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DEPARTMENT OF OVERSEAS TRADE.

Report on the
Conditions and Prospects
of British Trade in
INDIA

1929-30.

BY

THOMAS M. AINSCOUGH, C.B.E., M.Com., F.R.G.S.
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DEPARTMENT OF OVERSEAS TRADE.

COMMERCIAL REPRESENTATION ABROAD.

To foster British overseas trade, the Department has developed and controls the following Services of Commercial Intelligence Officers:—

1. IN THE EMPIRE.

The Trade Commissioner and Imperial Trade Correspondent Services.

At the present time there are 15 Trade Commissioners' offices. These are situated, four in Canada (Montreal, Toronto, Vancouver, Winnipeg); two in Australia (Sydney, Melbourne); South Africa (Capetown, Johannesburg); and India (Calcutta and Bombay—to cover also Ceylon); and one each in New Zealand (Wellington, Irish Free State (Dublin), British East Africa (Nairobi), British West Indies (Trinidad), and Malaya (Singapore).

The Trade Commissioners have the assistance of Imperial Trade Correspondents at a number of important centres.

In various parts of the Empire in which at present there are no commissioners, there are correspondents with whom the Department deals direct.

The Department is represented in India by Mr. T. M. Ainscough, C.B.E., H.M. Senior Trade Commissioner, Calcutta, and Mr. W. D. Montgomery Clarke, H.M. Trade Commissioner, Bombay.

2. IN FOREIGN COUNTRIES.

(a) The Commercial Diplomatic Service attached to the British Diplomatic Missions.

This service consists of 36 officers who are stationed in all the more important foreign markets of the world. The members of the Commercial Diplomatic Service are styled "Commercial Counsellors" in the highest grade, and "Commercial Secretaries" in the two lower grades. They are members of the staff of the British Embassy or Legation in which they serve.

The Commercial Diplomatic Officer has general supervision over the commercial work of the consular officers in his area and, with the co-operation of these two services, a complete network of Government commercial representatives is thrown over foreign countries.

(b) The British Consular Service.

Particular attention has been given to the commercial side of consular work since the reorganisation of the service. In certain countries where no commercial Diplomatic Officer is stationed the senior Consular Officer undertakes duties of a similar character.

Members of British firms are urged to call upon the Department's representative abroad when they visit an overseas country. It is also important that they should make a point of their representatives abroad keeping in close touch with the Department's officers.

NOTE.

It should be understood that the views expressed in annual reports are the views of the officers themselves, and are not necessarily in all respects those of the Department.

COVERING DESPATCH.

*To The Right Honourable William Graham, M.P.,
President of the Board of Trade.*

Office of H.M. Senior Trade Commissioner in India,
Fairlie House, Fairlie Place,
Calcutta.

31st July, 1930.

SIR,

I have the honour to forward for your information a Report on the Conditions and Prospects of British Trade in India during the Indian fiscal year 1929-30.

In compiling this Report I have been handicapped, firstly, by the fact that I was absent from India during almost the whole of the year under review and, secondly, by the outbreak of the political boycott movement in April which not only changed the aspect of the whole situation but made it extremely difficult to describe the relatively peaceful events of 1929/30 at a time of stress and difficulty when there were so many other calls on one's time.

The first handicap has been overcome by relying upon official and other sources of information. The Report, however, lacks the usual commentary upon and interpretation of events which can only be given after personal contact with the market.

The problem of dealing with the present boycott agitation presented much greater difficulties. At first sight it would appear inevitable that mention should be made of the present political situation in a report written in May/July of this year. On the other hand, the political situation only really became acute last April after the close of the period under review and the fiscal year 1929/30 was not affected by it. The anti-British boycott campaign is now raging throughout most of India and the future is still so obscure that it is not yet possible either to assess the agitation at its true value or to give any reliable estimate as to its permanent effect on British trade in India. Moreover, the economic and political questions are so interwoven and involve such delicate issues that I decided to defer any treatment of the subject in a published report until next year when it may be possible to review the agitation and its reactions in truer perspective and in a calmer atmosphere.

Once again I have to acknowledge my indebtedness to the Officials of the Commerce, Industries and Finance Departments of the Government of India for their unfailing courtesy and assistance during the year. Special thanks are due to the Director-General of Commercial Intelligence and Statistics and his staff who have prepared the special tables embodied in the Report, to the Chief Controller and staff of the Indian Stores Department and to the Collectors of Customs for their valuable help and co-operation which have always been so willingly rendered. I would also like to record my appreciation of the numerous memoranda which have been contributed by Engineers and other Officers in charge of important works throughout the country and which have, in most cases, been incorporated with due acknowledgments in the Report.

I have the honour to be, Sir,

Your most obedient servant,

THOMAS M. AINSCOUGH,

H.M. Senior Trade Commissioner in India.

PREFATORY TABLES.

NOTE.—The author desires to express his indebtedness to the Director-General of Commercial Intelligence and Statistics for the particulars given in these tables.

I.—TRADE DISTRIBUTION :—PRINCIPAL ARTICLES.

TABLE SHOWING VARIATIONS IN THE SHARES OF THE PRINCIPAL ARTICLES IN THE IMPORT AND EXPORT TRADE OF BRITISH INDIA DURING THE LAST THREE YEARS, AS COMPARED WITH AVERAGES OF THE PRE-WAR AND WAR PERIODS.

IMPORTS (*in percentages*).

(Sea borne : exclusive of treasure and of imports on Government account).

	1909-14. <i>Average.</i>	1914-19. <i>Average.</i>	1927-28.	1928-29.	1929-30.
Cotton manufactures ...	36	35	26	25	25
Iron and Steel ...	7	6	9	8	7
Machinery ...	4	4	6	7	8
Sugar ...	9	10	6	6	6
Hardware ...	2	2	2	2	2
Mineral Oil ...	3	3	4	4	5
Silk ...	3	2	1	2	1
Other articles...	36	38	46	46	46

EXPORTS (*in percentages*).

(Sea borne : exclusive of treasure and of exports on Government account).

	1909-14. <i>Average.</i>	1914-19. <i>Average.</i>	1927-28.	1928-29.	1929-30.
Jute, raw and manufactures...	19	25	26	27	26
Cotton, raw and manufactures ...	15	16	18	23	23
Food grains ...	21	17	13	10	11
Seeds ...	11	6	8	9	9
Tea ...	6	8	10	8	8
Hides and skins ...	7	8	3	3	3
Other articles...	21	20	22	20	20

II.—TRADE DISTRIBUTION:—PRINCIPAL COUNTRIES.

TABLE SHOWING VARIATIONS IN THE SHARE OF THE PRINCIPAL COUNTRIES IN THE IMPORT AND EXPORT TRADE OF BRITISH INDIA DURING THE LAST THREE YEARS, AS COMPARED WITH AVERAGES OF THE PRE-WAR AND WAR PERIODS.

IMPORTS (*in percentages*).

(Sea borne : exclusive of treasure and of imports on Government account).

	1909-14. <i>Average.</i>	1914-19. <i>Average.</i>	1927-28.	1928-29.	1929-30.
United Kingdom	63	56	48	45	43
Other parts of the British Empire	7	9	7	9	9
United States of America ...	3	7	8	7	7
Japan	2	10	7	7	10
Java	6	8	6	7	6
Germany	6	1	6	6	7
Other Foreign Countries ...	13	9	18	19	18

NOTE.—Imports from Germany during the quinquennium, 1914-19, consisted mostly of receipts in the early part of the official year 1914-15, and the residue of cargoes of prize vessels imported during the war period.

EXPORTS* (*in percentages*).

(Sea borne : exclusive of treasure and of exports on Government account).

	1909-14. <i>Average.</i>	1914-19. <i>Average.</i>	1927-28.	1928-29.	1929-30.
United Kingdom	25	31	25	21	22
Other parts of the British Empire	16	21	16	14	14
United States of America ...	8	12	11	12	12
Japan	8	11	9	10	10
France	7	4	5	5	5
Germany	10	1	10	9	8
Other Foreign Countries ...	26	20	24	29	29

NOTE.—Exports to Germany during the quinquennium, 1914-19, were confined to the early part of the official year 1914-15.

*Including re-exports.

COMMERCIAL SUMMARY.

<i>Area—</i>						<i>Sq. miles.</i>
British India	...	...	...	...	...	1,094,300
Native States	...	...	...	...	...	711,032
Total	...	...	...	...	...	1,805,332

Population Census of 1921—

British India	...	...	...	...	...	247,003,293
Native States	...	...	...	...	...	71,939,187
Total	...	...	...	...	...	318,942,480

*Language (Commercial use of English, etc.)—English.**Monetary unit(s)—*

3 pie=1 pice.

4 pice=1 anna.

16 annas=1 rupee.

1 lakh=Rs. 1,00,000

1 crore=100 lakhs.

} e.g., Rs. 1,45,67,200=1 crore, 45 lakhs,
67,200 rupees.*Rate of Exchange (pre-war and current average quotations)—*

Pre-War	...	...	...	...	...	1s. 4d.
Current. June 30th, 1930	...	...	...	...	...	1s. 6d.

Index Numbers—July, 1914=100.

Wholesale prices, Bombay	...	...	April, 1930=132.
Retail prices (food), Bombay...	...	...	April, 1930=159.
Cost of living (working class), Bombay	...	...	April, 1930=141.

Principal weights and measures (other than ordinary metric or British) with British equivalents.

