circular of the Department of Industries would be issued, it would contain reports from Directors regarding the progress of such schemes in the different Provinces.

19. Co-operation with the Ministry of Labour in finding employment for British labour.

On the subject of co-operation with the Ministry of Labour in the United Kingdom in placing Indian employers in touch with persons in England seeking employment in India, the President informed the conference that local Governments had been addressed in August last. All except Bombay and the Punjab had agreed to co-operate: replies from Bombay and the Punjab were awaited.

20. Economiser installations.

The conference was then informed that Directors of Industries had agreed to obtain information regarding the amount of the various by-products now obtainable in the slaughterhouses in the country, and the present methods of disposal.

21. Other matters.

With regard to other matters that had been discussed at the April conference, Sir Thomas Holland said that the Government of India had accepted the recommendation of the Governments of Madras and Bihar and Orissa, that Directors of Industries should be delegated the powers of a head of a department. The question of the place of Directors in the Warrant of Precedence had also been taken into consideration by local Governments, and the matter was now being discussed by a Committee in Simla, which is dealing with the general question of the Warrant of Precedence.

Powers of Directors of Industries and their position in the Warrant of Precedence.

REVIEW OF THE ACTIVITIES OF THE BOARD OF INDUSTRIES IN CONNECTION WITH SUBJECTS OTHER THAN THOSE DISCUSSED AT THE FIRST CONFERENCE.

Sir Thomas Holland stated that the criticisms of the local Governments on the proposed draft amendments of the Indian Electricity Act that had been circulated some time ago, were now being examined in the Government of India. He hoped that the necessary legislation would be undertaken early in the 1921 session of the new Indian Legislature. Local Governments had also been circularised regarding a revision of the Rules under the Indian Electricity Act, and replies were still awaited from some of them.

Amendment of the Indian Electricity Act.

Sir Thomas Holland then referred to the hydro-electric survey that had been organised by the Government of India, and he stated that the Government of India were in communication with local Governments on the subject of the broad principles which should be observed in granting hydro-electric rights.

Hydro-electric Survey.

Along with the revision of the Stores rules that would naturally follow the recommendations of the Stores Purchase Committee and the organisation of a Stores Department, it would be necessary to revise the present procedure for the supply of stationery to Government officers and departments. This question was now being examined in the Government of India.

Revision of the rules for the supply of stores and stationery.

After making a reference to the recent legislation for the extension of the Indian Patents and Designs Temporary Rules Act, 1915, and the amendment of the Indian Patents and Designs Act, 1911, in order to bring India into the inter-imperial arrangement for the protection of inventions and designs within the Empire, Sir Thomas Holland referred to the prospect of a general revision of the Indian Patents and Designs Act, 1911, in order to bring it up to date. This question was now being examined in the Government of India.

Revision of the Indian Patents and Designs Act, 1911.

The conference was then informed that the Government of India were in communication with the Secretary of a State, regarding the engagement of a glass expert. It was hoped that it would be possible to obtain the services of a suitable expert during the present cold weather.

Employment of a glass expert.

Sir Thomas Holland then stated that the Government of India had discussed with the Government of Bengal the establishment of an Imperial Tanning Institute in Calcutta. The Government of Bengal had agreed to co-operate in the establishment of the institution, and necessary measures are now being taken under Sir Henry Ledgard's advice for the preparation of plans and estimates.

Imperial Tanning Institute, Calcutta.

The President then referred to the Chemical Services Committee's Report, and said that local Governments had been addressed on the subject, and their opinions on the main proposals of the committee were now awaited by the Government of India.

Recommendation of the Chemical Services Committee.

The President told the conference that the draft conventions and recommendations, that had been adopted at the Washington Meeting of the International Labour Conference, would be placed before the Indian Legislature early in February, and, in case they

Revision of the Indian Factories Act, 1911.

were accepted by the Legislature, a Bill would be immediately introduced revising the Indian Factories Act in accordance therewith. This would be followed later on by a Bill for similar modification of the Indian Mines Act, and, if necessary, legislation would be undertaken for the regulation of work in transport services.

After a passing reference to the question of Works Committees which the conference would discuss during the week, Sir Thomas Holland mentioned that the Dhanbad School of Mines and Geology. Government of India were endeavouring to obtain a Principal for the School of Mines and Geology which they had determined to establish at Dhanbad: land had been acquired for the school, and, as soon as the Principal was obtained, the governing body would proceed with the framing of proposals for buildings, staff and regulations for the school.

The conference then discussed the order in which they would take up the agenda. It was decided to devote the afternoons to visits to industrial establishments in Cawnpore, while the mornings were to be reserved for discussion of the items of the agenda.

I.—INDUSTRIAL POLICY OF GOVERNMENTS AND THE METHODS BY WHICH THE IMPERIAL GOVERNMENT CAN BEST ASSIST THEM.

(PREFATORY NOTE READ AT THE CONFERENCE.)

At the last conference* it was suggested that the help of the Imperial Government could be given to provincial Industries Departments in many ways,

* Page 56-57 of Bulletin No. 1.†

e.g.—

- (a) The lending of experts to study local conditions, report on the feasibility of technical schemes and the best way to overcome local difficulties, etc.
- (b) Recommendation to local Governments to take up the investigation of new industries.
- (c) Recommendations to local Governments to take over new industries which had been partially investigated by the Central Government.
- (d) The giving of advice based on the experience of others.
- (e) The periodical inspection of technical schools on the invitation of local Governments, the visitor being asked to see if they are being run on the most up to date or the most successful lines.
- (f) The tours of officers of the Stores Purchasing organisation.

2. At the last conference, Directors were asked to consider these suggestions and have proposals ready by the date of this conference. The views of the Directors are now requested.

F. R. R. RUDMAN.

Discussion.

Mr. Scott said with reference to sub-paragraph (d) that it would be an advantage if Directors could circulate to their colleagues in other provinces the minutes of the proceedings of their Advisory Boards. It was pointed out that Directors would naturally send for publication in a

Publication in the Monthly Circular of decisions of Advisory Boards and results of industrial enterprise.

† Page 36 of the Proceedings of the conference of April 1920 (foolscap size).

Monthly Circular of the Imperial Department any important developments that arose out of the decisions of the Advisory Boards. Formal circulation of the minutes, therefore, did not seem necessary but there was no objection to this if it could be done with the sanction of the local Governments. In reply to another suggestion of Mr. Scott, it was also pointed out that the results of industrial enterprises undertaken by Government in different provinces, whether in the way of pioneer or demonstration factories or otherwise, would also be published in the Monthly Circular.

Mr. Scott further urged that it would be useful to Directors of Industries in giving advice to persons intending to go for training abroad if information was readily available regarding the facilities for technical and industrial education in the United Kingdom and other countries

abroad. The President said that such information was already available in several publications, *e.g.*, the Empire Universities Year Book, pamphlets published by the National Indian Association, and also in an annual publication of the United States of America. He thought that the object would be served if the Department of Industries published in the Quarterly Journal a bibliography of such publications.

Sir Henry Ledgard raised a question about the Directors of Industries being equipped with suitable libraries. Mr. Blunt said that there was a good technical library now located in the Director's Office at Cawnpore, which was available for the Director and his staff, and also for the general public. Mr. Findlay Shirras said that there was a library in the Department of Commercial Intelligence in Calcutta which had a good collection of books dealing with statistics and commercial information. Mr. Chatterjee said that a good technical library was being brought together in the Department of Industries in the Government of India, and facilities would be afforded for the loan of books to Directors. At the same time he thought that Directors should have their own libraries, and money spent on a good collection of books would always be profitably spent. The point was raised that Directors did not always get to hear of good books, and could not select books without some guidance. Mr. Chatterjee stated that it was intended to publish notices as well as reviews of books that would interest Directors in the Quarterly Journal of Indian Industries and Labour. He also said that the catalogue

of the Department of Industries' library would be printed in a few months and would be available for Directors.

Mr. Swinchatt said that they were endeavouring for some time past to obtain an expert for the glass industry in the United Provinces. He, however, thought that the mere employment of an expert would not be of full avail unless he was provided with a demonstration factory fitted with up-to-date plant and appliances. It was difficult for an expert to do anything in many of the existing factories which are extremely ill-equipped and the owners of which are not always anxious to obtain the latest plant. Mr. Scott said that it would involve considerable waste and duplication unless different provinces pooled their experts and demonstration factories. After some discussion it was resolved that apart from the work connected with the development of industries that will devolve on the Government of India under the Reforms Scheme, that Government should consider the employment of experts and the starting of demonstration and pioneer factories for industries which may be of interest to certain of the local Governments but not to all, the idea being that the local Governments concerned would contribute their share of the expenses while the Government of India should also contribute a share, the control remaining with the Government of India until the demonstration was complete when the factory could be made over either to a local Government or to private parties.

With regard to sub-para. (e) of para. 1 in the prefatory note, Mr. Scott represented the urgency of the appointment by the Government of India of Visitors or Inspectors for technical and industrial schools run by local Governments. He thought that speaking for the Punjab, the local Government was at present ill-equipped in this matter, and would not for a long time be able to appoint competent Inspectors for the different kinds of schools that are now growing up. Mr. Swinchatt said that there was at present no co-ordination between the provinces with regard to educational methods in these schools. The President pointed out that it was not really necessary to follow uniform methods in the technical education for different industries. For instance, the proportion of time to be devoted to theoretical instruction and practical work in shops would differ in the training for different industries. There was no such

Employment of experts and starting of demonstration factories by the Government of India.

Visitors for technical and industrial schools.

thing as finality in technical education. Experience and development of technical methods were constantly changing educational ideas and methods. Also education would be a transferred subject under the Reforms, and the Government of India, even if they appointed visitors for technical school for the periodical inspection of local Governments' institutions, would not be prepared to dictate methods to Ministers. His idea was that the Visitor should report to the local Government and not to the Government of India.

After discussion it was resolved that the Government of India should, without delay, obtain 3 Advisers for the following classes of schools:—

- (a) General Industrial and Polytechnic Schools; the Adviser should have special knowledge of general methods of organisation of such schools;
- (b) Weaving schools, and
- (c) Technical schools for Mechanical Engineering.

It was understood that the services of these Advisers, when employed, would be lent free of charge to local Governments, and they would visit the schools of local Governments only on their invitation, and that they would report not to the Government of India but to local Governments.

The President informed the conference, in reply to enquiries, that the Government of India contemplated the employment of a number of experts for different industries and that this would be done after the Industrial Service had been organised. When such experts were employed they would be lent in turn on deputation to different local Governments who would be expected to pay for them for the periods of deputation. In this way full use would be made of the Advisers, and a local Government would not have to obtain a specialist from abroad for a short period on extortionate terms.

Mr. Meek raised the question of collecting information regarding markets for the industries of a province that might be available either in other provinces or in other countries. The President said that apparently what Mr. Meek wanted was correspondents in the principal markets. Mr. Collins said that he had honorary correspondents in several towns in his own province, and they were doing fairly well. Mr. Chatterjee pointed out that

Employment by the Government of India of experts for different industries.

Collection of information regarding markets for the industries of a province.

when the Stores organisation for the Central Government would be fully developed, industrial intelligence officers would be employed who could furnish the necessary information. Mr. Findlay Shirras said that his Department obtained figures from the Chambers of Commerce which could be made available.

Sir Henry Ledgard referred to the commercial museum in Calcutta and said that if such museums were duplicated in other parts of the country and information regarding prices could be obtained more frequently, perhaps the object alluded to by Mr. Meek would be attained. Mr. Scott said that it was desirable to obtain frequent figures regarding prices of all kinds of goods for the benefit of retail dealers as well as small artisans. Mr. Chatterjee said that the information so collected would be entirely unreliable under present conditions, and that Government should not embark on any large enterprise of this sort. He also stated that the Commercial Intelligence Department had wished to raise the question in the present conference with regard to the supply of commercial intelligence within the province by respective Directors of Industries. The President said that the Commercial Intelligence Department was likely to be developed and enlarged in the near future, and it would be better if the discussions on this point were postponed to a future meeting of the conference when representatives of the Department of Commercial Intelligence would attend.

Mr. Campbell suggested that in sub-para. (b) of para. 1 of the prefatory note, the development of existing industries should be added to the investigation of new industries. This was agreed to. Mr. Campbell further suggested that not only

Investigation of new industries and development of existing industries.

officers of the Stores Purchasing Organisation but other officers of the Imperial Government should tour in the provinces. This, the President said, was already a recognised part of the programme of the Department. Mr. Crosthwaite stated that he wanted a

Boot-making expert for the Central Provinces.

boot-making expert to reorganise their existing boot-making school in the Central Provinces.

All work done there at present was by hand, and it was not contemplated to introduce machinery in the school at present. They wanted a man only for six months. He should be able to train a less expensive local man who could then be placed in charge of the school. Sir Henry Ledgard said that it would be difficult to obtain a man for the hand-trade except from firms

in the larger towns of the country. The President said that it would be difficult for the Government of India to import a man just for a few months as it did not appear that any other province would be willing to employ him after he had finished his work in the Central Provinces. In Sir Thomas Holland's opinion it might possibly pay the Central Provinces Government to employ a man for a fairly long period, say, 3 or 5 years, in which case a suitable candidate might probably be obtained.

Mr. Barua said that in view of the size and resources of his province (Assam) it was not possible for them to start many technical industrial schools, but they were following the policy of sending promising youths to schools in other provinces. There was, however, difficulty in securing the admission of such youths in the schools in other provinces. Local Governments naturally desired to give preference to boys from their own province, and as a rule accommodation in industrial and technical schools was limited. Mr. Blunt said that in the United Provinces they would be prepared to admit boys from other provinces if a reasonable proportion of the cost of the school was paid by the latter provided that accommodation was available. One province was allowed to undertake agency functions for another province under the Reforms Scheme. The President said that mutual arrangements should be made by the different provinces on the basis of a contribution to the cost. The proposal should come from the province which wanted the facilities.

Sir Henry Ledgard raised the question whether the Imperial Government would be prepared to grant financial assistance for new or struggling industries in the provinces. Mr. Chatterjee said that under the new financial scheme the Government of India could embark on such expenditure only in cases affecting the national safety.