Weights and measures in India vary not only from district to district but also for different commodities within the same district, and though the railways have given a lead to the adoption of a uniform system, the country is so vast that the differences are likely to persist for many years to come. The principal units in all the scales of weights are the maund, seer and the tola, and the standard weights for each of these are 82.28 lbs., 2.057 lbs. and 180 grains troy. The tola is the same weight as the rupee. In addition to these weights, there is the viss of 3.60 lbs. or 140 tolas and the candy of 500 to 840 lbs. It is not necessary for the purposes of this volume to detail any variation of the weight of the maund, except those which enter into the export trade. It will be sufficient to say that in any particular city there are probably as many different maunds as there are articles to weigh. The only varieties which need be considered in connection with the foreign trade are the Bengal or railway maund already specified, the factory maund of 74 lbs. 10 ozs. 11 drs., the Bombay maund of 23 lbs. and the Madras maund of 25 lbs. In October, 1913, the Government of India appointed a Committee to inquire into the whole question, and their majority report, which was presented in the following year, recommended the extension of the railway system based on the 180 grains tola, while the minority report advocated the adoption of the metric system. The views of the Provincial Governments on these reports were obtained and the Government of India in their Resolution dated the 3rd January 1922 declared themselves in favour of the ultimate adoption in India, excluding Burma, of a uniform system of weights based on the scale now in use on the railways. It has been decided that no new measures prescribing all-India measures of weight or capacity should be introduced at present but that the Local Government should take such executive action as they can to educate public opinion in favour of the standard maund and seer.

In the table below an attempt has been made to present within a small compass the principal weights and measures employed in the Indian export trade.

Principal weights and measures in use in the export trade.

Name of Unit.		British Imperial Value.
General.		
Tola	... ..	180 grains troy.
Seer (Standard or Railway or Indian)	...	2.057 lbs.
Seer (Factory)	... ..	1 lb. 13.5 oz.
Viss	... ..	3.60 lbs.
Maund (Standard or 40 seers Railway or Indian)	... ..	82 lbs. 4 oz. 9 dr.
Maund (Factory)	... ..	74 lbs. 10 oz. 11 d.

NOTE.—For local variations consult "Handbook of Commercial Information for India," by C. W. E. Cotton, C.I.E., I.C.S., 2nd Edition, 1924.

Total Imports—1st April, 1929 to 31st March, 1930.

	Rs.
Merchandise	2,40,75,99,533.
Government Stores	8,91,05,249.
Treasure	27,83,19,584.
Total	2,77,50,24,266.

Principal Imports.—Cotton manufactures, machinery, iron and steel sugar.

Imports of merchandise from	United Kingdom	Rs.
"	Japan	23,59,26,164.
"	United States	16,16,76,742.
"	Germany	15,82,67,212.
"	Java	13,66,82,758.

Total Exports.—(Indian merchandise). 1st April, 1929 to 31st March, 1930
Rs. 3,10,79,91,950.

Principal Exports.—Cotton, jute, grain, pulse, tea.

Exports of Indian merchandise to	United Kingdom	Rs.
"	United States	67,32,04,799
"	Japan	36,31,78,594
"	Germany	32,27,68,223
"	"	25,70,72,668

Railway mileage.—31st March, 1929.

Railways owned by the State	42,336
Other railways	13,121

Total route mileage opened for traffic 55,457

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REPORT
ON THE
CONDITIONS AND PROSPECTS OF BRITISH TRADE
IN
INDIA,
1929—30.

CHAPTER I

GENERAL REVIEW OF THE PERIOD.

Although the year 1929/30 opened with great promise, India gradually found herself seriously affected by world conditions and, in common with all other countries, suffered from the American financial collapse in the autumn and the consequent further fall in the prices of all commodities. The Controller of Currency, in his review of the year, summarises the position very clearly when he states :—

“ India, being a country where general economic well-being is still very dependent on the world demand for her exportable surplus of agricultural produce, could not hope to escape the serious effects of these general world conditions. Luckily, the monsoon was adequate and well-distributed and the crops were good, the cold weather wheat crop in Northern India in particular affording a much-needed relief to the cultivator after the failures, or partial failures, of the preceding two years. Cotton, jute, tea, coffee and ground-nuts were also good and had prices not collapsed India would have had an excellent year. Even with the collapse in prices, the visible balance of trade in private merchandise was 79 crores in favour of India, as compared with 86½ crores in the year before. The labour situation was also better on the whole, though towards the end of the year it was again being clouded by politics. The strike in the cotton mills in Bombay was settled early in the year, and though there was a strike in the Calcutta jute mills in August, and sporadic strikes on the Railways, the trouble was neither so intense nor so prolonged as in the previous year. Industry was unfortunately too closely involved in the world-wide depression to profit by this slightly better atmosphere. The steel industry suffered from the unavoidable curtailment of capital expenditure on the railways and generally; the jute mills suffered from the heavy fall in the price of the produce caused by the slackening in the demand from Australia, the United States and the Plate; the Bombay cotton mills had been severely crippled by the prolonged strikes and other adversities of the preceding years, and before they had a chance to rehabilitate their position the drop in the price of raw cotton dealt them a fresh blow, though before the end of the year the increase of the piecegoods tariff in the budget re-opened to them the prospects of considerable relief from their immediate difficulties the results of which, when strikes are worked-off and the full benefit of the new conditions are felt, may well prove to be very substantial indeed.”

The exports of Indian merchandise fell from Rs. 330 crores to Rs. 311 crores, a decrease of 19 crores or 6 per cent. Re-exports were also reduced by Rs. 70 lakhs or 9 per cent. When one considers the extraordinary fall in the prices of all India's staple export commodities, it must be admitted that the export trade managed to weather the storm in a remarkable way. The following table of price index numbers compiled by the Director-General of Commercial Intelligence, illustrates the difficulties with which Indian exporters had to contend :—

Commodity.	Basis 100 at end of July, 1914.		
	March, 1929.	September, 1929.	March, 1930.
Cereals	129	128	103
Pulses	146	155	140
Tea	157	129	121
Oil Seeds	148	175	142
Jute, raw	106	90	72
Jute, manufactured	139	122	89
Cotton, raw... ..	161	146	107
Hides and Skins	130	109	100

The value of the total exports of raw cotton fell from 67 to 66 crores of rupees, raw jute from 32 to 27 crores, tea from 26½ to 26 crores, jute manufactures from 57 to 52 crores, hides and skins from 9 to 8 crores. On the other hand, the shipments of grain, pulse and flour actually advanced from 33¾ to 34¾ crores and spices from 1½ to 2 crores.

The total imports on private account fell from Rs. 253 to Rs. 240¾ crores, a drop of 13 crores or 5 per cent. This is mainly accounted for by a noteworthy decline in the imports of grain, pulse and flour from 10¾ to 5½ crores, largely due to reduced arrivals of wheat in consequence of a good wheat crop in Northern India. The imports of cotton yarns and manufactures fell from 63¼ to 59½ crores, iron and steel from 20 to 17 crores, wollen yarns and manufactures from 4½ to 3¾ crores, and miscellaneous textiles from 6½ to 5¾ crores.

The Hon. the Finance Member in introducing the budget on March 1st, 1930, took the opportunity to give a brief survey of the economic situation. Sir George Schuster said :—

“ It is very obvious at present that India is suffering from a general wave of depression. It is also obvious that, apart from this special depression, there is great room for improvement in the standard of living of the masses of the country and of general economic production. It is necessary to make a clear distinction between these two conditions. The first is temporary and not special to India. It is mainly produced by causes over which the Government have no control. The second is one which demands the constant and urgent attention of all the forces of society, public and private alike. As to the first, I hope, in the course of the debate, to have an opportunity more fully to express my views. I only wish to emphasise at present that I think that the depth of the depression is exaggerated in comparison with the very special period through which the country passed in the years 1924-25 and 1925-26. If we examine the trend of economic events in India since the end of the War, we find that the volume of imports and exports has, on the whole, shown a steady progression with two exceptional periods, first, as regards imports in 1920-21 and, secondly, as regards exports in 1924-25 and 1925-26. As regards prices, while the prices of imports have tended steadily to decline, those of exports, for various world causes, tended to rise during the period from 1921 to 1924. Since then, world prices for Indian imports and exports have steadily declined. The point of time at which the general rise in the prices of India's exports culminated coincided with an exceptional period for the volume of agricultural production, and this produced, in the two special years 1924-25 and 1925-26, to which I have referred, an exceptional peak of prosperity. Public opinion as to the course

of Indian trade and general conditions, tends, I think, at present, to be framed too much with reference to this special period, and though I do not wish to minimise the effects of the present depression, I think that, if our view is cast back along a longer period of India's history, we shall find that the present conditions are not, in comparison, so black as they are sometimes painted and that the general economic course of the country has been one of steady advance. The cause of the continued fall in world prices for India's chief imports and exports since 1925-26 is somewhat obscure. It would appear to be world-wide, as, on the basis of 100 for 1926, the Index Number of general prices in the United Kingdom, the United States and India are 92.2, 96.8 and 95.3 respectively for 1929. While a fall has thus taken place in all the three areas, that for India lies between those for the United Kingdom and the United States. This world-wide fall in prices has been put down by some to general over-production, both of raw materials and industrial products, throughout the world. It is known that large scale mass production has been developing throughout the world during the last few years and that tropical and sub-tropical areas have extended their output of raw materials. There are others who would give, as a further reason for the general world-wide fall in prices, the insufficient production of gold for the general requirements of the world as a whole.

Unfortunately, the fall did not end with 1929. Conditions in America, to which I have already referred above, have led to a large recession in business activity all over the world. The immediate outlook is uncertain. Manufacturers and dealers are using up their stock of raw materials and refusing to enter into fresh commitments until they see how far this recession is likely to go. The result is that the fall in the prices of primary products, which was a feature of the year 1929, has been accelerated. India has been particularly hard hit by this world development. Since the 1st January the price of cotton has fallen by about 15 per cent. and the price of wheat by about 12 per cent., while the prices of other staple products such as jute and rice show no signs of recovery from the low level which they reached during the year 1929. It would be rash to attempt to say when the tide will turn, but there are signs in America that the trade recession will not be so severe as was anticipated, and it looks as if prices are now so low that the world will soon begin to take more interest in the products of India and be prepared to enter into commitments for the future. There is reason to hope, therefore, that a recovery from the present economic depression will not be long delayed.