Mr. Scott suggested that the Government of India should offer criticism on industrial measures adopted by local Governments. The President said that such points could always be raised at the conference, but he did not think that the Government of India should go out of their way to criticise measures of local Governments which had not been submitted by them to the central Government for advice or opinion.

Admission of students in technical institutions of other provinces.

Grant of financial assistance by the Government of India for new or struggling industries in provinces.

Criticism by the Government of India of industrial measures of local Governments.

II.—FINANCIAL AND OTHER FORMS OF ASSISTANCE TO NEW INDUSTRIES.

(PREFATORY NOTE READ AT THE CONFERENCE.)

Reference pages 58-65 of Bulletin No. 1.*

Note on the financial assistance which can be given to new industries under the reformed constitutions.

IN THE PROVINCES.

In so far as the provinces are concerned, the position can be explained in a very few words. Industries will be an entirely transferred subject, and the Government of India Act and the rules made under it impose no restrictions at all upon the powers of local Governments to spend money in this connection. Ministers will be able to give cash grants, recurring, and non-recurring, at their discretion, and to make loans from the Provincial Loan Account to any extent they please. In order to finance the Provincial Loan Account, they can, if they wish, raise loans in the open market. There will, however, be two main checks upon the exercise of their discretion in this connection, and these checks will be exercised by the provincial Finance Department and the provincial Legislative Council. No money can be spent until it has been voted by the Legislative Council as part of a grant demanded by the executive. The Finance Member will be responsible for the presentation of the budget, and under a rule made under Section 45A of the Government of India Act he will refuse to include in a demand any proposal for expenditure that has not been thoroughly scrutinised in his own department. In the course of his scrutiny he will of course be entitled to object to any expenditure on financial grounds. He will not be able to overrule the Minister, in case the latter is not prepared to accept his objection, but he will be entitled to insist that his opinion should be submitted to the Governor for the orders of the local Government. If the Governor backs the financial objection, the Minister will not get his scheme through.

* Pages 37-41 of the Proceedings of the conference of April 1910 (10½cap size.)

2. As I have shown above, it will be necessary for a Minister before spending money on industries to run the gauntlet of financial criticism as well as of discussion in the Legislative Council which will have full power, to reduce any provision for expenditure which he may make in his part of the budget. There will be yet another check upon the Minister's action which it may be hoped in the course of time will become a very real one. This check will lie in the ultimate scrutiny of the accounts by the Committee on Public Accounts. This body will be empowered to examine every item of expenditure incurred, to make its comments upon them and to refer any case which it considers to call for this course for the decision of the Legislative Council as a whole.

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J. E. C. JUKES.

Discussion.

Mr. Collins said that the so-called Industrial Banks now existing in the country were so far of very little assistance for the industries in the provinces. He gave an illustration of a case where a proposal which had been backed by him was rejected by an industrial bank. Other Directors recounted similar instances that had occurred in recent times in their provinces. It was generally agreed to that no help could be expected from the present industrial banks in the country. They were mostly engaged on ordinary banking business and not on industrial business. The President referred to the recommendations on this subject of the Industrial Commission, and stated that the committee, which the Commission had suggested, had not been appointed pending the consideration of the question of the amalgamation of the different Presidency Banks. Mr. Crosthwaite said that an Imperial Bank would not be of much assistance for the development of new industries and what was really needed was the establishment of provincial banks with the countenance of Government, but not necessarily with any financial support from the Provincial Government. The President asked whether the conference desired

Committee recommended by the Industrial Commission.

that the Government of India should be approached for the appointment of a committee on the lines recommended by the Industrial Commission. Mr. Crosthwaite deprecated the appointment of a committee. He thought that when Ministers came into power they would move themselves, and action would be more rapid. Mr. Collins thought that if a small committee were appointed they would report within a reasonable time. Mr. Crosthwaite doubted whether an Imperial Committee would understand the needs and requirements of provinces. The President alluded to the development of large financial trusts which were also interested in industries and thought it unlikely that such financial trusts would go to the aid of rival industries however small.

All members of the conference were agreed that the question of industrial banks was an important one and should not be neglected. The President promised that the present position would be examined in the Government of India.

III.—PROGRESS MADE IN VARIOUS PROVINCES AS REGARDS PIONEER AND DEMONSTRATION FACTORIES.

Discussion.

The President asked the Directors if they had any new developments to report. Mr. Scott said that administrative approval had been obtained in the Punjab for the establishment of a Boot Demonstration Factory either at Lahore or Amritsar, and of a Dyeing Factory at Lahore. The object of the dyeing factory would be to provide instruction in the use of chemical dyes; it will also experiment in vegetable dyes. Mr. Campbell stated that in Madras a Glue Factory had been recently established.

The President suggested that it would be useful if the Directors could compile brief histories of the Pioneer and Demonstration Factories that had so far been established or were working in different provinces. These could be published as Bulletins of the Imperial Department of Industries or incorporated in the Quarterly Journal for general information. Mr. Campbell said that they were already publishing Bulletins on these subjects in Madras. It was agreed that summaries of the Bulletins already published by local Governments might be inserted in the Quarterly Journal. In future it might be advisable to have such Bulletins published in the series of the Imperial Department; extra copies could be obtained for provincial circulation.

Publication in the Quarterly Journal or in Bulletins of the Imperial Department of brief histories of the Pioneer and Demonstration Factories in provinces.

IV.—SYSTEM OF ACCOUNTS TO BE ADOPTED IN GOVERNMENT FACTORIES.

Discussion.

It appeared that the subject had been considered since the last conference in great detail in the Madras Presidency, where a committee had been appointed by the local Government to make recommendations. The following is a summary of the recommendations made which have not yet been considered by the Government of Madras :—

* * * * *

Recommendations of the Committee appointed by the Government of Madras.

“ 43. Summary of recommendations—
(i) The accounts of the following institutions should be kept on commercial lines :—

- (a) Pioneering and experimental factories.
- (b) Demonstrational and instructional factories.
- (c) Industrial and training institutions run on commercial lines.
- (d) Experimental farms.
- (e) The purchase and distribution of commodities by the departments of agriculture and fisheries.

(We have not considered the general operations of the forest and salt departments as no representative of those departments was placed on our committee, and if the Government so desire, the heads of those departments can be consulted as to whether the new system would be applicable to their departments.)

(ii) In respect of each undertaking, capital and revenue accounts should be maintained outside the ordinary Government accounts; balance sheets and profit and loss accounts should be drawn up annually; the manager should be given a personal deposit accounts on which he will operate as if it were working capital; he should not be allowed to overdraw his account without the sanction of the Government; the undertaking should be treated as if it were an independent private commercial undertaking, *e.g.*, interest should be charged on overdrafts, full rates should be charged for all services rendered by the other departments or by officials of the same depart

ment whose pay is not debited to the undertaking; a committee should be appointed to determine the amount of capital, including the personal deposit, required for a new undertaking and suitable forms of accounts.

(iii) A Financial Adviser and Auditor with a suitable staff should be appointed. He should have the standing of a Deputy Secretary to the local Government; he should be Financial Adviser to the Minister in charge of the department and to the Member in charge of the Finance Department and to the head of the department concerned. He should have an adequate staff of auditors and clerks. He will be responsible to the Comptroller and Auditor General for the audit of the accounts of the commercial undertakings; he will keep in close touch with them in order to ensure that the management is economical (having in view the objects of the undertaking), to prevent or check irregularities and to advise the head of the department regarding any proposal for further development.

(iv) Local boards of directors should be appointed where possible. Such boards should be advisory only and should have no powers of control; they should meet monthly and receive returns and vouchers from the manager and should send copies of the minutes of the proceedings to the controlling authorities as well as to the manager; they will advise the head of the department and the manager with reference to the general policy of the undertaking but would not be expected to interfere in details; the members should receive a suitable fee for attending the meetings of the board.

(v) The committee referred to above in clause (ii) should also draw up proposals regarding the powers to be exercised in respect of each undertaking in the first instance by the head of the department who should be at liberty to delegate any of his powers to the manager.

(vi) We do not consider that it is necessary to confer any special powers on the head of the department or the manager in respect of placing order direct outside India for stores, etc., so long as the head of the department has the power to order at his discretion particular items of plant or machinery or equipment, required for experimental purposes, from any firm he chooses.

(vii) It may be found desirable to draw up a special financial code or set of rules indicating in what directions the ordinary financial rules and codes will not apply in respect of commercial undertakings.

(viii) Existing undertakings should be brought under the new system of finance and accounts by the valuation of their present assets and liabilities and the determination through such valuation of the present capital value of the undertaking, *i.e.*, no attempt should be made to ascertain the amount of capital actually sunk in an undertaking as we believe it is impracticable to obtain the necessary data from the Government accounts.

A. Y. G. CAMPBELL.

L. D. SWAMIKANNU.

T. K. RAJAGOPALAN.

C. B. WOOD."

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The President invited criticisms of the recommendations made by the Madras Committee. Mr. Campbell stated, in reply to different questions that a share of the cost of the Financial Adviser and his establishment would be included in the cost of the factory as it is provided that full rates should be charged for all services rendered by other Departments or by officials of the same Department whose pay is not debited to the undertaking. Sir Henry Ledgard feared that recommendation (viii) might prove misleading owing to the great appreciation in recent years in the value of buildings and plant. It was, however, pointed out that persons desiring to start similar industries at the present moment would have to incur costs at the present rates. Moreover in comparing profits the present valuation would also have to be taken into account. There was further the difficulty in ascertaining the actual cost that had been incurred as pointed out in the Committee's report. Sir Henry Ledgard did not wish to press his point. Mr. Chatterjee enquired whether the personal deposit account referred to in sub-para. (ii) of the summary would have the same effect as the present procedure in the Forest Department according to which, within certain limits, the revenue and the expenditure sides of the budget could be increased by the same amount without extra sanction. Mr. Campbell said that that was the intention. Sir Henry Ledgard drew attention to the extensive powers apparently given to the Manager in sub-para. (ii) by allowing him to draw on the personal deposit account,

as if it were a working capital. Mr. Campbell stated that it was the intention as indicated in sub-para. (v) that these powers should really be exercised by the Head of the Department who would be at liberty to delegate as much of his own powers as he thought fit to the Manager. It was suggested that in order to make the point quite clear the words "subject to the control of the Head of the Department" should be inserted after the words "on which" in the sentence "The Manager should be given a personal deposit account, etc.. * *." Subject to this correction, the conference suggested that the report of the Madras Committee should be commended to all local Governments, and also to the Government of India for consideration. It was also resolved to thank the Madras Government and the Committee appointed by it for the very careful and comprehensive report.

V.—A.—STANDARDISATION OF MACHINERY AND PLANT WITH A VIEW TO THEIR MANUFACTURE IN INDIA.

B.—ADOPTION OF BRITISH ENGINEERING STANDARDS IN INDIA.

(PREFATORY NOTE READ AT THE CONFERENCE.)

References pages 75-78 of Bulletin* No. 1.

A.—In July 1920, local Governments were addressed on this question. It was pointed out that Government should, as far as possible, encourage the manufacture of machinery in India, but that without some guarantee of assistance from Government it was doubtful whether firms would venture to erect plant in India for such manufacture. It was suggested that a committee of experts might be appointed to examine the various types of machines in general use and perhaps design standard types, which firms might be brought to manufacture. As an inducement to firms to take up the manufacture of the standard types it was also suggested that Government might make it a condition of granting loans to agriculturists and others that a machine of the standard type must be purchased from an approved indigenous firm. The following replies have been received from local Governments:—

North-West Frontier Province.—The demand is so small that the Chief Commissioner cannot give an opinion.

Punjab.—No guarantee of an assured demand can be given, but in any case manufacturers would probably be prepared to establish factories without a guarantee. Government should make a note of the requirements of the province, at the same time advising and influencing industrialists to employ such standard type of machinery manufactured by firms in India as experience shows to be best suited for the purpose. If any additional encouragement were required, a lump grant might be paid to a firm which agreed to turn out certain types at a certain rate, or a protective tariff might be imposed on imported machinery. It would be useless to appoint

* Pages 47-48 of the Proceedings of the conference of April 11 20 (foolscap size).

a committee of experts until the statistics of demand had been ascertained.

Bihar and Orissa.—Compulsory standardisation is deprecated. Free competition is more likely to prove the best selective agency. Firms would probably manufacture machinery without a Government guarantee.

There is no objection to the appointment of a committee to enquire into the type of prime movers most suitable to India.

Central Provinces.—The proposal is premature and the suggestion that Government loans should be conditional on the purchase of a certain type of plant is deprecated. Any attempt to standardise before the knowledge of local requirements is complete will hinder progress. It is suggested that the first step should be the expansion of the engineering side of the Agricultural Department which will find out the real needs of the cultivator and place the information which it obtains freely at the disposal of firms desirous of manufacturing plant and implements in India.

United Provinces.—Standardisation will lead to stagnation. It is also dangerous inasmuch as there is no well-organised engineering profession in India to check hasty decisions. Standardisation is, in the main, confined to the manufacture of parts of machinery; this presupposes the existence of a highly developed machine industry which does not exist in India at present. The question should be fully discussed by a representative committee of both manufacturers and buyers. The suggestion that financial assistance should only be granted on condition that a standardised type of plant was ordered from specified firms, is objectionable as it will expose Government to a charge of favouritism. The Director of Agriculture and the Director of Industries are collecting statistics of the demand for machinery and plant in the province.

Bombay.—The Bombay Government do not approve of the proposal to standardise machinery with a view to its manufacture in India. A detailed study of designs by experts will be necessary before a standard type of plant which is most generally in demand can be evolved. It is impossible to give the annual requirements of standardised types of machinery and it is undesirable that Government should insist on the purchase of a standardised type of local manufacture as a condition for assisting persons requiring such machinery.

Madras.—Agrees that Government should as far as possible encourage local manufacture of machinery and plant and that a committee of experts should be appointed for designing standard types. Can not offer any useful remarks at this stage on the suggestion regarding Government's guaranteeing an assured demand for each province. Is in favour of the grant of Government's loans being made conditional on the purchase of standard type of machinery. Encloses a note by the Assistant Director of Industries regarding the type of machinery of which standardisation is possible. No approximate estimate of the requirements of such type can be given.