Whatever the reasons for the fall and whatever the future prospects, it is clear that the condition of the agricultural classes of India must be seriously affected, and it may be that, in order to maintain their position, they have to part with an undue proportion of their own production. Measures of immediate relief are difficult, but the main lines of the policy which should be pursued seem clear. In the first place, and above everything, it is necessary to stimulate and improve the agricultural production of the country and, as a supplement to this, to put the poorer agricultural classes into a position in which they can retain a greater proportion of their own produce for their own subsistence. In the second place, it is desirable to encourage industrial development provided that this can be done in conjunction with, and as a supplement to, the agricultural life of the country. In the third place—and this is a minor matter but still one of very great importance—the whole country urgently needs the provision of better methods for the study of its own economic conditions than are at present available.”

General Position of British Trade in India. — The following table, compiled by the Director-General of Commercial Intelligence and Statistics, clearly shows the percentage shares of the United Kingdom, the British Empire as a whole, and the principal foreign countries in the trade of India during the fiscal year 1929-30 as compared with the previous year and the average of the last five complete pre-war years 1909/10 to 1913/14 :—

	Imports.			Exports, including re-exports.			Total Trade.		
	Pre-war average.	1928-29.	1929-30.	Pre-war average.	1928-29.	1929-30.	Pre-war average.	1928-29.	1929-30.
	Share per cent.	Share per cent.	Share per cent.	Share per cent.	Share per cent.	Share per cent.	Share per cent.	Share per cent.	Share per cent.
United Kingdom	63	45	43	25	21	22	40	31	31
British Countries	7	9	9	16	14	14	12	12	12
TOTAL BRITISH EMPIRE	70	54	52	41	35	36	52	43	43
TOTAL FOREIGN COUNTRIES	30	46	48	59	65	64	48	57	57
<i>Principal Countries.</i>									
<i>BRITISH EMPIRE—</i>									
United Kingdom	62.8	44.7	42.8	25.1	21.4	22.0	40.0	31.4	31.0
Ceylon .. .. .	.5	.8	.8	3.7	4.2	4.2	2.4	2.8	2.7
Straits Settlements	2.1	2.0	2.5	3.4	2.4	2.5	2.9	2.2	2.5
Australia .. .. .	.7	3.3	2.3	1.4	2.2	1.8	1.1	2.7	2.0
Hongkong .. .. .	.7	.3	.3	4.1	.7	1.0	2.7	.6	.7
Other British Countries	2.9	3.0	3.6	3.4	4.6	4.6	3.2	3.8	4.2
TOTAL BRITISH EMPIRE	69.7	54.1	52.3	41.1	35.5	36.1	52.3	43.5	43.1
<i>Foreign Countries.</i>									
Germany	6.4	6.3	6.6	9.8	9.6	8.1	8.5	8.2	7.5
United States	3.1	6.9	6.7	7.5	11.8	11.6	5.8	9.7	9.5
Japan	2.5	7.0	9.8	7.5	10.2	10.2	5.5	8.8	10.0
Java	6.4	6.5	5.7	1.3	1.1	1.3	3.3	3.4	3.2
France	1.5	1.9	1.9	6.6	5.3	5.2	4.6	3.8	3.8
China (exclusive of Hongkong and Macao)	1.1	1.7	1.7	3.9	2.8	4.1	2.8	2.3	3.1
Belgium	1.9	2.8	2.8	5.3	4.0	3.9	3.9	3.5	3.4
Italy	1.0	2.9	2.8	3.2	4.4	3.6	2.3	3.8	3.2
Other Foreign Countries	6.4	9.9	9.7	13.8	15.3	15.9	11.0	13.0	13.2
TOTAL FOREIGN COUNTRIES	30.3	45.9	47.7	58.9	64.5	63.9	47.7	56.5	56.0
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

The further reduction of 2 per cent. in the share of the United Kingdom in the import trade results from a falling-off in the imports of British piecegoods amounting to 6½ crores of rupees, of iron and steel amounting to 2½ crores and of machinery to a value of nearly half a crore. These items mainly account for a total reduction of just over ten crores of rupees in the total arrivals from the United Kingdom. The British percentage figure of 42.8 is the lowest yet recorded, but it is fully anticipated that the figure for 1930/31, as a result of the present political situation, will show a still further decline. The trade has been lost to Japan so far as textiles are concerned but the percentage shares of our other competitors remain practically unchanged.

The Balance of Trade.—The Controller of the Currency in his most informative and lucid report for 1929/30, on which I have very freely drawn for the ensuing comments, gives the following statement which compares India's visible balance of accounts during the year with the figures of the preceding two years and the averages of the last ten pre-war years ended 1913/14 and the first ten post-war years ended 1928/29. The detailed figures work up to a *plus* or *minus* balance (*plus* representing net export and *minus* representing net import) for each of the three main heads of classification, namely, (1) private imports and exports of merchandise, (2) private imports and exports of treasure, and (3) remittances through Government leading up to a *plus* or *minus* total for the transactions as a whole.

	Average of 10 pre-war years ending 1913-14.	Average of 10 years ending 1928-29.	1927-28.	1928-29.	1929-30.
			<i>(In Lakhs of Rupees).</i>		
Exports of Indian merchandise (private)	+ 1,94,67	+ 3,13,86	+ 3,19,15	+ 3,30,13	+ 3,10,80
Re-exports of Foreign merchandise (private)	—	+ 12,75	+ 9,54	+ 7,83	+ 7,13
Imports of Foreign merchandise (private) (b)	— 12,293	— 2,38,78	— 2,46,73 (b)	— 2,51,49 (b)	— 2,38,91
Balance of Trade in Merchandise (private)	+ 71,84	+ 87,83	+ 81,96	+ 86,47	+ 79,02
Gold (private) (a)	— 20,87	— 23,72	— 18,10	— 21,20	— 14,22
Silver (private) (a)	— 7,67	— 14,28	— 13,85	— 13,04	— 11,89
Currency Notes (private) (a)	—	— 26	— 24	— 12	— 9
Balance of Transactions in Treasure (private) (a)	— 28,54	— 88,26	— 82,19	— 84,86	— 26,20
Total Visible Balance of Trade	+ 43,20	+ 49,57	+ 49,77	+ 52,11	+ 52,82
Council bills and telegraphic transfers paid in India, purchases of sterling from banks and firms in India and payments for sterling taken over in London from local bodies	— 38,47	— 27,65	— 37,77	— 41,02	— 20,39
Sterling transfers on London sold in India	+ 1,22	+ 4,91	—	— 1	—
Transfers of Government Securities	— 71	— 16	+ 28	—	— 29
Interest drafts on India in respect of Government of India securities	—	— 34	— 35	— 36	— 33
Balance of Remittances of Funds	— 37,96	— 23,24	— 37,84	— 41,89	— 21,01
Total Visible Balance of Accounts	+ 5,24	+ 26,33	+ 11,93	+ 10,72	+ 31,81

(a) Excludes transactions which do not enter into the balance of trade.

(b) Exclusive of the value of railway materials imported direct by State Railways working under company management.

The reduction, by 19 crores of rupees, in the total value of India's exports of merchandise resulted not so much from a reduction in the total quantities exported as from the phenomenal fall during the year in the prices of practically all India's standard export commodities. Imports of merchandise showed a reduction of 12½ crores of rupees, largely due to diminished arrivals of wheat and of cotton textiles. It will be noted that the total visible balance of trade was Rs. 52,82 lakhs, or Rs. 71 lakhs in excess of last year.

The Course of Exchange. — Telegraphic transfers on London fluctuated between 1s. 5 $\frac{3}{4}$ d. in May, 1929, and in December, 1929, and 1s. 5 $\frac{3}{4}$ d. in August, 1929. The Controller states that :—

“ At the beginning of the year Government were purchasing sterling by open tender in India in the manner described in last year's report. This was temporarily superseded by the reintroduction at the end of June of the system of open purchase in the market in India which had been followed before April 1927. Purchases were made in accordance with this procedure up to the middle of February 1930 when a reversion was made to the previous system of purchase by weekly open tenders with intermediates on offer at a rate which was usually $\frac{1}{8}$ above the highest tender accepted.

The early weakening in Indian money rates caused an immediate slackening in exchange, so that after buying a quarter of a million sterling at 1s. 6d. in April the Government received no further tenders at satisfactory rates. Such tenders as were made were for such small amounts that it would have been impossible to accept them without upsetting the market, and for several weeks no tenders were made at all. Government, therefore, discontinued the offer of tenders at the end of May, but even with Government off the market the rate had fallen to 1s. 5 $\frac{3}{4}$ d. by the second week in June. With the flotation of the rupee loan and the consequent temporary tightening of money exchange had a short revival, and at the end of June Government announced that they would be prepared to purchase sterling at 1s. 5 $\frac{1}{2}$ d. Only £30,000 was received at this rate and exchange again fell away rapidly, largely owing to the ease of money and the unfavourable international situation. On the 9th August when the Federal Reserve Bank rate of New York was raised to 6 per cent. exchange touched 1s. 5 $\frac{3}{4}$ d. in Bombay. The flotation of Rs. 1½ crores 6 months' treasury bills on the 13th August steadied the rate to 1s. 5 $\frac{3}{4}$ d. The continued issue of treasury bills and a contraction of Rs. 4 crores against rupee securities of the Government of India stiffened exchange and enabled Government to purchase £2 millions sterling at the end of August at 1s. 5 $\frac{3}{4}$ d. Small purchases continued to be made throughout September at this rate while money was gradually tightening with the cumulative effect of treasury bills, the growing trade demand and the anticipation of stringency in the cold weather. These factors, combined with the rise of the Imperial Bank of India rate to 7 per cent. in October, resulted in purchases of £2½ millions in that month, and the Government buying rate was raised to 1s. 5 $\frac{3}{4}$ d. Unfortunately the rapid fall in the prices of commodities consequent on the collapse of the stock exchange boom in New York diminished the amount of finance which it was anticipated would be required during the busy season, and Government were only successful in buying £1½ millions during November which is usually an active month. In December, however, matters improved and Government were able to purchase £7½ millions, and raised their buying rate to 1s. 5¹⁰d. on the 4th and to 1s. 5 $\frac{1}{2}$ d. on the 30th. Local strength was also assisted by the drop in the Bank of England rate to 5 per cent. on the 12th. These large receipts of sterling were largely anticipatory sales by exchange banks; encouraged by the high price which Government were prepared to pay for sterling and the generous rates at which they were selling their treasury bills, the banks were largely selling Government the sterling which they normally would have

sold from January to March, and were investing the money in treasury bills until it should be required for financing Indian exports. The sudden and heavy fall in the prices of all the more important staples materially diminished the amount of money required to finance them, and this combined with the return of maturing bills to the market kept it well supplied with funds. A further factor which now came more strongly into operation to weaken exchange was the tendency to transfer capital abroad in view of the repudiation programme of the extremists. After failing to purchase any appreciable quantity throughout January, Government reduced their buying rate to 1s. 5 $\frac{1}{8}$ d. at the end of the month. The market rate promptly fell away to 1s. 5 $\frac{3}{8}$ d. In February the system of purchase by open tender was reintroduced, and tenders were invited for £500,000 on the 19th. Tenders of £25,000 at 1s. 5 $\frac{1}{8}$ d. and £475,000 at 1s. 5 $\frac{3}{8}$ d. were accepted. This led to a further drop in the market rate to 1s. 5 $\frac{1}{2}$ d. on the 22nd February and to 1s. 5 $\frac{1}{8}$ d. on the 17th March. Throughout March no further purchases were made, and the market rate remained at 1s. 5 $\frac{1}{8}$ d. By the end of the month, however, the withdrawal of nearly five crores from the market by treasury bills, coupled with a contraction of Rs. 8 crores of currency, and, more important, the feeling that for the time being at least the rapid drop in wholesale prices had ceased and that the prices of India's more important export staples had touched bottom, strengthened the undertone, and at the end of the year there was a reasonable prospect that Government would soon be able to effect further purchases."

Money Market Conditions in India during the year.—The year commenced with the bank rate at 8 per cent., but owing to the early close of the busy season it was reduced to 7 per cent. on the 11th April. The failure of the Northern India wheat crop materially lessened the demand for finance which is usual in April and May, but the repayment of the outstanding balance of Rs. 2 crores currency by the Imperial Bank and the contraction of a further Rs. 2 crores by the Government against sterling securities, combined with the flotation of nine and three month's treasury bills, prevented rates falling away too rapidly. The bank rate was again reduced to 6 per cent. on the 9th May, and when treasury bills were discontinued on the 14th May, money eased rapidly, and the rate was reduced to 5 per cent. on the 6th June.

The flotation of the rupee loan in June temporarily steadied the market, but at the end of the month, as soon as the loan was closed, rates fell away rapidly, the usual seasonal unattractiveness of short-term investment in India being enhanced by the strength of the demand abroad. The seasonal demand for jute finance was also less than usual. The flotation of twelve months' treasury bills at the end of July had little immediate result, but by the middle of August, six and then three months' treasury bills had provided an outlet for short-term money. Thereafter, for the remainder of the year, money rates were regulated by weekly issues of three months' bills, supplemented from time to time by the issue of intermediates on tap or by bills for longer maturities. With the favourable progress of the season and the continuation of treasury bills money tightened steadily, and the bank rate was raised to 6 per cent. on the 10th October and to 7 on the 31st.

The shock to trade and prices caused by the collapse on the New York Stock Exchange reacted immediately on the Indian

market, and money rates eased at once. Government raised their weekly offer of three months' treasury bills from 50 lakhs to a crore on the 5th November and again to $1\frac{1}{2}$ crores on the 26th, simultaneously raising the rate of interest by gradual stages to 5.8 per cent. On the 27th they also announced the unlimited issue till further notice of six months' bills on tap with a yield of just over 5 per cent. The effect of these issues on the market was not at once apparent. The anticipation of stringency in the near future made the market unwilling to invest too freely even in three months' bills and as there was no other outlet in the absence of an immediate trade demand, the rate for call money remained very low, especially in Calcutta, up to December. The other side of the picture was to be seen in February and March, when the anticipation of easier conditions in the near future induced the market to invest its funds in treasury bills up to the hilt, with the result that the still active trade demand kept the call rate high and frequently obliged the market to have recourse to the Imperial Bank for temporary accommodation.

As soon, however, as the trade demand became active, the effect of these withdrawals was felt, and the absence of funds in India, combined with the easing of money rates in London, as shown by the reduction of the Bank of England rate to $5\frac{1}{2}$ per cent. on the 21st November and to 5 per cent. on the 12th December, induced the banks to bring out funds, so that in December the demand for cotton finance in Bombay resulted in large sales of sterling to Government. In January there was a reaction. The heavy fall in the price of cotton, hessians, and, in fact, all India's export staples, materially lessened the amount of finance required to move the crops and the large maturities of treasury bills in January, February and March kept the market well supplied with funds. The continuous issues of three months' treasury bills at an effective rate of 6.3 and later 6.6 per cent. and the maintenance of six months' bills on tap at 5.9 per cent. prevented any serious disturbance of equilibrium, and though exchange remained dull at $1s. 5\frac{1}{8}d.$ to $1s. 5\frac{7}{8}d.$ and Government's purchases were insignificant, the 7 per cent. bank rate was kept effective. In March signs were visible that the season was closing. Funds began to come back rapidly, particularly from jute in Bengal, and the cash balance of the Imperial Bank rose. Steadiness was, however, maintained by the removal of surplus funds by three months' treasury bills at rates which gradually improved to $5\frac{1}{2}$ per cent. and by the contraction of 8 crores of currency, and the bank rate at the close of the year remained at 7 per cent.

The Public Debt. — The following table, abstracted from the Currency Report, shows the interest-bearing obligations of the Government of India outstanding at the close of the last three financial years and also the interest-yielding assets held against these obligations. The Controller points out that the figures for the cash balance and treasury bills are estimates only, the final actuals not yet being available.

	31st March, 1928.	31st March, 1929.	31st March, 1930.
<i>In India.</i>			
	(In crores of Rupees).		
Loans (a)	372.25	390.73	405.31
Treasury Bills in the hands of the public	7.59	4.00	36.04
Treasury Bills in the Paper Currency Reserve	31.94	39.15	29.22
Total Loans, etc.	411.78	433.88	470.57
Other Obligations—			
Post Office Savings Banks	32.67	34.49	37.48
Cash Certificates	30.70	32.30	35.00
Provident Funds, etc.	55.82	60.52	65.65
Depreciation and Reserve Funds... ..	25.48	31.09	31.77
Provincial Balances (b)	10.48	10.43	10.17
Total Other Obligations	155.15	168.83	180.07
Total in India	566.93	602.71	650.64
<i>In England.</i>			
	(In millions of £'s).		
Loans (a)	272.32	283.31	289.04
War Contribution	17.28	16.72	16.13
Capital value of liabilities undergoing redemption by way of terminable railway annuities	54.79	53.35	51.86
India bills	—	—	6.00
Provident Funds, etc. ... ..	.19	-.43	2.66
Total in England	344.58	353.81	365.69
Equivalent in crores of Rupees at rs. 6d. to the Rupee	459.44	471.75	485.59
Total Interest-bearing obligations	1,026.37	1,074.46	1,138.23
Interest-yielding assets held against the above obligations:—			
(i) Capital advanced to Railways	668.60	700.69	731.90
(ii) Capital advanced to other Commercial Departments	20.60	21.81	23.05
(iii) Capital advanced to Provinces	126.34	137.52	142.45
(iv) Capital advanced to Indian States and other interest-bearing loans	13.91	15.49	17.57
Total Interest-yielding assets	829.45	875.51	914.97
Cash, bullion and securities held on Treasury account	24.26	28.34	46.78
Balance of total interest-bearing obligations not covered by above assets	172.66	170.61	176.48

(a) These figures represent the nominal amounts of loans outstanding and also include comparatively small amounts of expired loans which do not bear interest.

(b) The figures represent those portions of provincial balances which bear interest either because they form part of the old Famine Insurance Fund or the present Famine Relief Fund or because they have been placed with the Government of India on fixed deposit.

The soundness of India's debt position is clearly shown. Against interest-bearing obligations of Rs. 1,138.23 crores she possesses interest-yielding assets *plus* cash, bullion and securities held on Treasury account amounting to Rs. 961.75 crores leaving an uncovered balance of only Rs. 176.48 crores. When one realises the proportion of the debt which is invested in railways and irrigation projects, both magnificent assets which should show increasing returns and a growing contribution to the relief of taxation, it will be granted that the position of India is an enviable one.