Burma.—Considers that the proposals are open to grave practical objections. Owing to keen competition amongst European and American firms constant improvements in all classes of machinery are being introduced and manufacturers of standardised machinery would find themselves with large quantities of unsaleable stock or Government will have to force inferior articles on unwilling users. The question of patent rights will arise. Any action on the part of Government to protect the Indian manufacturer by levy of a heavy tariff will raise very wide issues affecting the whole fiscal policy of the Government of India and if the tariff results in the protection of an intrinsically inferior article it may hinder rather than help industrial progress. Doubts whether the policy of making Government loans conditional on the purchase of standardised products is a sound one. Suggests that the most suitable form of encouragement would be the granting of loans on easy terms to approved manufacturers.

Assam.—It is undesirable that Government should standardise machinery by any form of subsidy or guarantee. Is not in favour of the grant of Government loan being made conditional on the purchase of such machinery. The proposed committee of experts might be formed and the results of their labour made public but thereafter the matter should be left in the hands of business firms. Does not consider that any subsidy or guarantee is necessary for the manufacture of standardised machinery for the various industries practised in the province.

Bengal.—Is strongly in favour of local manufacture of machinery, but is of opinion that the problem must be attacked not as a general one but in parts. Standardisation should begin in the first instance with prime movers and gradually take up other most common forms

of machinery. The Industries Department should make a preliminary investigation as to the present and future demands of the country and the first step to be taken is to appoint a committee of experts to advise the Director of Industries as to the form in which the above information should be collected and to use that information in effecting standardisation. The use of agricultural machinery is at present in its infancy and no estimate of the probable requirements of these can be given. Considers the question of giving a guarantee to any manufacturing firm somewhat difficult; Government can guarantee demands which it can control but beyond this can only influence by advice the purchase of machinery by any enterprise which is assisted with technical advice. Has no objection to the grant of loans or financial assistance by Government being made conditional on the purchase of machinery of a standard type but feels doubtful if this would have any influence on the demand.

B.—In his despatch No. 8-Public Works, dated the 2nd March 1917, the Secretary of State addressed the Government of India on the question of the adoption of British Engineering Standards in India and the formation of a permanent Local Committee to influence the adoption of these standards. In reply the Government of India, in despatch No. 36-P. W., dated the 14th December 1917, informed the Secretary of State that they accepted the above proposals and it was further proposed to contribute an initial grant of £500 to the Home Committee and an annual subscription of the same amount. This was approved by the Secretary of State.

Local Governments were informed of the position in February 1918 and their views were invited as to the composition of the Local Committee. They all expressed themselves in favour of the formation of a Committee but opinions were far from unanimous as to its composition. It was subsequently decided that the Institution of Engineers (India) which was then being formed would be in the best position to undertake the formation of the Local Committee and to arrange for the distribution and sale of the Home Committee's publications and the Organising Secretary was addressed on the subject. He replied that the Institution would be pleased to undertake these duties.

The Secretary of State was informed of the position in despatch No. 17-P. W., dated 15th August 1919, and local Governments were instructed to supply all their officers with copies of British Standard Specifications and to ensure that these standards were

specified when orders were placed in India. They were further asked to intimate whether, pending the formation of the Local Committee, any firms were prepared to stock the Home Committee's publications for sale to the public. A consolidated list of such firms was prepared and furnished to all local Governments in July 1920 and they were instructed to arrange for the supply of the publications to these firms.

Action up to this stage was taken by the Public Works Department but it has now been decided that the Board should deal with all future references regarding the formation of a Local Committee and the arrangements to be made for the sale and distribution of the Home Committee's publications.

F. R. R. RUDMAN.

Discussion.

A.—The President thought that, in view of the opinions obtained from local Governments the proposal made at the April conference, namely, that loans by Government should be made conditional on the purchase of a machine of the standard type from an approved firm, should be abandoned. The question now before this conference was whether they should recommend the appointment of a committee to go into the question of standardisation. The President feared that the committee would sit for a long time in order to come to any final decision on the points referred to it. Moreover, such standardisation would probably interfere with the process of natural evolution in the use and invention of machinery, and also might bring about stagnation. In reply to Mr. Chatterjee's enquiry whether Directors had collected any statistics on the lines that had been agreed to at the April conference, it was ascertained that no statistics had yet been collected. Mr. Findlay Shirras thought that statistics of imports into the country might be useful in this connection. He admitted, however, that the available statistics did not provide any details, and the conference agreed that, without such details, the statistics would be of no value for the present purpose.

After further discussion, it was agreed that the time had not arrived for the appointment of a committee, but that Directors of Industries should gather information as to whether there were any

types of machinery for which the demand was such that they would be suitable for standardisation.

B.—The President stated that the Institution of Engineers (India) had now been registered: he thought that the matter under discussion could now be left in the hands of the Institution. This was agreed to.

VI.—QUARTERLY BULLETINS SHOWING THE QUANTITY AND DESTINATIONS OF STORES INDENTED FOR ON THE DIRECTOR GENERAL OF STORES WHICH ARE NOT INCLUDED IN THE HALF-YEARLY LISTS OF ENGINEERING STORES SUPPLIED TO THE INDIAN ENGINEERING ASSOCIATION.

(PREFATORY NOTE READ AT THE CONFERENCE.)

It will be remembered that at the last conference of Directors (*vide* page 4 of the Proceedings* of the conference stores portion), the view was expressed that summary lists of the classes of articles bought on behalf of the Government of India from home or in India should be circulated among provincial Directors in the shape of a bulletin. The lists have been drawn up in two parts, the first of which shows the quantity and destination of articles indented from the Director General of Stores which appear in the list of stores imported and manufactured by the Members of the Indian Engineering Association; the other part shows stores indented for on the Director General of Stores which are *not* included in part I. Copies of these bulletins have already been supplied to Directors of Industries.

2. The point for consideration now is whether any practical advantage is derived from the preparation of these bulletins or any modifications are required which would enhance their value. It would of course be useful if the price were also given in the lists, but, in considering this question, two points should be borne in mind:—

- (a) the preparation of the bulletins involves a considerable amount of work and printing;
- (b) the inclusion of the prices would increase the work considerably.

F. R. R. RUDMAN.

Discussion.

It appeared in discussion that part I of the bulletin had been of some use to the members of the engineering profession, but part 2

* Not published.

had not been so far of any marked utility. Mr. Chatterjee stated that, in view of the transitional nature of the organisation of the Board of Industries, it was difficult to prepare these bulletins at the present moment in a satisfactory form, and suggested that, when the Stores Department was organised, they would be in a much better position to prepare these bulletins either in the present form or in a modified form. This proposal was agreed to by the conference.

**VII.—CONSULTATION OF EXPERTS BY PROVINCIAL ADVISORY
BOARDS CONSTITUTED UNDER SECTION 35 OF THE
INDIAN ELECTRICITY ACT.**

(PREFATORY NOTE READ AT THE CONFERENCE.)

In paragraph 228 of their report the Indian Industrial Commission made the following remarks on the administration of the Electricity Act ;—

“ * * * * * It was * * * * *
brought to our notice that in some provinces the professional qualifications and experience of the Electric Inspectors did not command the confidence of the managers of the larger local undertakings. The principal criticisms were that the rules were too rigidly worked, that they were sometimes wrongly interpreted and that there was an unwillingness on the part of the Inspectors to assume the responsibility of relaxing the rules in cases which obviously demanded it. To remedy matters it was suggested to us that men of higher professional status and with practical and commercial experience of electric supply undertakings should be appointed as Inspectors and that an Imperial Advisory Board should be established to advise local Governments with regard to appeals from the decisions of their Electric Inspectors. We support the former suggestion strongly, but it appears to us that the appointment of provincial Advisory Boards, as contemplated in Section 35 of the Act, will meet the needs of the case, especially if these Boards are permitted, when necessary, to consult experts such as the Electrical Adviser to the Government of India.”

The question for consideration is whether the attention of local Governments should be drawn to the advisability of permitting their Advisory Boards to consult experts, such as the Electrical Adviser to the Government of India, when necessary.

A. C. CHATTERJEE.

Discussion.

It was elicited in discussion that in the Central Provinces and the Punjab, Electrical Inspectors had been placed under the administrative control of Directors of Industries. This system would also be adopted in Bengal on the 1st December next: in the other provinces Electrical Inspectors still acted under the Public Works Department.

It was felt that this was probably necessary, so long as a local Government had not sufficient work for an Electrical Engineer to deal with Government installations and, for a separate whole-time Inspector to administer the Electricity Act and Rules made thereunder.

It was considered advisable to postpone the consideration of the question raised in the preliminary note until Electrical Inspectors in the provinces came more generally under the control of Directors of Industries.

VIII.—WORKS COMMITTEES.**(PREFATORY NOTE READ AT THE CONFERENCE.)**

Before the war a number of progressive employers in the United Kingdom had set up in their factories small committees consisting of representatives of the management and of the workers to consider various objects of common interest such as methods of remuneration, accidents, hours, holidays, improvements, etc. During the war the restrictions on strikes diminished the influence of trade unions and their place was largely taken by such committees which became very numerous. They were generally composed, as far as the workers' side was concerned, of shop stewards (i.e., the unpaid officials of the trade union within the factory or workshop): and the number of officers nominated by the management was, as a rule, equal to the number of workers elected by the men. A strong impetus was given to this movement by the reports of the Whitley Committee which attach special importance to the Works Committees as a means of settling disputes at the source and establishing direct contact, and consequently sympathy, between employers and employed. The idea has received support in England from men of the most divergent political and economic views. And though some people still regard Works Committees as embryonic soviets and others as obstacles to trade unionism the great majority in England have accepted them as a very valuable aid to industrial harmony and they have received careful study and appreciation from observers from America and elsewhere.

2. The first Works Committee in India was set up by Mr. C. T. Allen at Cawnpore and numerous small committees with a central co-ordinating committee have been established by the Tata Iron and Steel Company at Jamshedpur. The Government of India has endeavoured to introduce the system in the Presses but owing to a prolonged strike and consequent discord, little progress has been made.

3. The idea is one which appears to be pre-eminently suited to Indian conditions, and something of the kind is badly wanted. So long as industrial organization was in a primitive state, employees

had direct access to the master and an assurance that their grievances would receive immediate hearing. The complexity of modern industry tends to place more and more intermediaries between the controlling authority and the labour force and Works Committees are designed primarily to make it possible, under modern conditions, to restore direct contact.

4. The subjects with which such Committees can deal are almost unlimited and, as a rule, the wider scope given them, the better. They enable the management to realise and very often to remove the minor hardships which the men suffer and many of which are due to oppression or favouritism on the part of foremen and others and they help workers to realise that there are often other difficulties in the way of granting their requests than the obstinacy and avarice of the capitalist.

5. Can Directors of Industries make any suggestion as to popularising these Committees in India? Their introduction will probably be opposed on the one hand by reactionary employers who are afraid of any organization on the part of their men and on the other hand by interested persons who wish to capture labour organizations for their own ends and who may realise that this form of organization cannot be so captured.

A. G. Clow.

Discussion.

Mr. Chatterjee stated that, besides the Works Committees referred to in paragraph 2 of Mr. Clow's note, it appeared that similar organisations had been or were being set up on some of the railways and also in the Buckingham and Carnatic Mills in Madras.

Mr. Campbell then read the following note recorded on the subject by Mr. Moir, the Commissioner of Labour in Madras:—

“ In para. 3 of Mr. Clow's note it is stated that the idea of Works Committees is one which appears to be pre-eminently suited to Indian conditions. With that statement I agree with the proviso that we must in attempting to give the idea practical effect have regard to Indian conditions and must not attempt to force upon the industrial organisation here machinery which was devised to meet entirely different conditions and developed in an environment of its own.”

“The history of works committees under their various aliases in the United Kingdom is very complicated but roughly speaking there have been two main lines of development. Under one the origins of the movement are to be found in the convenience or necessity to Trade Unions of having some machinery in individual shops or works for looking after Trade Union interests, for example the issue of membership cards and the collection and acknowledgment of receipt of members' subscriptions. In matters of this kind the management were not concerned at all. To these were added matters in which the management were interested such as the interpretation in individual cases of Trade Union rules, agreements as to wages, hours, shifts, piece work, etc. To refer alleged breaches or evasions of these rules, etc., to the Trade Union to be taken up was a cumbersome procedure and the custom of bringing them formally or informally to the notice of the foreman or if necessary to that of the management grew up. The management generally found this a convenience and procedure sometimes was regularised, in some cases I believe not altogether to the liking of the Trade Unions who disliked this independence on the part of individual groups of workmen. The Whitley reports were related, it seems to me, more to this line of development than to the other. The scheme of Whitley Councils was devised with reference to well organised industries, i.e., industries in which employed and employers are so highly organised that their respective associations may be regarded as representative of the great majority of those engaged in the industry.”

“The other line of development has been due mainly to the initiative of enlightened employers themselves. They realised that with the growth of the modern factory system with thousands of men employed in a single concern, grouped in different shops or compartments with different and sometimes conflicting interests, the personal touch and direct individual contact of the small shop or factory was no longer possible and that something must be introduced to take its place. As a result in many business concerns, Messrs. Cadbury Bros., Bourneville, is a striking example, there is an elaborate organisation of Shop and Group Committees and Works Councils in an ascending hierarchy by which all representations on matters affecting the workers are discussed with the management's representatives, the respective functions and powers of each grade in the hierarchy being precisely defined. Trade Union rules or

agreements are taken for granted but there is an immense scope for joint discussion and agreement. If we wish to popularise the idea of Works Committees in India among employers, and it is the employers we have to win over to its acceptance, it is to the second line of development that we shall look for guidance. If we take the other line, I speak with reference to the Madras Presidency, and give employers any reason to believe that we are advocating this policy with a view to forcing them to recognise and admit to a status within their industrial concerns of organisations which they regard as engineered and established by outsiders to further their own personal or political ends we shall ruin the chances of a movement to which I attach the greatest importance."

"I believe that the great majority of employers realise that something of the kind is necessary and that it is in their own interests to devise machinery by which matters affecting the men will be promptly considered and adjusted. As one employer said to me 'we have to recognise that the *Ma bap* era is over and we have to find something to serve the same purpose.'"