The Year's Loans.—The Controller describes Government's public borrowings during the year as follows :—

The Rupee Loan.—“ The rupee loan consisted of two series issued at 5 per cent., the interest on both being liable to income tax, a loan repayable from 1939 to 1944 and bonds repayable in 1935. The former was issued at Rs. 96.8 per cent. giving a yield of 5.459 per cent. if repaid in 1939 and 5.342 per cent. if repaid in 1944. The bonds were issued at Rs. 98 per cent. giving a yield of 5.395. Owing to the fall in Government securities in the previous two years it was decided to provide certain safeguards against further capital depreciation. Government offered to accept the 1939-44 loan at its issue price as the equivalent of cash in subscription to any future loan having a currency of ten years or more and maturing after the 15th July 1944. As a further insurance against the risk of capital depreciation, a sum equal to 1½ per cent. of the amount of the loan outstanding at the close of each financial year is to be set aside to form a fund which will be primarily used to support the loan in the open market when its quotation falls below the issue price.

Subscriptions to the loan were payable in cash, treasury bills, or in 6 per cent. Bonds, 1930, 1931 and 1932. All the three series of Bonds could be converted into the long term issue, but 1930 Bonds could also be converted into the short term issue subject to the proviso that at least an equal amount had been tendered for conversion into the longer loan. The Bonds were accepted as the equivalent of cash in subscription to the loan at Rs. 102, 103.2 annas and Rs. 104.2 annas, respectively, per Rs. 100 nominal value of Bonds tendered. Interest on the Bonds tendered for conversion was paid up to the 30th June 1929 irrespective of the date of tender. Treasury Bills were accepted in subscription to the loan at their face value *less* a discount of 4 per cent. per annum in the case of three month's bills and 4½ per cent. per annum in the case of nine months' bills on the unexpired portion of the currency of the bills.

Cash subscriptions were limited to twelve crores for the long term loan and fifteen crores for the short term bonds, but either issue could be closed at the option of Government to cash subscriptions at any time before the 23th June if the subscriptions to both the loan and bonds taken together reached a total of eighteen crores. Subscriptions in the form of 6 per cent. bonds were unlimited. The loan was opened for subscription on the 20th June, and as the maximum of cash was not reached it remained open till the 28th June, 1929. The total applications received amounted to Rs. 37,24,72,100 of which slightly over 29 crores were contributed to the loan and 8 crores to the bonds. Subscriptions in cash amounted to Rs. 13,22 lakhs. The nominal value of the bonds tendered for conversion was Rs. 22,31 lakhs of which Rs. 13,51 lakhs represented 1930 Bonds. The treasury bills received amounted to Rs. 38 lakhs.

The terms of the loan were generally well received by the market, and in view of the unsatisfactory circumstances of the year the conversion results

must be regarded as satisfactory and the cash subscriptions as not disappointing. The general market conditions were even less favourable than in previous years. There had been a further material drop in the price of Government securities, and in view of the international stringency of money there was great uncertainty as to the future trend of security prices. The borrowing rate had, therefore, to be raised approximately one half per cent. over that of the previous year. The immediate effect was to lower security prices in India, but the ultimate result was more satisfactory in that the prices both of the loan itself and of other Government securities, though they suffered a serious drop during the busy season for reasons which are examined elsewhere, had practically recovered by the end of the financial year to the level at which they stood when the loan was floated."

The Sterling Loan.—"In February a sterling loan of £6 millions was issued in London at 6 per cent. per annum at an issue price of £99 per cent. The bonds will be repayable at par on the 15th June, 1932, but the Secretary of State for India reserves the right, on giving three months' notice, to extend the date of payment to the 15th June, 1933, in which event the bonds will be redeemed at £101 per cent."

Prices of Rupee Securities.—"In spite of the increasing international stringency, rupee security prices remained steady owing to the easy money situation locally until the announcement of the rupee loan in June when they dropped so as to give a return similar to the new issues. There was a slight temporary reaction in July, but, as steps were taken to draw in superfluous funds from the market by treasury bills, prices fell in sympathy with those of gilt-edged securities in international centres up to the end of October. In November, when money rates eased internationally, Indian securities did not share in the recovery. In the first place, the easing of money internationally coincided with the commencement of the busy season in India when a seasonal drop in gilt-edged prices is normally to be expected. A more important reason for the further drop in Government of India securities was political. Nervousness about political developments in India led to continued selling of Indian Government sterling securities in London; the 3½ per cent. loan fell seven points from 65 to 58 between October and February. Since the stabilisation of the rupee exchange there has been a growing arbitrage business in rupee and sterling securities of the Government of India between Bombay and London, so that the fall in sterling securities led to a sympathetic drop in the price of rupee securities. 3½ per cent. paper fell to 64 ½ and the 1929-47 and 1945-55 loans had to be supported by purchases from the sinking fund. A reassuring statement, however, which was issued by the India Office at the end of January, and the publication of the budget at the end of February had a strengthening effect on the London market, and this, combined with the rapid easing of money in that centre, brought the Government of India sterling issues back to their October level, the 3½ per cent. loan again reaching 65. This was again reflected in India and the release of funds on the early termination of the busy season in India led to a general recovery in security prices so that by the end of the financial year the loan and bonds which were floated in June were back to their issue price and 3½ per cent. paper had recovered to Rs. 69 as compared with Rs. 71-4 on the 31st March, 1929, a drop of 2½ points during the year as compared with falls of 4 in the year before and 3½ in 1927-28."

The Budget—1930-31.—The Hon. The Finance Member of the Government of India, in introducing the Budget, summarised the position as compared with that provided for in the budget estimate of 1929/30 as follows:—

	Rs. (lakhs).
Deterioration in the main commercial departments,	
Railways and Posts and Telegraphs	99
Essential new services and demands	1,46
Net addition to interest on dead-weight debt... ..	1,07
Special provision for bonus on Post Office Cash Certificates	88
Increase in provision for reduction or avoidance of debt	27
Budget deficit of 1929/30	90
	<hr/>
Total	5.57
Against which the net improvement on the main revenue heads amounted to	5
leaving a total gap to be filled of	Rs. 5.52 lakhs.

Against this sum, economies in the civil estimates amounting to Rs. 62 lakhs and in military expenditure amounting to Rs. 80 lakhs were effected, thus reducing the gap to Rs. 4,10 lakhs, for which funds had to be found. A proposed reduction in the export duty on rice from three annas per maund to two annas three pies per maund increased this gap to a total of Rs. 4,40 lakhs, for which new taxation had to be imposed.

The readers of this report will be mainly interested in the cotton textile duties, which are dealt with at some length in Chapter III and which are expected to contribute a net increase to the revenue of Rs. 1,25 lakhs. In addition, an increase was proposed in the excise duty on kerosene from one anna to one anna six pies per gallon coupled with a reduction in the import duty from $2\frac{1}{2}$ annas to $2\frac{1}{4}$ annas per gallon. This combined proposal was expected to contribute Rs. 35 lakhs. An all round increase in the import duty on sugar of Rs. $1\frac{1}{2}$ per cwt. yielding Rs. 1,80 lakhs was next proposed. Small changes in the rates of income tax and super tax, yielding a total of Rs. 70 lakhs and the reintroduction of an import duty of 4 annas per ounce on silver, estimated to yield Rs. 100 lakhs, completed the proposals, the net effect of which would be a surplus of Rs. 70 lakhs of revenue over expenditure. These duties were all passed by the Legislature and embodied in the Indian Finance Act, 1930, which also imposed a consequential addition of 8 per cent. (making 38 per cent. in all) in the duties on silver plate, silver thread and wire (including so-called gold thread and wire mainly made of silver) silver leaf and silver manufactures, all sorts not otherwise specified.

In concluding his speech, the Hon. Sir George Schuster emphasised the main features of his budget proposals as follows :—

First, all additional expenditure on normal increments and new services, including the large agricultural grants and such important new services as civil aviation, is being balanced by economies—mainly on military expenditure.

Secondly, principles of financial soundness are being doubly re-inforced. No financial weak spots are being left as regards debt redemption and the cash certificate liability while I have provided for a margin of safety in case events next year prove unfavourable. We can thus face the most stringent scrutiny of financial critics with confidence.

Thirdly, we are making a substantial start towards a constructive economic policy and opening the way for beneficial expenditure. If the year proceeds

without abnormal disturbances to trade or civil security, we shall have money at our disposal to increase our resources for these purposes, and having prepared these foundations, the Central Government next year ought to be in a position either to initiate important schemes themselves or to provide additional revenue for the Provincial Governments to give them the power for a more generous effort to this end.

Fourthly, although substantial new revenue is to be raised, the measures which I have proposed are so designed as to reduce restrictions on economic action and to lighten, rather than increase, the burden on the poorest classes. This is directly the case as regards the reduction of the rice export duty and of the import duty on kerosene, while all except one of the other measures ought to have indirect beneficial effects. I have, moreover, indicated various directions in which, with the normal proceeds of our new resources, I hope to remove certain hampering impediments to the business activities of the country.

Fifthly, we have, in our proposals affecting cotton, made a determined effort to remedy a special malady from which the industrial life of the country is suffering, and, by restoring health to one important centre, to improve the general condition of the country.

Sixthly, we have made a determined effort, by a proper control of capital expenditure, to give a chance for recuperation of the country's credit, so that, with strength restored, a healthy growth, proportioned to our resources, may be once more resumed."

The Railway Budget. — The Hon. Member for Commerce and Railways, reviewing the financial year 1929/30, stated that, on the basis of the revised estimates, the Railway Board expected that at the close of the year on March 31st, 1930, the total receipts from commercial lines would be Rs. 1,05 crores, which is Rs. $1\frac{1}{4}$ crores above the receipts for last year. The expenditure was estimated to be nearly Rs. 98 crores—an increase of Rs. $3\frac{3}{4}$ crores. The net gain from the commercial lines would be Rs. 7 crores, out of which the loss on the strategic railways amounting to Rs. 1,81 lakhs would have to be met. The balance of Rs. 5,26 lakhs, being insufficient to meet the contribution of Rs. 6,12 lakhs to General Revenues, they would have to draw on their reserves to the extent of Rs. 86 lakhs.

The budget estimates for 1930/31 anticipate total receipts amounting to nearly Rs. 1,08 crores, a figure nearly Rs. 3 crores more than the revised estimates for 1929/30. The total expenditure is estimated at nearly Rs. 100 crores, an increase of slightly over Rs. 2 crores on the revised estimates for 1929/30. The final result is a net gain to the Railways of nearly Rs. 8 crores. Out of the surplus a net loss on the strategic lines amounting to Rs. 1,80 lakhs and the contribution to general revenues of Rs. 5,74 lakhs will have to be met. Only a small balance of Rs. 34 lakhs will remain to be added to the Reserve Fund.

In reviewing the year 1929/30, the Commerce Member stated :

"The heavy falling-off in grain traffic is clearly due to the unsatisfactory harvests in Northern India, but under other heads it is not so much that traffic has fallen-off heavily as that it has failed to expand to the extent we hoped. India, like other countries, is passing through a period of trade depression due to falling prices, when buyers naturally adopt a cautious policy and goods move slowly."

The Chief Commissioner of Railways in introducing the Railway Budget in the Council of State also remarked—

“Our traffic has suffered from the prolonged labour troubles in Bombay and from the heavy floods in certain parts of the country, while the general trade depression has counteracted the stimulating effect for which we had hoped from the reductions of rates and fares during the past two years.”

Curtailement of Railway Capital Expenditure. — British suppliers of railway plant are being seriously affected by the curtailment of the Indian railway programme of capital works and new construction and may be interested in the following clear statement of the position taken from the Railway Board Memorandum issued early in the year :—

“It has become apparent that owing to existing conditions, not only in India but outside India as well, we are unlikely to obtain funds for capital expenditure on railways in the near future except at rates of interest substantially higher than those at which they have been procurable in the last three or four years. A rise in the rate of interest not only makes some projects either for extensions to the railway system or for improvements to the existing system unremunerative; it also makes it necessary to consider whether it is not wiser to postpone the inception of other projects which, even with a higher rate of borrowing, may still be remunerative, rather than to burden the railways of India with a large volume of indebtedness for money raised at a period of high interest rates. Consequently we have this year (1929/30), and propose next year, to concentrate almost entirely on pushing schemes already in hand through to completion, so that we may obtain an early return on the money spent on them, and have avoided adding to our commitments at a time when the future is so uncertain by undertaking new schemes.”

The Hon. the Commerce Member in his Railway Budget speech supplemented the above statement by assuring the House that, in order to bring about the necessary reduction in capital expenditure, it has not been necessary to bring to a standstill important works in progress and it has sufficed to refrain from the commencement of new projects which would have involved the railways in heavy commitments for future years.

Railway Capital Programme for 1930-31. — The Chief Commissioner of Railways, in presenting the Railway Budget to the Council of State on February 17th, 1930, outlined the capital programme for the current financial year in the following terms :—

“In framing our capital programme for 1930/31 we have followed the same principles as we did last year, viz., to press on with the completion of works already in hand and so reduce our future commitments. Our budget estimate for this year is a very modest one, and only allows for an expenditure of 25½ crores, after allowing for a reduction in our stores balances of ½ of a crore. Of this amount 16½ crores will be new capital and the remainder will be found from the Depreciation Fund. But although our programme is a modest one there is one direction in which we have decided not to call a halt. We are making a special provision of 25 lakhs during 1930/31 for expenditure on the construction of quarters, which will be required for the additional staff necessitated by the adoption of the Hours of Work and Rest Rules based on the Washington and Geneva Conventions. This is in addition to the provision made on all the railways, to the extent of 61 lakhs, for additions to and improvements in staff quarters for our subordinate staff.

Five crores of rupees will be devoted to the construction of new lines to be spent, with the exception of 2 lakhs for certain sidings on the East Indian Railway, on lines on which work is already proceeding. Though our programme of new construction has been very much curtailed I do not think

there is any need for despondency in this respect. It must be remembered that during the past five years about 2,300 miles of new lines have been opened to traffic, and even if there had been no shortage of funds next year, it might have been necessary to call a halt in the rate at which new lines could be constructed. The construction of lines in fresh country may be compared to an advancing army. Just as an army can only advance a certain distance before it becomes necessary to consolidate behind the line, so with railways the construction of branch lines must be limited to the carrying capacity of the main trunk lines, and I feel that the most urgent necessity at the present time is to increase the capacity of our main trunk lines, so that they may keep pace with the traffic offering from branch lines already constructed and which will be constructed as soon as the money market becomes easier. The capacity of a line may be increased in various ways—by electrification, by doubling, by increasing the strength of the track and bridges so that more powerful locomotives hauling heavier trains may run, by increasing the number of crossing stations, by the installation of up-to-date interlocking at wayside stations so that trains may pass through at speed, and in various other directions. Practically all these methods of increasing capacity are reflected in our works programme for next year; we have provided for the completion of the electrification of the Great Indian Peninsula Railway between Bombay and Poona and Bombay and Igatpuri; a start will be made on the doubling of the Cawnpore-Tundla section of the East Indian Railway, this section to a very large extent controls the traffic between Calcutta and the North and in the view of the Railway Board is one of the most urgent works in the programme; extensive rail renewals are proposed on the main line of the North Western Railway between Delhi and Bhatinda, and on the Great Indian Peninsula Railway between Itarsi and Agra and between Poona and Sholapur, and on the East Coast Line of the Bengal Nagpur Railway. Heavy bridge renewals are programmed on the Bengal Nagpur Railway, the Great Indian Peninsula Railway and the Bombay, Baroda and Central India Railway. These works, though they may not be as spectacular as the construction of new lines, all tend to improve our property and will give an immediate return through savings in operating expenses."

Indian Joint Stock Companies in 1929-30. Flotations.
—After a period of lack of confidence following the brief but ill-fated Indian industrial boom of 1919, the registrations of new Joint Stock Companies shows a progressive tendency of recent years, which is evident from the following statement showing the position over a period of years :—

Year.	Companies Registered.		Aggregate authorised Capital.		Average authorised capital per company.
	Number.	Index Number (pre-war year = 100).	Amount.	Index Number (pre-war year = 100).	
1913-14 (pre-war)	356	100	Rs. 000's omitted.	100	Rs. 000's omitted.
1923-24	430	124	26,49,78	40	6,18
1924-25	416	115	21,23,25	31	5,09
1925-26	472	133	30,06,08	45	6,37
1926-27	529	149	19,39,09	29	3,67
1927-28	626	176	17,57,04	26	2,81
1928-29	733	206	27,29,12	41	3,72
1929-30	842	237	61,66,27	92	7,32

During the past year increases in the authorised capital were noticeable under the following heads :—

Banking (+Rs. 29,64 lakhs),
Insurance (+Rs. 7,87 lakhs), and
Trading and Manufacturing (Engineering) (+Rs. 1,09 lakhs).

As I have repeatedly stated, however, the amount of authorised capital is a very poor guide to the actual state of affairs, as in the majority of Indian concerns the paid-up capital is only a small fraction of the authorised capital. Companies in India go to allotment on very small subscriptions.

Liquidations.—238 companies with an authorised capital of Rs. 13 crores, having ceased work, went into liquidation or were finally dissolved during the year 1929/30. These included 9 cotton mills with an authorised capital of Rs. 1,88 lakhs and 3 estate, land and building companies with an authorised capital of Rs. 1,20 lakhs.

Indian Working Class Cost of Living Index. Bombay
—This index figure, which is compiled by the Labour Office of the Bombay Government, has fluctuated during the year ended March, 1930, between 50 and 42 per cent. above the rates ruling in July, 1914. The tendency, since December, 1929, has been downwards. The articles included in the index are cereals, pulses, other articles of food, fuel and lighting, clothing and house-rent. The articles have been given the relative importance which each bears to the total all-India aggregate expenditure. No allowance is made for any change in the standard of living since July, 1914. The fluctuations in the past seven years are shown in the following table :—

(All items : Percentage increase over July, 1914).

	1923.	1924.	1925.	1926.	1927.	1928.	1929.	1930.
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
January ...	56	59	57	55	56	54	49	47
February ...	55	56	57	54	55	48	48	45
March ...	54	54	59	55	55	45	49	42
April ...	56	50	58	53	53	44	48	41
May ...	53	50	56	53	52	47	47	41
June ...	52	53	54	55	54	46	47	41
July ...	53	57	57	57	56	47	48	—
August ...	54	61	52	55	57	46	49	—
September ...	54	61	51	55	54	45	49	—
October ...	52	61	53	55	51	46	49	—
November...	53	61	53	54	50	47	50	—
December ...	57	60	55	56	51	48	50	—
Yearly average ...	54	57	55	55	54	47	49	—

Patents and Designs.—In his report for the calendar year 1929, the Controller of Patents and Designs states that the number of applications for patents filed during 1929 was 1,392 as compared with 1,274 in 1928. Of these applications, 10 were from women inventors, 231 originated in India, and the remaining 1,161 came from abroad. The trend of Indian inventions was notably towards machinery and implements for agricultural and irrigation purposes. There has been, in recent years, an increase in inventions from Indians and specially adapted to Indian needs. The Controller makes the interesting comment that—

“ although there was a general increase in the number of applications taken for the whole year, the number received in the concluding months of the year suffered a noticeable decrease owing to the general financial disturbance which followed the Stock Exchange speculations in the United States of America in September and October 1929, obviously because the finance necessary for the exploitation of new inventions was not easily available.”

As regards designs, 7,650 applications for registrations were filed during the year. Of these, 198 originated in India and the rest came from abroad. The textile designs came principally from the Calico Printers' Association (6,893 applications) and Steiner and Co. Ltd. (177 applications). Of the designs other than textile designs, those relating to boxes and cases, vehicles, jewellery and rubber goods predominated.