"We must further be content with small beginnings. We have to recognise that Indian labour is in training and experience a century behind the English workmen in these matters and that to attempt to give their representatives the wide functions contemplated by the Whitley reports would be to court failure and combined opposition on the part of the employers. We should be content to secure the setting up of machinery whereby the grievances of individuals or groups in an industrial concern shall receive prompt attention, discussion with the representatives of the men, careful consideration and prompt settlement. If the men's representatives were entrusted with the preliminary shroffing of complaints there would I think be a good many which would go no further."

"Another very important point is the position of foremen. They are responsible to the management of a concern for timing, for outturn, for discipline, and if any machinery adopted makes their position and the discharge of their duties difficult or impossible employers will soon find it or think it necessary to scrap it."

"The question is of course one for employers, but I think the difficulties can be largely got over. (1) By the employers carefully defining the powers of foremen, etc., I am inclined to think that they are at present ill-defined and in some cases excessive. We can't, of course, expect those responsible for the conduct of an industry

to adopt a system under which the question of the dismissal of a subordinate clerk takes eighteen months for its final decision but there is a golden mean between that and casual hiring and firing. (2) By the foreman or other executive officer's position on joint discussions being fully recognised and by his being present and joining in the deliberations on the side of the management when matters from his department are being discussed. To sum up it seems to me necessary (1) to keep this question entirely free from Trade Union complications, (2) to be content with small beginnings, (3) to remember the man who is responsible for discipline."

Mr. Chatterjee stated that, speaking for Mr. Clow, he did not think that the views stated by Mr. Moir were in any way antagonistic to the views entertained on the subject in the Labour Bureau of the Board of Industries. The President pointed out that the two questions of Works Committees and Trade Unions were by no means opposed to each other: there was nothing to prevent the development of healthy trade unions even where works committees had been organised and were working efficiently; on the other hand, works committees would enable the workers to develop a judicial spirit which would be of the greatest advantage to them in the organisation and management of trade unions.

Some Directors suggested that publications on the subject of works committees should be issued for the information of employers as well as workers. Mr. Meek said that the publications of the Home Government on the subject were already well known amongst Calcutta employers. The President said that, as soon as a certain amount of experience was gained with the works committees that had been organised in India, information on the subject would be disseminated more widely.

IX.—PROPOSED EMPLOYMENT OF AN EXPERT FOR THE DEVELOPMENT OF THE INDIGENOUS CUTLERY INDUSTRY.

(PREFATORY NOTE READ AT THE CONFERENCE.)

In 1913-14 the imports of cutlery into India were valued at £188,882, the countries of origin being chiefly the United Kingdom and Germany. During the war, when supplies from abroad, were cut off, and the demand for clasp knives (for soldiers) and pruning knives was considerable, steps were taken to develop the knife-making industry which had always existed on a small scale in India, especially in the Punjab. The indigenous product was quite successful: suitable steel can be obtained from the Tata Iron and Steel Company, and the bone, ivory, etc., required for the handles are also locally obtainable. The local knives, however, lack finish and, though serviceable in themselves, it is not unlikely that they will be ousted by the more attractive imported knives, unless something is done to assist the industry.

2. The question then arises whether it would be worth the while of the central Government, or of any provincial Government, *e.g.*, the Punjab (which is particularly concerned) to obtain from the United Kingdom a master cutler to advise local artisans and put the industry on a sound footing.

F. R. R. RUDMAN.

Discussion.

At the request of the President, Mr. Findlay Shirras gave figures of imports in 1914-15 and 1918-19, mentioning the countries of origin. They were as below:—

Imports of cutlery.

	1914-15	1918-19;
	£	£
United Kingdom	61,944	54,786
Germany	23,350	Nil
Japan	83	28,987
United States of America	6,173	40,763
Other countries	7,128	3,454
TOTAL	98,678	127,980

The President thought that, if an expert were imported, he would probably be of help to a big firm; but the village cutler, working according to primitive methods, would never utilise the services of the expert. Mr. Swinchatt (United Provinces) said that, if any real improvement was to be effected, more than one expert would be necessary as there was a good deal of division of labour now in the industry in advanced countries. With reference to the President's remark, Mr. Collins (Bihar and Orissa) thought that even Sheffield cutlery was, until recent years, to a large extent a cottage industry. Sir Henry Ledgard agreed with the President that it would be very difficult to help the cottage industry by the employment of an imported master cutler.

The President said that three courses were possible:—

- (1) when the steel manufacturers in the country produced enough steel, we might get a European firm to settle in India and manufacture in this country; or
- (2) we might get information with regard to the cost of up-to-date plant, and, if so advised, start a pioneer factory in India; or
- (3) we might import a master cutler and employ him in helping persons carrying on the industry in its present form.

It was resolved that, if any Director of Industries or a member of his staff went to England on leave in the next hot weather, he might investigate the conditions obtaining in England and make recommendations regarding the best course to adopt.

X.—CONTRIBUTION OF TECHNICAL MATTERS TO THE PRESS OR SCIENTIFIC MAGAZINES BY GOVERNMENT SERVANTS.

(PREFATORY NOTE READ AT THE CONFERENCE.)

According to rule 15 of the Government Servants' Conduct Rules, a Government servant may undertake occasional work of a literary or artistic character, provided that his public duties do not suffer thereby. Rule 17 stipulates that a Government servant may not, unless generally or specially empowered by the local Government in this behalf, communicate directly or indirectly to Government servants belonging to other Departments, or to non-official persons, or to the Press, any document or information which has come into his possession in the course of his public duties, or has been prepared or collected by him in the course of those duties, whether from official sources or otherwise.

2. The fact that Government servants are not allowed to communicate to the Press under rule 17, appears to receive different interpretations in different departments, *e.g.*, in the Public Works Department in Bombay, the rule is very rigidly adhered to and permission has to be obtained from Government to publish papers of engineering interest in the proceedings of the Bombay Engineering Congress. Other departments apparently do not take the same view, and the general impression among a good many officers is that the restriction makes officers refrain from writing in technical papers or contributing articles in magazines, etc. In the Department of Industries, it appears to be necessary that a good deal of publicity should take place, and that the technical officers working therein should bring their knowledge before the public as much as possible. It has often been urged that there is far too much secrecy among Government officials and that their knowledge and experience should be much more readily at the disposal of the public.

3. It is suggested, therefore, that the time has come when there should be some relaxation in this rule, and that the technical officers in the employment of Government should be encouraged to publish articles and letters on technical matters. It is not proposed that they should be allowed to give away confidential information or to

embarrass Government with opinions that are contrary to Government policy, etc., but it is thought that if this aspect of the case is clearly put before officers, they will have sufficient common sense to know what they should write and what they should leave out.

G. H. THISELTON-DYER.

Discussion.

The President suggested that the difficulties pointed out by Mr. Thiselton-Dyer (Bombay) would be met if the local Government delegated to heads of departments the power to scrutinise and pass a contribution intended to be made by an officer on a technical matter to the press or to scientific magazines. He did not think that the complete abrogation of the present rule would be desirable in the interests of either the writer or of the Government. Mr. Collins (Bihar and Orissa) referred to contributions made by agricultural and other officers to the Agricultural Journal of India; but it was pointed out that that was a Government publication issued by the Government of India. Mr. Chatterjee enquired whether Directors of Industries would have to obtain the approval of local Governments to contributions which they might wish to make to the Quarterly Journal of Indian Industries and Labour. The President suggested that Directors should obtain the general approval of their local Governments for contributions to the Journal of Indian Industries and Labour.

After discussion, the conference wished to suggest that the present rules on the subject should stand, but that local Governments be empowered to delegate to the Directors of Industries the function of scrutinising and approving the publication in non-Government journals of contributions from their staff.

XI.—A.—CENSUS OF PRODUCTION.**B.—LIST OF CHEMICALS MANUFACTURED IN INDIA.****(PREFATORY NOTE READ AT THE CONFERENCE.)**

A.—The question may be considered in connection with the blue book known as "Large Industrial Establishments in India," and with Resolution No. 53 of the Imperial Statistical Conference. The gist of the latter is that "endeavours should be made in all parts of the Empire to obtain annually if possible, or otherwise quinquennially, complete statistics of industrial production."

2. With regard to the blue book "Large Industrial Establishments," the officiating Director of Statistics states that the sources from which the statistics are compiled are:—

(a) returns of factories coming under the operation of the Factories Act;

(b) returns of industrial concerns not coming under the Factories Act but employing a minimum of 50 persons, which are received from local officers under instructions issued with the approval of the Commerce and Industry Department in 1909.

The statistics as collected under (b) are unsatisfactory; and instructions have been issued for the scrutiny by provincial Directors of Industries of the information which is collected by local officers. Mr. Ghosh points out that he obtains figures of production of Cotton Mills, Paper Mills, Woollen Mills, Breweries, Sugar Factories, Iron and Steel works, and suggests that figures of production of other industries should be collected for compilation in the blue book.

3. The officiating Director of Statistics has also written a further note in connection with Resolution 53 of the Statistical Conference in which he points out that, though certain figures of production are obtained, no attempt has hitherto been made to systematise the information available in India as has been done in other countries, where the information is collected by a special agency for the purpose. When, in February 1919, the Hon'ble Sir D. E. Wacha raised the

question of a census of production, Hon'ble Member, who was then in charge of the Commerce and Industry Department, replied as follows :—

“It seems doubtful whether a census of production covering a number of industries of which the statistics of production are not at present maintained, would, if undertaken now, produce any really valuable results. The position will, no doubt, be improved when well-equipped Departments of Industries are organised throughout the provinces.”

4. The statistics of production published at present are not sufficiently comprehensive, and the information is of little or no value to those who are interested in Indian industrial movement. Mr. Ghose states that, so far as factories are concerned [the Statistical Conference refers to industrial (factory) production], there would probably be no very great difficulty in collecting statistics, and that executive orders under the Factories Act would perhaps enable us to do so. To supplement these statistics, he adds, steps should be taken to collect information relating to private concerns through the provincial Departments of Industries. If the information collected by the Departments of Industries is found not to be complete, the question of taking a general census on a big scale by legislation can be considered later.

5. Mr. Ghose's note is open to the criticism that, under the Factories Act, Government has no statutory powers to call for information regarding production although, under the Mines Act, Government can probably do so in the case of mines. Nor is Government equipped with the machinery to obtain and compile statistics of production of the innumerable industries at present existing in India.

6. I may refer at this point to Resolution 13 of the Conference, which is to the effect that whenever a Government calls for statistics, it should confer the necessary statutory authority upon its officers for their collection; in other words, that, if a census of production is decided upon, legislation will be necessary.

7. Legislation may be necessary in future, but I do not think it can be justified at present, because :—

- (a) we have not the machinery to obtain statistics or to check them when they have been obtained;
- (b) without such check the returns will probably be of little value; and

(c) the small factory owners and establishments would at present resent being compelled to give figures of production; they will not understand for what reason the figures were being obtained and, by reason of the fact that legislation has been employed, will think that the only reason must be one adverse to themselves. They will probably associate the scheme with income-tax assessments.

8. Without legislation, however, it is possible to go a good way in the direction we want. When the new Factories Act comes into force, factories employing a minimum of either 10 or 20 men will come within the scope of the Act. Such factories will come in contact with the Factory Inspecting staff, who can explain the purposes for which Government require the statistics of their production; and if it is made clear to them that any figures which they give will be kept absolutely confidential, only totals being published, they will gradually become less unwilling to give accurate statistics. The mere fact that they are being inspected by Government officials at regular intervals will probably be an added inducement for them to give correct figures. Their figures can also be checked to some extent by the Factory Inspectors, and can further be checked by the Director of Industries. It seems feasible to utilise the provincial Departments of Industries for the collection of industrial statistics of production without having recourse to legislation.

9. For many years to come there is bound to be a considerable margin of error, as for instance in the case of cottage industries, statistics of which in an accurate form are probably unobtainable. We must, I think, give up all hope of trying to obtain absolute accuracy, and our endeavour should be to reduce the margin of error to the lowest degree possible. If the above statement of the position is accepted, the action now to be taken is to find out, in consultation with the Director of Statistics and provincial Directors of Industries, how best we can obtain such statistics of production as will voluntarily be given to us and are capable of some form of check by a competent authority.

B.—During the war, the Indian Munitions Board found it desirable to issue a confidential pamphlet known as the "List of Chemicals manufactured in India." Dr. Simonsen was of opinion that the list should be revised annually, and the time has come to consider whether revision is now necessary.

2. There is no doubt that our present figures are inaccurate and the only means of obtaining some measure of accuracy will appear to be to use the agency of provincial Directors of Industries. The points for consideration are:—

- (a) Is it worth while continuing this publication? and
- (b) If so, will Directors of Industries co-operate in scrutinising the figures furnished by firms?

F. R. R. RUDMAN.

Discussion.

B.—LIST OF CHEMICALS MANUFACTURED IN INDIA.

Mr. Chatterjee mentioned that there were difficulties at present in securing accuracy, both with regard to the prices quoted in the return, and also the quantities manufactured by different firms. After discussion, the conference resolved that information regarding prices and quantities might be omitted in the pamphlet, but that the names of firms and of the chemicals manufactured by the firms should be repeated. The information will be collected by Directors of Industries and transmitted to the Government of India to be incorporated in the next issue of the pamphlet which should bring the information up to date for the 1st of January 1921. The Directors of Industries will ask for information from the firms, regarding the quantities they regularly manufacture, but they need not transmit this information to the Government of India.

A.—CENSUS OF PRODUCTION.