Printed copies of accepted specifications are now distributed to 17 centres, including the Patent Offices in London and Washington, where these and other publications of the Indian Patent Office may be seen free of charge. Copies of about 16,200 specifications can be obtained at a uniform price of 1 Rupee each on application to the Indian Patent Office, 1, Council House Street, Calcutta. Specifications and other publications of the Patent Offices of the United Kingdom, the United States of America and Australia are available for inspection at the Calcutta Patent Office and at the Record Office, Bombay.

Civil Aviation.—I am indebted to Lt.-Col. F. C. Shelmerdine, O.B.E., Director of Civil Aviation in India, for the following comprehensive note on the progress of civil aviation in India during 1929/30 :—*

1. England-India Air Service.—The England-India air service was inaugurated on the 30th March, 1929, and the first machine arrived at Karachi on 6th April. The first machine for England left Karachi on 7th April. Under the original time-table the journey occupied 8 days in each direction. The revised time-table for the summer of 1930 provides for arrivals at Karachi on Fridays and departures on Tuesday, the journey in each direction being performed in 7 days.

2. The Indian State Air Service.—The England-India air service was extended from Karachi to Delhi (the first section of the route across India) on 30th December, 1929, as the Indian State Air Service running in both directions in connection with the service to and from England. It is operated with D.H. 66 aircraft chartered by the Government of India from Imperial Airways, Ltd. under an agreement which is operative for two years. It is

* This report on Civil Aviation has already been published in “ The Air Annual of the British Empire, 1930,” published by Messrs. Gale and Polden, Ltd., 2, Amen Corner, E.C.4.

proposed to extend this service from Delhi to Calcutta in the autumn of 1930 and thence to Rangoon as soon as the landing grounds between Calcutta and Rangoon are ready for use. These extensions will be undertaken with machines owned and operated by Government. At the outset mails only will be carried and special provision is being made for the training of Indians as pilots, mechanics, etc.

3. Organisation of air route across India.— (a) During 1929/30 the ground organisation of the first two sections of the air route across India viz. Karachi-Delhi and Delhi-Calcutta was practically completed. The Indian State Air Service will operate via Delhi but the more direct route which is generally followed by machines crossing India is via Jhansi. This route is 120 miles shorter but suffers from the disadvantages of having two long stages on which there are no emergency landing grounds and of traversing country where ground communications are bad. The route via Delhi follows the railway throughout. Details of the alternative routes are as under, mileage being computed on the basis of point to point distances *plus* 5 p.c.

<i>Karachi to Calcutta.</i>					
(a)			or (b)		
	<i>Miles.</i>			<i>Miles.</i>	
Karachi	Karachi ... ..	...	...
Hyderabad...	100	Hyderabad... ..	...	100
*Uterlai	293	*Uterlai ... ..	...	293
†Jodhpur	402	†Jodhpur ... ..	...	402
†Badhal	577	Jhansi ... ..	...	765
Delhi	722	Allahabad ... ..	...	973
Cawnpore	974	Gaya ... ..	...	1,181
Allahabad	1,092	*Asansol ... ..	...	1,331
Gaya	1,300	Calcutta ... ..	...	1,450
*Asansol	1,450			
Calcutta	1,569			

* Emergency Landing Ground only.
† Under construction.
‡ Indian State Aerodrome.

Hangars are available at Karachi, Delhi and Calcutta.

Dimensions :—

Length ... ..	...	...	132 feet.
Width (door opening) ... ..	...	...	101½ "
Height at door opening ... ..	...	...	24 "

W/T and D/F stations for aviation purposes are functioning at Karachi, Jodhpur and Delhi and will shortly be available at Allahabad, Gaya and Calcutta. Refuelling facilities throughout the route are being provided by the Burmah-Shell Oil Storage and Distributing Co. of India Ltd.

(b) During 1929 the improvements to Calcutta Dum Dum Aerodrome which have been in progress for more than two years were completed at a total cost of £23,500. The aerodrome is now fit for use throughout the year.

(c) During 1929 land for a Government Civil Aerodrome at Rangoon was purchased and its preparation put in hand. The aerodrome is situated at Mingaladon about 11 miles north of Rangoon on the main Prome Road. The total cost of acquisition and preparation is estimated to be £27,000.

(d) Improvements to the Akyab Aerodrome were also carried out in 1929.

(e) During 1930 further progress will be made with the organisation of the Calcutta-Rangoon route. Landing grounds will be provided at Chittagong, Sandoway and Bassein with wireless and D/F stations at all three places and also at Rangoon and Akyab. These new grounds will require extensive filling and will therefore probably not be ready for regular use throughout the year until after the monsoon of 1931. A hangar, customs accommodation and refuelling facilities will be provided at Rangoon.

(f) It is hoped to provide in 1931 further emergency landing grounds on this section at Cox's Bazaar, Kyaukpyu and Gwa.

(g) South of Rangoon landing grounds are being constructed at the following places :—

- Moulmein.
- Tavoy.
- Mile 44 (south of Tavoy).
- Mergui.
- Victoria Point. (Original ground being extended and improved).

The existing wireless station at Victoria Point will probably be modified and brought up to date for aviation purposes in 1931.

(h) Adequate meteorological facilities are now available between Karachi and Calcutta and in 1930 additional stations will be provided to meet the needs of the Calcutta-Rangoon route.

(i) During 1930 a landing ground will be established at Kotri to take the place of Hyderabad which is a military ground not available for regular use by civil aircraft. The Hyderabad ground is also small and quite unsuitable for use at night. Kotri is situated on the west bank of the Indus in close proximity to Hyderabad.

(j) During 1929 the land required for the Bombay Aerodrome was purchased at a cost of £23,000. A sum of £30,000 will be spent on its preparation during 1930/31, and it is hoped to complete the work during 1931/32 at a further cost of £40,000. Heavy filling is necessary as the land is at present under water during the monsoon season. The work which it is proposed to carry out will render the whole ground fit for use throughout the year and it is hoped to be able to arrange matters so that a portion will be available for use during the monsoon of 1931. The aerodrome is situated at Juhu approximately 12 miles north of Bombay on the Andheri road

(k) During 1929 land for an aerodrome was acquired at Vizagapatam which is a port on the east coast which is being developed. This ground will eventually be required for the Calcutta-Madras route and it was thought desirable to secure the site before the development of the port caused an appreciation in land values.

(l) It is hoped to equip the Karachi-Delhi Section for night flying during 1931-32.

(m) Land has been reserved at Berhampore for a future civil aerodrome. When established it will be possible for machines crossing India to fly via Berhampore and Dacca to Chittagong, thus avoiding the sea crossing between Calcutta and Chittagong.

4. Karachi Airship Base.—During 1929-30 the Airship Hangar and Mooring Tower at Karachi were completed. It is hoped that the first trial flight to Karachi of H.M. Airship R 101 will take place in September 1930.

5. Air Survey.—The Indian Air Survey and Transport Co., Ltd. have completed 1,655.5 square miles between 30th April, 1929, and the end of February, 1930. This work has all been verticle photography and includes large scale town surveys of Indore City and Calcutta. The Company is now engaged on a new contract of 2,200 square miles of settlement mapping in the United Provinces. They have also completed a considerable area for Forest Departments in the United Provinces. They are undertaking a survey of 500 square miles for irrigation purposes in Bengal. Later in the year settlement surveys in the United Provinces and Bengal will be continued. The Company's Drawing Office has been fully employed on all classes of mapping throughout the year and considerable progress has been made with the perfecting of new methods particularly those employed in the compilation of 16in. settlement maps. This class of work is now firmly established and has definitely proved to be more accurate and economical than similar work done by ground methods. The Company expect that there will be a considerable demand later in the year for large scale town surveys, and there are indica-

tions that their Irrigation, Forest, Railway, Settlement and Topographical Surveys will also be employed in many new districts.

The Company's European staff during the past year has numbered 10 and Indian staff 200. Flying equipment has consisted of 3 D.H.9s and 1 Avro Avian. No accident has occurred to any of the Company's aircraft and only one forced landing has been made.

In addition to ordinary survey operations many small areas have been covered both by oblique and vertical photography for commercial purposes in the districts in which the Company have been working.

The expansion of the Company's work, which can confidently be anticipated, should result in the course of the next year in a large increase in both staff and equipment.

6. Other Flying Activities.—Other flying activities have included air taxi work, pleasure flying and photography by Messrs. J. S. Newall and N. Vintcent in various parts of India. No other air transport companies are at present operating, the Bengal Air Transport Co. having closed down during the year.

The De Havilland Aircraft Co. Ltd. opened an Indian branch at Karachi in October, 1929.

It is hoped that next year it will be possible to carry out work in connection with the location and destruction of locust hoppers in conjunction with the Locust Committee appointed by the Imperial Council of Agricultural Research.

7 Training of Indians.—Eight Indians are now under training in England with a view to their future employment in the Civil Aviation Department of the Government of India as Aerodrome Officers, Inspectors, etc. Two more Indians were selected for scholarships in May and will start their course of training on 1st July.

8. Long distance flights by Indians.—His Highness the Aga Khan offered for competition a prize of £500 for the first solo flight from England to India or vice versa by a person of Indian nationality. On the 3rd March, 1930, Mr. R. N. Chawla, accompanied by Mr. A. M. Engineer son of Mr. M. H. Irani of Karachi who provided the aeroplane (a De Havilland Gipsy Moth) started from Karachi and successfully completed the flight to England where he arrived on the 20th March. The flight complied with all the conditions laid down in regard to His Highness the Aga Khan's prize except that a passenger was carried, whereas to be eligible for His Highness the Aga Khan's prize a solo flight must be carried out. The Government of India, however, granted Mr. Chawla a sum of Rs. 7,500 (£560 approximately) in recognition of his flight. Mr. Chawla originally learned to fly in October 1928 at the Nottingham Aero Club. He returned to India in 1929 and his training has been continued by the Karachi Aero Club since October last. Mr. Chawla is the first pilot of any nationality to fly a light aeroplane from India to England.