Mr. Findlay Shirras explained the importance of such a census, and described the procedure now adopted in the United Kingdom under the Act of 1906. He said that we should have information, not only regarding the value of the articles produced, but also, in conformity with the practice in the Dominions, we should have information regarding "added value" and of the amount paid away in wages. He said that a great step in advance had already been taken here in the issue of the industrial schedules in connection with the forthcoming census. He also understood that it was proposed very considerably to expand the definition of factories in the revised Factories Bill that would be placed before the Legis-

Nature of information required.

lature early in 1921. Meanwhile, Directors of Industries will soon be better equipped for the task that will be thrown on them in connection with a formal census of production. We should, also, be able very soon to obtain the advice of the Imperial Statisticians Bureau that will be established in conformity with the decision of the Imperial Statistical Conference. For these reasons, Mr. Findlay

*Postponement of
legislation.*

Shirras thought it would be better to postpone for a little time legislation to obtain authority for a regular census of production. He explained that in the United Kingdom, a census was taken every five years, or whenever the Board of Trade thought fit. In Canada a postal census had been taken. Mr. Chatterjee mentioned that in the United States separate censuses were taken for different industries, and it was understood that the machinery employed there was of a very elaborate character.

The President asked in what way Directors could assist in the collection of the statistics required by Mr.

*Assistance of Direc-
tors of Industries.*

Findlay Shirras for the census of production. Mr. Scott, Director of Industries, Punjab, did not recommend postponement; he said he had drawn up a tabulated form which he proposed should be filled in by Industrial Surveyors who had been appointed; the information thus collected may assist the collection of the statistics required; he would be glad if the form proposed by him were considered and criticised. He read out the form and explained how it should be filled in. On enquiry from the President he said he had not given detailed instructions to the Surveyors as to the filling in of the form, nor had he got the sanction of the local Government to the procedure he proposed adopting, nor did he consider that such sanction was necessary. Mr. Scott explained that the form was not intended to be issued broadcast but would be in book form with duplicates of which one form would be retained by the Industrial Surveyor and the other forwarded to the office for record; further, the form had not been drawn up with the idea of helping the production census, but for the purposes of an industrial survey.

Mr. Blunt (United Provinces) considered that the results of the procedure proposed to be adopted by Mr. Scott would be dangerous, because his men would not be trained, and statistics could not be relied on, unless they were compiled by trained men, who had a clear conception of the end in view.

Mr. Findlay Shirras pointed out that the procedure proposed by Mr. Scott was not what was ordinarily understood to be a census of production as it would not be in a form which would admit of totalling a comparison. The president thought that the use of these forms would introduce confusion and effect more harm than good, because people would get accustomed to vague and inaccurate information being collected before a true census of production was taken. Mr. Meek (Bengal) on the other hand, felt that the surveyors would get a training and they would come of use when a census was actually taken. The President then suggested that

Necessity of training surveyors for collecting accurate information.

the surveyors, instead of being provided with set forms only, should receive careful instruction in a "class" looked after by responsible persons, namely, either the Director himself or one of his senior officers. They could then be given definite instructions with regard to the enquiries that they should make when they proceeded to a village or town, and they should be provided

Standard inspection notes.

with standard inspection notes which would form a guide to their further inquiries. Mr. Meek (Bengal) stated that it is proposed that his circle officers should help the census officers in filling the industrial schedules. They will in that way receive a certain amount of training. Mr. Crosthwaite (Central Provinces) was in favour of early legislation for a census of production. He did not, however, support the idea of giving set forms to surveyors to fill in: in Mr. Crosthwaite's opinion inspection notes should be used by surveyors with definite instructions from the Director of Industries. Mr. Barua (Assam) was in favour of postponing any legislation with regard to a census of production.

In reply to a query from Mr. Collins (Bihar and Orissa)

Collection of statistics for the "large Industrial Establishments."

Mr. Findlay Shirras informed the conference that the information referred to in paragraph 2: of the note now came to the Director of Statistics—from some provinces from the Directors of Industries, and from some from the local Government directly. In Bengal and Bihar and Orissa the information was supplied by district officers. Mr. Collins (Bihar and Orissa) suggested that Directors of Industries should be given definite headings with regard to which they were to obtain information concerning large industrial establishments. He, also, thought that all industrial information received by the Director of Statistics should go through the Director of Industries. The

President said that these were matters which the Directors of Industries could settle with their own Government: it will be for the local Governments to determine the extent of the information which **Directors of Industries** should obtain and whether they should submit the same direct to the Director of Statistics or through their local Governments.

There was some discussion regarding the machinery already employed in different provinces for the collection of industrial information by Directors of Industries.

The general sense of the conference was that a staff of surveyors and circle officers should be employed in each province, and that they should be properly trained, either individually or preferably, in a "class" and that they should be provided with model inspection notes, which would form a guide.

Employment of a staff of surveyors and circle officers in each province.

XII.—LABOUR STATISTICS.

(PREFATORY NOTE READ AT THE CONFERENCE.)

Resolutions 83, 84 and 85 of the British Empire Statistical Conference which met in London in February are as follows :—

“(83) The Conference is of opinion that with respect to any statistics required to be obtained by the different countries having representation at any International Labour Conference, the material obtained by the countries of the British Empire, being in any case communicated to the proposed British Empire Statistical Bureau, may conveniently be prepared for presentation to the International Labour Office through the agency of the Bureau in any case in which direct presentation of the statistics is not specially desired by the Governments concerned. The Conference is further of opinion that information, the application of which to redistribution of labour may present advantageous opportunities to citizens of the Empire, should be available for Empire purposes not later than for general international purposes.

(84) The Conference realises that the pressure of modern industrial conditions necessitates a far closer and more accurate study of statistics of labour than has been accomplished hitherto. It realises that large quantities of statistical data have been secured in some cases, but affirms its opinion that with few exceptions the presentation of such data has left much to be desired. It is of opinion, therefore, that, notwithstanding the fact that fundamental differences in local conditions make direct worldwide comparisons impossible, special attention should be given in the British Empire to this field of statistical inquiry, and accordingly recommends that statistics of as complete a character as possible should be obtained in each country of the British Empire bearing on the rates of wages and the earnings of work-people, the hours of labour, the causes, duration and mode of conclusion

of strikes and lockouts, on employment, including unemployment, on industrial organisation, and on all other matters with a bearing on current labour conditions in so far as they are capable of statistical treatment.

- (85) The Conference recommends that those inquiries should extend not only to the conditions of labour in industrial establishments, but also to those of commercial, agricultural, maritime, and other employment."

An endeavour is being made to collect the necessary information in the Labour Bureau and the present position is as follows :—

- (I) *Cost of living and wages.*—Directors of Industries were asked for details and some useful material has been collected; but in the absence of any separate staff they are obviously handicapped. The Punjab has a special Committee enquiring into this matter and Bengal and Madras have officers directly concerned with industrial intelligence. Little, however, is known about the cost of living and the assertions freely made by both parties in industrial disputes as to its relations to wages cannot be checked. Accurate information on the cost of living would be of particular value to the Imperial and provincial Governments in framing wages scales for their industrial employes. An attempt was made to collect statistics giving a survey of wages for October 1919 and April 1920, but owing to the lack of any standard form these statistics proved almost impossible to collate.
- (II) *Strikes and Lockouts.*—Local Governments have been asked to send reports and have in most provinces delegated this work to the Directors of Industries. The Departments of the Government of India have also been asked to report strikes occurring in industrial establishments under their control.

Extracts are also collected from all leading newspapers and filed. These three sources are used to compile :—

- (a) A summary of each strike.
 (b) A weekly summary of the labour situation.

(c) The necessary reports to the Secretary of State. Can Directors of Industries suggest improvements? In England it has been the custom for over 30 years for the Board of Trade to ask the parties involved for their versions in a strike. There are obvious dangers in adopting this method in India, but it is worth consideration.

(III) *Unemployment.*—It is a well-known fact that there is at present no industrial unemployment in India, but we shall be subjected to repeated calls from the International Labour Office for statistics of unemployment. Can Directors of Industries suggest any method of gauging unemployment should it arise? The Ministry of Labour in England depends upon the returns from trades unions and other benefit societies, but in India such unions as exist embrace only a small proportion of the workers and none give any unemployment benefit.

(IV) *Industrial Organization.*—Directors of Industries and Departments of the Government of India have been asked to supply statistics of the various unions formed, but little accurate information is available. What is chiefly wanted is information as to the office bearers, strength and funds. The suspicion with which some regard these enquiries and the desire on the part of others to exaggerate their own importance will probably make accurate information difficult to obtain. Can Directors of Industries offer any suggestions?

A. G. CLOW.

Discussion.

With regard to the first subject, namely, cost of living, the President said that the Government of India were now examining the question. It has to be determined whether an index number should be prepared, and if so, on what basis. There will then be the question whether the enquiry should be made separately in different provinces or should be co-ordinated. Before the Government of India finally decide to address local Governments the Director of Statistics would be consulted.

With regard to the collection of figures of wages, Mr. Chatterjee stated that the Revenue and Agriculture Department had issued a letter to local Governments in May 1919, whereas statistics regarding wages in October 1919 and April 1920 had been obtained independently from local Governments. It was desirable that the matter should be further examined in the Government of India before we could be in a position to discuss the methods with the Directors of Industries. Mr. Findlay Shirras agreed with this view. The President thought that the Government of India must fix standards before satisfactory returns of wages could be obtained, otherwise figures obtained from one province could not be compared with those from other provinces. The conference, therefore, decided that the matter was not yet ripe for a full discussion.

With regard to strikes and lockouts, the various difficulties in obtaining satisfactory reports from the parties concerned were fully thrashed out in the discussion. The point was raised whether a statutory obligation could be imposed on the owner of a factory to report a strike or lockout of any dimensions as soon as it occurred. The President said that the point would be examined by the Government of India.

As regards unemployment Mr. Findlay Shirras suggested that a procedure similar to that in vogue in the United Kingdom might be adopted. There forms are sent round to owners of factories as well as to employers' associations to be filled in and returned to the Ministry of Labour. These forms gave figures of the number of men employed week by week, and also gave particulars of "overtime" and "short time." Mr. Chatterjee pointed out that such figures would be deceptive in the case of India in view of the migratory nature of Indian labour. Other members of the conference supported Mr. Chatterjee's view. It was thought that the conference could not make any definite recommendations under this head.

With regard to particulars about Trade Unions Mr. Crosthwaite said that there was difficulty in furnishing information regarding the office-bearers, strength and funds, because in many cases these facts were kept confidential by the unions that had been formed. Directors of Industries promised to send up-to-date information in the

beginning of January next. In this connection the President referred to the necessity of the organisation of a machinery in every province to deal with the questions of labour intelligence and statistics. So far no province had set up any organisation with the exception of Madras and Bengal. The Government of India had established a Labour Bureau, but its duties were limited to collection and collation of information. It could not do the work in the provinces.

The feeling of the conference was that a machinery ought to be set up in each province.

XIII.—METHODS OF OBTAINING COMMERCIAL AND INDUSTRIAL INTELLIGENCE FROM FOREIGN COUNTRIES.

(PREFATORY NOTE READ AT THE CONFERENCE.)

Commercial attachés and consuls already do a certain amount of work in collecting and distributing general information regarding the countries to which they are credited; but they have generally no special knowledge of Indian requirements, and, for this reason, the Industrial Commission recommended consideration of the proposal to appoint Indian trade agents in foreign countries of special importance to India. The proposals of the Commission are under consideration by Government and need not probably be considered further at the conference.

2. There is one important proposal, however, that has apparently not been sufficiently considered, and that is the deputation of industrial and technical specialists to appropriate foreign countries. Most technical specialists have friendly relations with men of their own caste abroad, and, through them, receive literature bearing on their own lines of work. No commercial attaché or general trade agent can give information which supersedes that already in the possession of technical specialists; and this information can be improved on only by a personal visit on the part of the specialist himself. The bond of friendship between him and his corresponding specialist in the foreign country will enable him to get inside information not otherwise obtainable. He will, also, have in his mind a certain number of specific problems of interest to India, and will look out for information affecting these problems.

3. When the provincial Departments of Industries are fully developed, there will be technical specialists in each province, and it will then be necessary for the Government of India to insure that unnecessary duplication does not occur by the deputation of more than one of each kind of specialist to the same foreign country. But there will be few chances of such duplication occurring in the near future.

4. In order that India may obtain full value for the cost of such deputations, it will be necessary to limit the privileges to

those officers who are members of permanent services. It would, obviously, be unwise to pay for the deputation of a temporary officer who cannot turn to account for long, in the interests of India, his newly acquired information. India could only obtain the advantages of such a deputation by renewing the officer's agreement, and in that case, he would probably, because of his newly acquired information, raise his market value.

T. H. HOLLAND.

Discussion.

Mr. Nelson said that the local Government would be anxious to send specialists to foreign countries for enquiries like those suggested in the note if the Government of India would approve. The President said that the Government of India had considerably relaxed the stringency of the scrutiny of local Governments' proposals in this matter. Mr. Nelson said that the proposal in the note was an additional argument for the organisation of permanent services. The President agreed and said that the matter had been referred to in his opening remarks. The principle of the note was then agreed to by all Directors.

XIV.—REGULATION OF JAIL INDUSTRIES.

(PREFATORY NOTE READ AT THE CONFERENCE.)

The Problem.—Starting from the hypothesis that extra-mural labour cannot be the principal form of employment, it follows that long-term prisoners must have regular intra-mural employment. The main object of prison administration is reformation of the prisoner, and it is therefore desirable to avoid all forms of labour which are purposeless and sterile. The best forms of labour are therefore those which excite the prisoner's interest, lead him to exert his powers willingly and cause him to form habits of industry. The cost of jail administration falls on the tax-payer, and it is therefore the duty of Government to obtain as good a market as possible for the products of jail industry as a set-off against the cost of such administration.

On the other hand, jail manufactures compete with free industries, and the competition is unfair because in the case of the former—

- (i) Labour is free, and
- (ii) Jail industries are not conducted on strictly commercial lines. If there is any loss on one year's working it is wiped off at the expense of the general tax-payer, instead of being carried forward as a debit which the factory has to work off itself.

It is a question how far jail labour could be employed on the production of partially manufactured articles, such, for instance, as forgings or hand-stampings. Such articles find their market among manufacturers and their production is not therefore open to the same commercial objections to jail competition.

Attempted solutions in the past.—In 1886 the Government of India laid down the following principles:—

- (1) Jails must not be converted into steam factories. The use of steam machinery is not prohibited but all extensions of substantial magnitude must be submitted to the Government of India for sanction.
- (2) Jail industries must be adapted as far as possible to the requirements of the public consuming departments, and

these departments must be compelled to take articles of jail manufacture as long as they can be supplied of the same quality and at the same price as in the open market. Special industries, such as carpet-making, may be exceptions to this rule.

(3) The price of jail-made articles must follow as closely as possible the existing market rates for similar articles made by private industry. When such market-rates do not exist or cannot be ascertained, the price must include:—

- (a) the price of raw material;
- (b) the wages of jail labour, due allowance being made for the admitted inferiority* of convict labour to free labour
- (c) a percentage of wear and tear of plant;
- (d) a percentage on account of profits which would ordinarily be fixed at—

10 per cent. in the case of articles supplied to Government,

15 per cent. in the case of articles supplied to retail dealers,

25 per cent. in the case of articles supplied to private consumers,

on the cost of the raw materials and labour.

- (e) An excise duty of 3½ per cent. in the case of cotton goods.

In 1906, the Government of India gave it as their opinion that it is not necessary for a jail purposely to handicap itself by the use of obsolete or inferior machinery. They considered, however, that when it is proposed to lay down steam machinery for the first time in any jail, the objects of the installation and the possibility of its interfering with private enterprise should be thoroughly examined and, if the proposal survived this test, that it should be submitted for the sanction of the Government of India.

The question is discussed in paragraphs 215 and 216 of the Report of the Indian Industrial Commission who definitely recommended—

- (i) that only manual labour should be allowed in jail industries and;

* It may be noted that the greater the extent to which up-to-date machinery is installed, the more this element can be discounted.—J.C.B.D.

- (ii) that the industries themselves should be so chosen that the labour put into the finished goods represents the major portion of the cost of production. †

The Commission deprecated the establishment of power factories and the extensive employment of machinery in jails and recommended that Directors of Industries and their Advisory Committees should be given a voice in such matters with power to make recommendations to the local Government.

It may be noted that a possible objection from the point of view of jail administration to power factories is that they either fail to teach a man any trade on which he can live on release; or teach him a trade, such as power weaving or spinning, in which he is never likely to obtain employment unless he lives in a place whence mill labour is recruited.

Difficulties in carrying out this policy.—If the consuming departments of Government are to be made to obtain their requirements from the jails, it seems clear that jails must be made responsible for supplying suitable articles. Therefore they should be suitably equipped with up-to-date machinery, particularly as they cannot count on the retention of their skilled workmen.

Proposals for consideration.—It is suggested that while the principle should be reaffirmed that jail industries should be adapted as far as possible to meet the requirements of the public consuming departments, and that those departments should be compelled to purchase articles of jail manufacture, subject to the condition that they are of similar quality to, and not of greater price than, those obtainable in the open market, the following principles should be adopted:—

- (1) Jail industries should be directed mainly into channels in which large, organised and powerful industries are already in existence—such as jute and cotton.
- (2) Local Governments should avail themselves of the advice of their Directors of Industries in selecting jail industries. Apart from the question of competition with free industries, the selection of jail industries which will provide a useful training for the convict is admittedly difficult since instruction is costly, *e.g.*, it often involves waste of material.
- (3) Sale to the general public should not be prohibited and, in the case of a well-established special industry, such

as carpet-making, need not be objected to; but, in other cases, it should be reduced to the minimum.

- (4) Jails should not issue public advertisements.
- (5) Articles intended for sale to the public should be collected and sold at a central depôt.
- (6) The principle that the price of jail-made articles should follow as closely as possible the market-rate should be reaffirmed.

In connection with the last point, it is for consideration whether a recommendation should be made to the effect that Directors of Industries should be consulted before the price of jail-made articles is fixed.

J. C. B. DRAKE,

Secretary to the Board of Industries.

Discussion.

After considerable discussion the conference considered that looking at the questions raised in the note purely from the industrial point of view, the conference suggests that the Inspector-General of Prisons in a province might consult the Director of Industries before the introduction of any new industries into a jail. The conference also thought that a training in jails in organised industries was less harmful from the industrial point of view than such training in small cottage industries and that generally speaking the fear of jail competition with established industries is more imaginary than real.

XV.—THE FUTURE CONSTITUTION OF THE CONFERENCE.

(PREFATORY NOTE READ AT THE CONFERENCE.)

At the last conference it was decided not to increase the size of the conference at this stage, and on a request being put forward by the Nizam's Government that the Directors of Industries of Indian States should be invited to attend, Honourable Member considered that as the present conference would be concerned mainly with the completion of the discussion regarding official machinery and methods of co-operation between provinces, it would be unwise to invite to it persons other than Government Directors of Industries of British Provinces. Later, when definite questions of industrial and technical development come under discussion, representatives of Indian States, as well as of Industrial and Commercial associations might be invited to attend the conference.

2. This plan would involve a complete change in the object and scope of the conference and, if it was effected, it would be necessary to arrange for separate meetings for official discussion on purely Governmental subjects.

F. R. R. RUDMAN.

Discussion.

After discussion the conference resolved that the next meeting of the conference should be held at Simla about six months from now. It would be desirable to postpone till then the consideration of the question of the enlargement of the constitution of the conference. Meanwhile if a Director of Industries thought that the presence of any particular gentleman belonging to his province would be of value in the deliberations of the conference, the Director would send in his name for consideration by the President for an invitation to attend the conference

XVI.—PROVISION IN INDIAN SCHOOLS OF ART FOR TRAINING IN THE METHODS OF ARTISTIC ADVERTISEMENT.

(PREFATORY NOTE READ AT THE CONFERENCE.)

Extract from the Weekly Report of the Board of Industries and Munitions, dated the 26th June 1920, on artistic advertising of Indian manufactures.

“The attention of the Board has been drawn to the deficiency of India in advertising and its effect on her growing industries. It has been pointed out that advertisements are scanty and lack attractive illustrations or letter press, and that industries are not likely to make headway unless they advertise in an attractive way. India is very weak in presses that can print an attractive advertisement and this is a great handicap to the retail trade in locally produced goods, particularly in view of the probability of a flood of imported catalogues issued by retail agents of imported goods.”

“The export of Indian manufactured goods must be backed by attractive *wholesale* catalogues in some cases, and wholesale catalogues will also be needed to induce retailers to stock Indian-made goods since foreign wholesalers send them such catalogues at present. Industries requiring such catalogues will be those that produce on a large scale goods, the retail disposal of which depends mainly on their appearance or on catchy descriptions of their qualities. Jute and cotton goods do not need such catalogues, but such different types of goods as garments, leather articles, pencils, small engineering accessories, glassware, etc., do. It would be impracticable to issue illustrated catalogues of most kinds of Indian artware, as the output is not large enough to make it pay. Some goods, such as leather articles, will depend for their success very largely on export.”

The points for consideration are :—

- (a) Should the question of artistic advertising be taken up in Schools of Arts, or should this work be more appropriately left to private enterprise?

- (b) If it is decided to give instructions in artistic advertising in Schools of Arts, what practical steps are necessary to enable this to be done?

F. R. R. RUDMAN.

Discussion.

Mr. Chatterjee stated that the only replies so far received to the letter that had been issued by the Government of India were from Bombay and Bengal. The reply from Bombay was not encouraging. Mr. Meek said that he had circularised a number of firms interested in the subject, and read out answers obtained from them to a questionnaire that he had sent out. (An abstract of these answers has been printed as appendix B to these proceedings.) Sir Henry Ledgard then spoke on the importance of the study of methods of distribution in order that markets may be secured for the goods produced in an industrial country. The most successful of these methods was the use of advertisements. Sir Henry Ledgard gave illustrations of the methods of advertisement pursued in the boot and shoe trade. He also referred to the question of design, which must always precede manufacture in every industry. He thought that there was a great need in India for designers in this sense of the word.

Mr. Heard, Principal of the School of Arts and Crafts in Lucknow, who was present by request, stated that a section for artistic printing was started in the Lucknow School five years ago. They brought out from England a specialist in lithography and started a class. Eighteen students had been trained till now, but it had been difficult to find employment for the majority of them. In his opinion the boys were well trained for the work, but he was not able to propose any further developments until the printing presses in the country were ready to obtain the necessary plant and to give employment to the men turned out from the school. Mr. Heard exhibited to the conference a large number of drawings to illustrate the kind of work that was being done by the boys in the course of their training in the school. He did not consider that the technical difficulties, caused by the climate or other causes,

were in any way insurmountable. The main question was that of making industrialists and trades people realise the importance of artistic advertisement and of making the printing presses offer an adequate remuneration to the technical men employed by them. Some of the students turned out by the Lucknow School had been employed outside the province.

The President suggested that in order to develop the industry and to make advertising popular the school might take in work on a semi-commercial scale. Mr. Heard said that that was the proposal now under consideration by him. Sir Henry Ledgard asked whether the boys in the Lucknow School would be able to make designs for industries, for instance, for caps worn by Indians. The designer would furnish designs to suit the material available, and then the industrialist would manufacture the caps according to the design. In this way the caps could be made to suit the tastes and fashion of the time. Mr. Heard said that if samples of the materials were supplied the students in his school could be trained to make the designs.

It was then suggested in the conference that a pioneer institute should be established in some suitable centre. **Pioneer Institute.** The expenses should be undertaken by the local Government concerned, but that other provinces which would benefit should also contribute towards the expenses of the institute. In other words, it was to be an all-India institute. The question was then discussed whether such an institution was likely to be in competition with any business already organised in the country. It was believed that there was no such competition likely. As a matter of fact, if any business were already organised in India they would want trained men for their work, and the pioneer institution would be of benefit to them by supplying such trained men.

Mr. Crosthwaite, who had recently made investigations in England on the subject, mentioned that there was a great concentration there at present on colour work, and that the use of stone was being replaced by aluminium plates. Mr. Campbell stated that in Madras it had been suggested by one or two interested industrialists that a school of advertising should be started. Mr. Heard explained that men of different types and ability were required first, there was the man who could produce the idea, novel or otherwise; second, the man who could put the design on paper suitable for the method of reproduction; third, the man who could produce the various printing

surfaces required and fourth, the printer himself. In summing up the President suggested that Mr. Heard should write a note on the subject, which could then be discussed in the Department of Industries, and if necessary in the next conference, and in the alternative a special conference could be assembled, representing all the interests involved, to discuss the matter. Mr. Heard accepted the suggestion.

XVII.—BRITISH INDUSTRIES FAIR.**(PREFATORY NOTE READ AT THE CONFERENCE.)**

Directors of Industries have doubtless seen this office letter No. I-531-54, dated the 2nd July, asking local Governments whether they proposed to participate in the British Industries Fair of 1921. In the letter, attention was invited to the following points:—

- (1) Exhibits at the Fair are only samples to be used as a basis for wholesale trade, and there would be little advantage in exhibiting such samples unless there was some certainty that orders placed on the samples could be reproduced in sufficient quantities, of the same standard of quality and up to time.
- (2) If participation in the Fair is to be of real value, it should be continued from year to year.
- (3) Provinces participating must be represented by an officer whether of their own or of another Province. Local knowledge is of course very desirable, but the main thing is that the representative of a province should be responsible for accepting only such orders as can be executed, and for getting them executed.

Other matters for consideration are as follows:—

- (4) The desirability or otherwise of having a central show room to which trade purchasers can come. The toys and fancy goods trade will not buy "on catalogue" but only after seeing samples and selecting the articles which they think they can sell. Such show room should perhaps be in the Indian Trade Commissioner's Office.
- (5) A discount must be allowed to the wholesale purchaser, or, in other words, the retail price must be considerably higher than that at which the goods can be sold wholesale.
- (6) It is doubtful policy to give to a single firm the agency for all England, though it may often be desirable to give an agency for a limited time, for a single town or a group of towns, to a big retail shop which has local branches.

- (7) A business organisation is necessary to advertise, arrange exhibits, see to the delivery of goods, collect money, etc.
- (8) Modifications in design or execution must be carried out in order to meet the requirements of the foreign market.
- (9) All organisations in India will presumably be provincial.

In order to put the matter on a business footing the formation has been suggested of a company in England known as "Indian Village Industries, Limited," the capital of which would be subscribed in England: there would also be, in the different provinces of India, "Indian Village Industries," Bombay, United Provinces or Burma, as the case may be. These would probably be aided by local Governments, supported by local men, and so arranged that ultimately groups of craftsmen would become shareholders.

F. R. R. RUDMAN.

Discussion.

Mr. Heard, who was present by request, and who had represented the Government of the United Provinces at the last British Industries Fair described the business he transacted there. There were two main results, namely, the volume of business done in the class of exhibits that were shown by him in England had increased very considerably, and secondly he had also been able to secure a great improvement in the quality of the goods sold in the United Kingdom and abroad.

With regard to the system of business that is now being done by Mr. Heard with customers abroad in regard to goods that Mr. Heard supplies to order, the question was raised about the uncertainty caused to the buyer by fluctuations in the rate of exchange. It was recognised that either the buyer or the seller must suffer if exchange varies between the time the articles bought are paid for and the time they are sold and paid for. It would be difficult to throw the risks of the fluctuation by exchange on the producer under present conditions in India. Most of these articles are the products of art industries, and, in a way, articles of luxury. It was, therefore, probable that if good quality was secured, and there was also regularity and promptitude in delivery, the buyer or the dealers in England and abroad would not object very much to the

uncertainties of price caused by fluctuations in exchange. Mr. Heard agreed to write an article on the subject for the Quarterly Journal of Indian Industries and Labour. The various points that will be raised in his note as well as the suggestions enumerated in the preliminary note that was placed before the conference, will then be criticised and discussed at the next meeting of the Directors' conference.

XVIII.—BRITISH EMPIRE EXHIBITION.**(PREFATORY NOTE READ AT THE CONFERENCE.)**

Reference—pages 34-40 of Bulletin* No. 1.

The British Empire Exhibition has received the warm support of the Imperial Government, and a special bill will be introduced in Parliament to enable Government to participate in the guarantee funds. The British Government will guarantee £100,000, provided the British public guaranteed £500,000. There is little doubt, but that the guarantees will be given. The exhibition will probably take place in 1923.

2. It is anticipated that the Government of India which has been specially asked to participate will do so officially.

3. At the last conference the opinion was unanimously held that India should participate, and it was agreed that a Commissioner should be appointed to get into touch with the organisers of the Exhibition at home, tour throughout India and organise the exhibits of local Governments, the Forest Department and business firms. He would also accompany the exhibits to England.

4. As regards expenses, it was thought that the Imperial Government should defray the cost of the Commissioner's salary and of the building while local Governments, firms and other exhibitors should pay not only the cost of the exhibits, but also some rent for the space taken up by them together with a fair share of the maintenance charges. It is desirable that no time shall now be lost in coming to a decision on these points, particularly regarding the appointment of the Commissioner.

5. The conference would perhaps like to discuss the way in which the Commissioner should get to work.

F. R. R. RUDMAN.

Discussion.

Discussion centred on the point as to what ought to be the principal object of India's participation in the British Empire Exhibition, namely, whether—

(1) it should be simply with a view to develop trade, or

* Pages 23-26 of the Proceedings of the conference of April 1920 (foolscap size).

- (2) whether it should also be an object to display the various resources of the country and of the industries that now flourish in India as well as to indicate the possibilities of the development of new industries in the country.

The general sense of the conference was that the second object should not be excluded from our aim in making arrangements for the participation of India in the exhibition.

It was finally suggested that the Government of India should send a circular letter to local Governments at an early date with regard to the exhibition, and ask them after consulting Directors of Industries to make suggestions regarding the scope of India's participation in the exhibition. As soon as these suggestions are received the Government of India can proceed to make arrangements regarding the appointment of a Commissioner, and the co-ordination of the work that must be undertaken without delay in the provinces for the preparation and collection of exhibits. In the letter to local Governments the Government of India should, if possible, make suggestions regarding the apportionment of costs between the Central Government and the Provincial Governments. In this connection the question of the inclusion of Indian States in the exhibition should not be lost sight of.

OTHER MATTERS OF GENERAL INTEREST.

The conference discussed the question whether teaching should be combined with research in the Provincial Research Institute and particularly in the Cawnpore Institute. Dr. Watson was present.

The various points for and against were brought forward. The conference did not wish to make any definite suggestion or recommendation, but Dr. Watson was given an idea of the views held on the subject by each member present.

Mr. Chatterjee mentioned that the International Labour Office was issuing weekly bulletins, samples of which were shown to the members of the conference.

It was stated that any Director who wished to obtain copies of the bulletins could apply direct to the International Labour Office at Geneva.

Combination of teaching with research in the Cawnpore Technological Institute.

Weekly Bulletins of the International Labour Office.

The President mentioned that a Director of Industries had recently sent an enquiry regarding the supply of Parliamentary Blue Books for the use of Provincial officers. According to the recent orders contained in the Resolution of the Government of India in the Indian Munitions Board, No. B-290—15, dated the 28th February 1920, each local Government which wished to obtain any Blue Book should apply direct to the Under Secretary of State for India at the India Office; the indent need not go through the Government of India.

Mr. Chatterjee mentioned that, as already stated during the course of the conference, the Department of Industries intended issuing Monthly and Quarterly Journals from the beginning of the new year. He expressed the hope that Directors would send in their contributions with fair regularity, and also that they would obtain useful contributions from non-official gentlemen.

Directors were also informed that the Punjab Department of Industries were issuing a bulletin. Mr. Scott said that this was only an experimental issue, so he had not sent copies to other Directors yet.

Several Directors of Industries then raised the question of the present difficulties connected with the supply of coal for the provincial industries. It appeared that with the exception of the Central Provinces in which no complaints had been made by consumers since July 1920, and only five complaints between March and July 1920 all other provinces were suffering acutely from the insufficiency and irregular supply of coal. There were no complaints in Assam. The President stated that the matter was one for the Railway Board, and the Commerce Department, but he would bring the views of the Directors to the notice of the authorities concerned.

Before closing the conference the President said that he had no doubt that all the members of the conference would agree in authorising him to convey their thanks to the Government of the United Provinces for the permission to use the Circuit House at Cawnpore for the meetings of the conference, and for the accommodation of the members. He also thought that the acknowledgment of the conference should be conveyed to the United Provinces Government for the presence at the conference of two Secretaries to the local Govern-

Parliamentary publications.

Contributions to the departmental Quarterly Journal and Monthly Circulars.

Supply of coal for industries.

Closing remarks of the President.

ment and for permission to Mr. Heard and Dr. Watson to attend the meetings of the conference. The President also wished to thank Mr. Swinchatt for the trouble he had taken in making arrangements for the housing of the conference and the members. These proposals were unanimously agreed to. The President then expressed the appreciation of the conference of the valuable advice and assistance that Sir Henry Ledgard had given during the deliberations, and in arranging for visits to the factories and mills in the town. He also wished to thank the managing authorities of the mills and factories for the courtesy they had extended to all members of the conference.

APPENDICES.

APPENDIX A.

Notes on the Organisation of the Department of Industries in the Provinces.

(1) NOTE ON THE ORGANISATION OF THE DEPARTMENT OF INDUSTRIES, MADRAS.

Head Quarters.

- (1) Director of Industries.
- (2) Head Quarters Assistant Director (temporary) who discharges the duties of—
 - (a) Personal Assistant to the Director and
 - (b) Commercial and Industrial Intelligence Officer ;
he also supervises the compilation of statistics which has recently been transferred to the Director of Industries.
- (3) Industrial Engineer (temporary).
- (4) Inspector of Industrial Schools (permanent).
- (5) Industrial Chemist and Dyeing Expert (permanent) ;
works at present at the Indian Institute of Science, Bangalore, as there is no laboratory for him in Madras.
- (6) Chemistry Assistant (permanent).
- (7) Leather Expert (permanent).
- (8) Weaving Expert (temporary for three years).

2. Each of these officers except the Chemistry Assistant is regarded as the head of a "section" of the Director's office and certain of the Director's clerks are deputed to work under him. All the clerks are included in one list, so that the promotion of a clerk does not necessarily mean a change of his work. A "general section" is under the manager (temporary) of the office; this includes an account and despatching branch in which work is done for all sections. Each section is responsible for its own records and registers. Indexes of records are to be maintained in each section in the card index form. A beginning has been made with the establishment of a commercial and industrial library.

District Staff.

3. (1) Five Assistant Directors of Industries (temporary) with head quarters at Bezwada, Madras, Madura, Bellary, Coimbatore.
- (2) 12 Supervisors of Industries.
- (3) Mechanics and maistries.

These are responsible for commercial and industrial enquiries; the Pumping and Boring branch of our work; the inspection of industrial undertakings

the administrative supervision of technical parties such as the peripatetic weaving parties; visits to aided industrial schools; the Assistant Directors act as the local representatives of the Director.

Institutes, factories, etc.

4. *The Madras Trades School* at Madras provides instruction in mechanical engineering, electric wiring, plumbing, machine drawing and practical mathematics to young men already engaged in engineering workshops or in some similar employment. Machine drawing is also taught in the vernacular to maistries of the wood-working, metal working and building trades. A branch of the Trades School is established at the Perambur Railway works for apprentices employed in those works.

5. *Madura Industrial Institute.*—The Government have recently sanctioned the re-organisation of this institute so as to provide training in carpentry, cabinet making, fitting, turning, moulding and blacksmithy; a class of motor drivers will also be opened there.

6. *School of Arts, Madras.*—The School of Arts was transferred to the Department of Industries on 1st October 1920.

7. *Aided Industrial Schools.*—Last year 34 industrial schools were aided by the Government.

8. *Orr Works School.*—This school was opened on 1st April 1920 by Messrs. P. Orr & Sons to provide education for the young boys employed in their works. The classes will include practical work in the workshops as well as reading, writing and arithmetic in Tamil.

9. *Kerala Soap Institute, Calicut.*—Soaps are manufactured in this institute both by the cold process and by boiling. It is proposed to give instruction in it as soon as the new buildings are ready.

10. *Minor Industries Laboratory, Coonoor.*—Research has been undertaken at Coonoor in connection with jams, inks, adhesives and vinegar.

11. *Leather Trades Institute, Madras.*—This institute was opened in 1915 and is run partly as a model tannery and school and partly as a research institute.

CAWNPORE;

Dated the 2nd November 1920.

A. Y. G. CAMPBELL,

Director of Industries.

(2) NOTE ON THE ORGANISATION OF THE DEPARTMENT OF INDUSTRIES,
BOMBAY.

The only permanent establishment so far sanctioned in this Presidency is a Director of Industries and an office staff costing about Rs. 2,100 per mensem. The following temporary arrangements have, however, been made for work in the different branches in the department pending further orders:—

Industrial Engineering Section:—Mr. Tom. S. Dawson of the Victoria Jubilee Technical Institute has been assisting the department since March 1919 in this branch. In the same year Government sanctioned the following temporary staff:—

- (A) A Deputy Director of Industries;
- (B) An Industrial Engineer in charge of the Central Store and Workshops at Dapuri, in the Poona District;
- (C) A Mechanical Engineer (now working as Assistant Director of Industries, Ahmedabad);
- (D) A Manager for the workshop at Dapuri.

Chemical Section.—Mr. A. J. Turner, Head of the Chemistry Branch of the Victoria Jubilee Technical Institute and Dr. A. N. Meldrum of the Gujerat College, Ahmedabad, have been assisting the department in this branch after Mr. Mackenzie Wallis, R.A.M.C., left. They have each one assistant chemist to work under them. A Manager has lately been appointed for a demonstration case in factory at Anand in Gujerat.

Pottery Section.—The services of the Superintendent of Pottery of the Sir J. J. School of Art, Bombay, (Mr. E. R. Fern) have been temporarily placed at the disposal of this department.

Fisheries Section.—A Superintendent of Fisheries (Mr. T. J. Walke) has been working at Karwar.

3. The following proposals for a permanent staff of Mechanical Engineers have been submitted to Government for sanction:—

- (1) One Deputy Director, to be Head of the Mechanical Engineering Department, having Bombay proper and the neighbourhood in his direct charge.
- (2) Five Assistant Directors, one each for Sind (to be designated "Deputy Director"), Gujerat, Deccan and the Southern Maratha Country, Dapuri, and leave vacancies.
- (3) 13 Circle Officers to work under the Deputy Director and the Assistant Directors, and
- (4) One Workshop Manager, Dapuri.

4. On the chemistry side the appointment of a Deputy Director of Chemical Research is in contemplation and Mr. Bell who is at present in England is trying to secure a suitable officer. This officer will have an assistant chemist to assist him.

The present Superintendent of Pottery will be transferred permanently to this department and a Manager appointed to supervise the demonstration factory which will shortly come into existence at Kurla in the Thana District.

A trawler has been purchased in England and the services of a marine biologist, a skipper, mate and boatswain have been engaged. These officers will arrive by the end of December next.

5. An Advisory Committee consisting of the Director as Chairman and 10 members, 7 nominated by Government and 3, one each appointed by the Chamber of Commerce, Bombay, Chamber of Commerce, Karachi, and the Indian Merchants' Chamber and Bureau, Bombay, is assisting the Director.

BOMBAY ;

Dated the 19th November 1920.

G. H. TRISELTON-DYER,

Director of Industries.

**(3) NOTE ON THE ORGANISATION OF THE DEPARTMENT OF INDUSTRIES,
BENGAL.**

The department office is divided up into sections A, B, C, D, etc., and each officer runs his own section, keeping and filing his own records in his section. We have not yet all collected into one building but by March 1921 all sections will be in one building and the Accounts Branch of the office will do the accounts for all branches and the typing will be general for each floor of the building (three floors).

The officers will be able to consult each other as much as they wish unofficially and to carry on their routine work issuing letters over their own designation but when any fresh scheme is begun or any new departure made, the initial correspondence will issue from the Director of Industries or Deputy Director of Industries and only when the work in this new connection has been reduced to uniform practice will the officer in immediate charge of the section be allowed to continue it in his own name.

In addition to new references all references to Government or to public bodies will be made by the Director of Industries. The Industrial Intelligence Officer will have power to ask for information from any of the other officers of the Department.

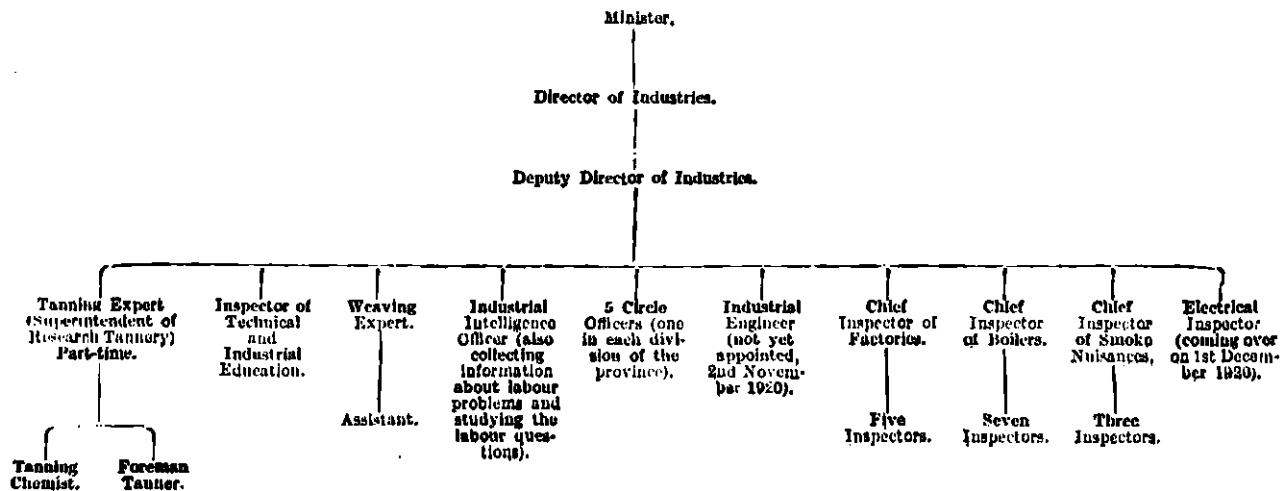
The Weaving Expert will also be allowed to communicate direct with the Circle Officers.

Each officer will make a short report weekly to the Director of Industries of all direct references to Circle Officers or to any of the other officers.

Each officer, Circle Officers excepted, will also see the Director of Industries weekly on a definite day at a definite time to explain fully any new proposals and to report general progress. They will also have power to ask to see the Director at any time.

A library is being built up and a room has been set aside for the use of the public where they may consult any of the books or periodicals in the library and take extracts if they wish.

General relations between various officers of the Department of Industries, Bengal.



D. B. MERK,
Director of Industries.

CAWNPORE ;

Dated the 2nd November 1920.

**(4) NOTE ON THE ORGANISATION OF THE DEPARTMENT OF INDUSTRIES,
UNITED PROVINCES.**

All the Industrial and Technical schools have been under the Director of Industries for some time now; and so has been the case with factory and boiler inspection department and the technical laboratory. But all these have separate office establishments of their own for routine work, though they are under the direct supervision of the office of the Director of Industries. The office of the Industrial Chemist to Government who is in charge of the technical laboratory has come under the control of the Principal, Research Institute, Cawnpore, from October 1920. The Principal of the Research Institute has an office of his own and deals directly with the Government.

The office work is subdivided under four sections namely Education, Industries, Accounts and miscellaneous. The education section deals with all matters connected with the different schools. All enquiries relating to industrial matters are dealt with by the Industries section. The rest of the work excepting the accounts and the budget for the whole Department which is done by the Accounts section is dealt with by the miscellaneous section.

The superior staff of the Industrial and technical schools consists of the following :—

1. Principal, Carpentry School.
2. Vice Principal, Carpentry School.
3. Principal, Arts and Crafts School.
4. Vice Principal, Arts and Crafts School.
5. Principal, Central Weaving Institute.
6. Principal, Technical School, Lucknow.
7. Principal, Government Technical School, Jhansi.
8. Principal, Dyeing School, Cawnpore.
9. Head Master, Leather Working School, Cawnpore.
10. Lady Principal, School of Needle Work, Lucknow.
11. Principal, Gorakhpur Technical School.
12. Superintendent, Leather Working School, Meerut.
13. Honorary Manager, Fabric Printing School, Farrukhabad.

CAWNPORE;

Dated the 2nd November 1920.

P. H. SWINCHATT,

Director of Industries.

(5) NOTE ON THE ORGANISATION OF THE DEPARTMENT OF INDUSTRIES,
PUNJAB.

The Department is administered by a Director who is the head of the Department; his papers go through the Financial Secretary, but he is allowed direct access to His Honour the Lieutenant-Governor. The Director of Industries is also Director of Civil Supplies.

The Departmental staff is as below:—

1. One Assistant Director Mr. Head, A.M.I.M.E., whose services and advice are at the disposal of all owners of factories or machinery. He has under him six Industrial Surveyors.
2. Factory Inspector.
3. Assistant Factory Inspector.
4. Electrical Inspector. This officer works under the Director of Industries in so far as the administration of the Electricity Act is concerned. For his executive work he is under the orders of the Chief Engineer, Public Works Department, Buildings and Roads Branch.
5. Tanning Superintendent.
6. Dyeing Professor, Mr. S. R. Khosla, A.M.S.T., F.C.S., (Manchester.)
7. One Textile Master.
8. Six Assistant Textile Masters.
9. Arboriculturist, Mr. G. M. Malik, M.Sc.Ag: engaged in fostering the plantation of mulberry trees for silk worms and kikar trees for tanning industry.
10. Six Industrial Surveyors.

The Department is also assisted by Divisional Advisory Boards. These Boards are established one in each Division, additional Boards are provided for large industrial towns, *e.g.*, Amritsar. The Boards meet once a month. The Boards are consulted by the Government and the Director of Industries; any member is himself allowed to put up a subject for discussion.

The members of the Board are nominated by the local Government. The number in each Board is limited to six; they are allowed to introduce special members to discuss special subjects; each Board elects its own Vice-Chairman.

CANNING; ;

Dated the 2nd November 1920.

E. A. SCOTT,

Director of Industries.

(6) NOTE ON THE ORGANISATION OF THE DEPARTMENT OF INDUSTRIES,
BIHAR AND ORISSA.

There is a Director and a post of a Deputy Director has been sanctioned to which an officer with engineering qualifications has just been appointed. The Textile Expert to Government was appointed in January 1918. He was formerly manager of a mill in Bombay for nine years. The Professor of Chemistry at Patna acts as Chemical Adviser to the Director. The Principal of the Bihar School of Engineering, who as such is subordinate to the Director of Public Instruction, also acts as Inspector of Technical Schools. A proposal has been submitted by the local Government to the Government of India and Secretary of State for the appointment of an Inspector of Factories. At present the factories in Bihar and Orissa are inspected by a joint department which is administratively subordinate to the Government of Bengal. Boiler inspection is also carried on by a joint department and no proposal has yet been made for a separate department for Bihar and Orissa. The Electrical Inspector works under the Public Works Department but all cases connected with the administration of the Electricity Act are referred to the Director of Industries for his opinion. A Personal Assistant has recently been sanctioned for the Director and he will have charge of statistical work and an industrial intelligence bureau. He is not supposed to be a touring officer. No staff has been sanctioned for labour work. A proposal for an advisory board of industries has been submitted to Government but orders on this have not yet been received. It is proposed that this board should usually meet in Calcutta.

2. The control of technical and industrial education has been transferred to the Director with the exception of the two engineering schools—one of which the Bihar School of Engineering, is at present in existence and the other, the Orissa School of Engineering, is under construction at Cuttack. Both of these are schools primarily for the education of civil engineering subordinates. There is only one Government Industrial school in the province, which is situated at Ranchi. Aided technical schools for the training of mechanical and electrical apprentices are about to be developed at Jamalpur and Jamshedpur. There is one weaving school and four peripatetic parties working under the Textile Expert and proposals have been submitted to Government for a Cotton Experimental and Testing station at Ranchi and a Silk Institute at Bhagalpur.

3. The office of the Director is at present small. The Director, Deputy Director and the Textile Expert have their head-quarters at Ranchi, where the Inspector of Factories is also to be stationed. It is proposed to have only one joint office at this station with a common superintendent and typing and despatching section. There will be separate clerks for each branch. The expert subordinates to the Director will manage their own branches and issue and receive letters in their own names. Matters which require the orders of the Director will be submitted to him with a file and office note and letters will, if necessary, be issued in his name. The statistical section of the office has not yet been organised but it is proposed shortly to take over the compilation of Rail and Riverborne Trade and Frontier Trade statistics from the Director of Agriculture, while

the collection of figures such as mineral production, factory production and labour statistics would also be undertaken by this section, which will work under the Personal Assistant. In order to maintain touch with the various industrial and commercial centres in the province, an experiment is being made with a system of trade correspondents who write a monthly letter to the Director giving him information on certain fixed points, *e.g.*, the price of vegetable oil and oil seeds, the price and supply of coal, waggon supply, starting of new industries, etc., etc. Only a few correspondents have at present been arranged but the system so far has been found to be fairly satisfactory.

CAWNPORE;

Dated the 2nd November 1920.

B. A. COLLINS,

Director of Industries.

(7) NOTE ON THE ORGANISATION OF THE DEPARTMENT OF INDUSTRIES,
CENTRAL PROVINCES.

The administrative head of the Department is the Director. All business carrying the authority of the Department passes through him. He has, to support and help him, an Advisory Board. His office is in the Secretariat and is the controlling office under and through which the offices of the heads of sub-departments work. The Director himself works personally and directly with the heads of sub-departments, and communication is usually by means of the spoken or informally written word; official correspondence between the Director and members of his staff being avoided.

2. The Deputy Director is, at present, an officer who is a qualified mechanical engineer, and he joined his appointment on the 1st May 1920. He is, therefore, in training not as regards his professional knowledge, but with respect to the practical administration of a department which calls for an acquaintance with local conditions obtainable only within the Province.

3. Under the office of the Director, who is ultimately responsible to the Administration for the work of his entire department, there are the heads of the sub-departments noted below:—

- (i) Electrical Engineer (with laboratory, subordinate staff and small office);
- (ii) Textile Expert (with small office, workshop, Superintendent of Weaving Masters, and teaching staff);
- (iii) Inspector of Schools of Handicraft, with office and store, and Headmasters of schools and staff of craft instructors;
- (iv) Leather Expert (who will have small office and Tanning School and staff);
- (v) Inspector of Factories, with office, and, under him, the Boiler Inspectors.

4. The Curator of the Museum, an institution which contains a range of economic exhibits (agricultural, mineral, and industrial) is, also, under the Director of Industries; so, also, is the Coin Expert who deals with ancient coins and inscriptions.

CAWNPORE;

Dated the 1st November 1920.

H. R. CROSTWHAITE,

Director of Industries.

**(8) NOTE ON THE ORGANISATION OF THE DEPARTMENT OF INDUSTRIES,
ASSAM.**

The Director of Industries in Assam is also the Registrar of Co-operative Societies. There is at present no Deputy Director or Industrial Engineer under him.

The experts under him are:—

- (1) Weaving Expert recruited from Madras as Superintendent of Weaving. He is in charge of the newly established Weaving School at Gauhati for training of demonstrators. Next year two peripatetic parties will be formed. The Superintendent of Weaving has got his office and Head Quarters at Gauhati. There are at present two teachers in the weaving school. The Superintendent inspects also the two existing district weaving schools at Shillong and Tura.
- (2) Superintendent of Sericulture, trained in Japan and formerly in the Agricultural Department. He is in general charge of the Sericultural station at Titabor. His assistant, recently appointed, will be sent to Pusa for training in bacteriological work. The Head Quarters of the Superintendent of Sericulture is at Jorhat.
- (3) Fishery Officer trained under Mr. Southwell, Director of Fisheries, Bengal. He has his Head Quarters at Gauhati. He is in charge of the supply of carp fry to the public in Assam.

As collection and compilation of trade statistics is one of the functions of the Department of Industries in Assam, there is a Trade Inspector and a number of Trade Registrars under the Director.

There is a Boiler Inspector in Assam but he is not under the Director of Industries. He works under the Public Works Department.

We shall shortly have the school of Handicrafts established. Either the Principal of the school or the Industrial Engineer when appointed will inspect the existing Industrial Schools.

CAWNPORE ;

Dated the 2nd November 1920.

K. L. BARUA,

Director of Industries.

APPENDIX B.

An abstract of the replies received to a questionnaire issued by the Director of Industries, Bengal, to certain firms, newspapers and institutions on the subject of artistic advertisement.

1. What exactly is the present position in India, and in Bengal in particular, as regards advertisement writers?

The general consensus of opinion is that there is a lack of good advertisement writers in India. This is attributed to the work not being sufficiently remunerative. The few so called specialists located in Calcutta cannot compare with such artists in England either in skill or initiative. The majority of advertisement writers in India do not possess enough experience to enable them to make any suggestions regarding the particular form which the advertisement should take.

2. What exactly is the present position in India, and in Bengal in particular, as regards artist composers?

There are practically no artist composers of any standing or class in India. There are some second rate men and the best of them work under contract with advertising agencies to design and illustrate advertisements solely for the agencies. There are lithographic artists and some excellent Indian artists, but they lack initiative and the knowledge of what constitutes an effective advertisement design.

3. What is the present position in India and in Bengal in particular, as regards presses capable of producing artistic illustrations?

There are a few presses capable of turning out fairly good work including three-coloured prints, but the work is not first class. Backwardness is attributed to difficulty of obtaining high class materials, climatic troubles and lack of original designers.

It is suggested that a technical institution for the training of young men in process engraving, chromo-lithography and colour printing would be of great benefit.

4. To what extent do the large established industries in India at present employ the coloured or art form of advertisement and to what extent do they get such advertisements composed and printed (or either) in India? Who are the local artist composers and printers employed?

The coloured or art form of advertisement is used in India to a limited extent. Very few industries or trades employ it on account of the great expense, and the firms doing so usually get the work executed abroad. The Alliance Advertising Agency, Mr. Phillip Groaves of 9, Hare Street, Mr. W. Smith, for some years designer to Messrs. Cornelius & Co., the "Statesman" Process Department, the Edinburgh Press, the Phototype Co., all of Calcutta, and the "Times of India" Press and the recently floated Publicity Co., in Bombay are employed to design advertisements, draw up catalogues, etc.

5. *If any advertising orders are now being placed abroad in what respect and to what extent would the existing facilities for their production in India have to be changed in order that these orders might be directed to India?*

Lack of finish, partly due to inferior material and partly to poorer workmanship is what prevents the Indian Industry from successful competition with similar work abroad. The question is not directly answered, but it is implied that both material and workmanship must be improved.

6. *What facilities now exist for the production in India of such advertisements?*

The replies received indicate generally the lack of facilities for such work in India. There are no properly trained artists and printers, while up to date printing plant and materials are not available. The climate also offers difficulties.

7. *Why are the facilities for the production of artistic advertisements so comparatively undeveloped? Have experiments been made which have failed? If so, what are the causes of failure? If not, what is preventing the making of such experiments?*

It is suggested that there is little or no demand for high-class work. Also printers are without theoretical training and artists without the special training necessary. It is not stated that experiments in producing first class work have been tried without success. It is suggested that assistance might be given by Government to help small printers to procure better machinery and better buildings to combat climatic conditions.

8. *What amount of demand would you require (in value of orders per annum) in order to make it worth your while developing a fully modernised art printing section?*

Only two replies name specific sums. One suggests initial expenditure of Rs. 5 lakhs, and the other Rs. 50,000 worth of orders. Others say that it is difficult to estimate the demand that would be necessary, but suggest that the public require educating up to a higher standard.

9. *To what extent, if any, is the local climate a handicap?*

Three firms state that the climate is a handicap, and throe that it is not. The first three cite the difficulty in obtaining cool water and the variable humidity. One of the last three admits that the climate adversely affects collotype work.

10. *Could you hope to compete with European products? If not, why not?*

Calcutta presses could compete with European products in the matter of actual production if sufficient outlay were made, but ability to compete in practice would require a great deal of organization to catch the market.

11. *Any other suggestions which you may have to make?*

Scholarships should be given to those of the poorer classes who are found suitable for the work. Government would do well to establish an ink producing plant and also a plant for producing high class paper.