On the same machine, a D.H. Gipsy "Moth," Mr. Engineer started on the 25th April, 1930 from Croydon for India in an attempt to win the Aga Khan's prize. This he succeeded in doing, arriving in Karachi on the 11th May, within the stipulated period of one month. This is all the more creditable when it is remembered that Mr. Engineer was not quite 18 years of age at the time of this flight. Two other attempts to win the Aga Khan's prize were made at about the same time, one by Mr. Man Mohan Singh from Croydon and the other by Mr. Jehangir Tata from Karachi. In both cases D.H. Gipsy "Moths" were used. Mr. Man Mohan Singh, whose third attempt it was, started on the 8th April. He was unfortunate enough to have a forced landing in a swamp at St. Rambert in the south of France, and it was not till the 1st May that he was able to resume his flight, which he did from Lyons. He arrived at Karachi on the 10th May having overtaken Mr. Engineer on the way, but was declared ineligible for the Aga Khan's prize as he had exceeded the limit of one month. Mr. Tata did not start till the 3rd May and arrived at Croydon on the 12th May. Though too late to win the prize, his flight was a creditable effort.

9. International Flights.—The number of international flights across India during the year under review was 36. They were distributed as follows:—

Dutch	17
French	8
Swiss	1
British	2
American	2
Australian	5
Chinese	1

The Dutch flights were experimental flights between Amsterdam and Batavia carried out at fortnightly intervals from September to December 1929.

10. Accidents.—Seven accidents occurred during the year, three of which resulted in minor injuries to pilots. Extensive damage to aircraft resulted in each case. Three of these accidents occurred in the course of international flights and four in Club flying.

11. Licenses and Certificates.—The following table shows the numbers of licences and certificates issued in 1929 and the numbers current on 31st December, 1929.

	Number issued in 1929.	Current on 31-12-29.
Pilot's A Licenses	56	56
Pilot's B Licenses	18	21
Ground Engineer's Licenses	1	6
Certificates of Registration... ..	16	26
Certificates of Airworthiness	20	19

The London—Karachi Air Mail.—Special mention should be made of the development of the weekly air mail service between Croydon and Karachi which was inaugurated from Croydon on March 30th, 1929, and which is operated by Imperial Airways, Ltd. The Company were unfortunate in suffering two disasters during the first year but in spite of this, steady progress has been made; the service is regular and punctual and is becoming one of the recognised features of Indian life. In a statement issued by the London General Post Office last autumn, they stated that the service was thrown open at the start for the carriage of the air mails of every country on the actual route and in June, 1929, it was made available to the mails of every country in the Postal Union. They add—

“The traffic to and from India has been increasing steadily week by week. From an average of about 300 lbs. in either direction (India only) the average weekly weight is now over 550 lbs. representing nearly 5 per cent. of the total letter mail outward and over 5 per cent. inward. (It should be mentioned that the weight of the ordinary mail outward is greater than the inward). During the first six months working of the service 14,656 lbs. of mail has been carried from London to various destinations and 17,529 lbs. of mail has reached London. The corresponding figures for India alone are 11,893 lbs. outward and 11,436 lbs. inward.”

A British official wireless message dated July 17th, 1930, states that the weight of letter mail to India had increased from 4,939 lbs. in the quarter ended June 30th, 1929, to 8,506 lbs. in the corresponding quarter of 1930.

During the summer flying season from April 12th, 1930, the

mails and passengers leave Croydon at 8.30 a.m. on Saturdays, arriving at Karachi at 3.30 p.m. on the following Friday and at New Delhi at 4 p.m. on the following Saturday. The homeward planes leave New Delhi on Monday morning at 7.30, leave Karachi at 10 a.m. on Tuesday and arrive at Croydon at 6 p.m. on the following Monday. The transit between Karachi and Croydon is effected in seven short flying days. As an example of what can be done if necessary, the homeward mails between Delhi and Karachi one week in July, 1930, were delayed by monsoon weather. The plane was $1\frac{1}{2}$ days late in leaving Karachi, but this time was recovered in the journey between Karachi and Croydon and the mails were delivered to time.

A map of the Air Route across India showing landing grounds and distances will be found at the end of the Report.

The Aero Club of India and Burma.—In my last Report I referred to the formation of the Club in 1927 under the patronage of H.E. the Viceroy and with H.E. the Commander-in-Chief as President, the objects being to develop civil aviation and, in particular, flying clubs throughout India. Four original flying clubs viz. Delhi, Bombay, Bengal and Karachi were formed some time ago and additional clubs in the Punjab and at Madras have been formed recently. In each case the Government of India grant an annual subsidy of Rs. 20,000 for two years, the supply—free of charge—of two "Moth" aeroplanes and a spare engine and a grant of Rs. 15,000 for the erection of a hangar. The response has exceeded expectations and it is abundantly proved that the desire to take up flying in India is widespread and increasing rapidly. Enquiries and definite proposals for the formation of new clubs have been received from Rangoon, Benares, Lucknow, Indore and Quetta and H.H. the Nawab of Bhopal is also considering the formation of a club in his State. The following particulars of membership at the end of 1929 may be of interest :—

Aero Club of India and Burma Ltd.	370	members.
Delhi Flying Club	204	"
Bombay Flying Club	202	"
Bengal Flying Club	357	"
Karachi Aero Club	173	"
Punjab Flying Club... ..	216	"
Madras Flying Club... ..	56	"

The enterprise of the De Havilland Aircraft Co. Ltd. in opening a depot at Karachi for the supply of their aeroplanes and spare parts has materially assisted the progress of private flying in India. All inquiries from manufacturers with regard to the Aero Club's requirements should be addressed to Wing-Commander A. R. C. Cooper, Secretary, Aero Club of India and Burma Ltd., Chelmsford Club, New Delhi, and to the Secretaries of the other Clubs.

Wireless Telegraphy.—I am indebted to the Acting General Manager of the Indian Radio Telegraph Co. Ltd. for the following note, with regard to the development of wireless communications in India :—

“Wireless Beam Service between Great Britain and India.—The Wireless Beam stations of the Indian Radio Telegraph Co. Ltd., were inaugurated by His Excellency the Viceroy on July 23rd, 1927. The success of the new service was immediate and the volume of traffic at the outset considerably in excess of the most optimistic anticipations.

During the past year a steady increase in traffic has been maintained and no less than 13 million words have been transmitted over the Indian Beam, a remarkable fact being the steady increase in fully paid traffic.

The aim of the company is to afford the public a cheap, accurate and speedy means of communication and in furtherance of this policy negotiations are being conducted with the Indian Government with a view to obtaining facilities for the more rapid distribution of traffic over inland lines.

The extension of the system to other countries is also being followed up actively and negotiations are proceeding to obtain a licence from the Indian Government to operate a beam service with Japan. In addition to the development of new beam telegraph services the policy of the company includes inter-Continental telephony and negotiations are proceeding with the Indian Government and the British Post Office to commence experimental tests in Wireless Telephony between Great Britain and India.

Point to Point Wireless Services.—During the past year the use of wireless for communication between stations or places in India has not advanced to any great extent, but many enquiries have been dealt with and it is anticipated that wireless telephony will be installed in several of the Indian States, particularly Bikaner, Kashmir and Hyderabad, during the next year. Extensions have been made to the wireless establishment of the Burma Military Police, who are also considering further considerable extensions. Several wireless telephone equipments have been installed for the Burma oilfields. Negotiations are proceeding with the Calcutta and Bombay Police authorities and it is expected that considerable development in the use of wireless for police purposes may be anticipated.

Wireless Beacons and Direction Finding Stations.—Various Port Authorities are considering the installation of wireless beacons for direction finding operations. The value to shipping and to the safety of life at sea has been so ably demonstrated in many parts of the world, it is hoped such installations will be introduced with advantage by the Port Authorities now considering such method and it is likely that the first wireless beacon station on the Indian coast will be installed by the Bombay Port Authorities during the next year.

Public Address Equipments.—The Indian Radio Telegraph Co. Ltd. have carried out a large number of successful demonstrations with the Public Address Equipments and there is quite a demand arising in India for Public Address functions of all kinds and also for band amplification. Several complete sets of Public Address Apparatus have been sold to Indian States, where they are giving every satisfaction. The Indian Radio Telegraph Co. Ltd. have developed this business and keep in stock the latest and most up-to-date equipments which could be installed at the shortest possible notice and operated by a trained and competent staff.

Future Developments.—Apart from inter-Continental telegraphic services there appears to be a considerable field for the development of wireless in India. It is admittedly suited for Police outposts such as those mentioned above, for coastal communication with lighthouses and lightships, and as an aid to navigation to both ships and aeroplanes with the anticipated development of commercial aviation in India for aerodrome and meteorological purposes, it is anticipated that there will be considerable developments on these lines in India in the near future.”

Broadcasting.—The business of the Indian Broadcasting Co., Ltd., was taken over by the Government of India from March 31st, 1930, against a cash payment of Rs. 3 lakhs. It is, for the time

being, administered by the Department of Posts and Telegraphs, the Postmaster-General, Bombay and the Electrical Engineer-in-Chief of the Telegraph Department, Calcutta, being in charge of their respective stations with Station Directors to advise them. On June 12th, 1930, a Central Broadcasting Advisory Committee was appointed by the Government of India comprising the Hon. Member for Industries and Labour as Chairman, two Official Members, two Indian Members of the Central Legislature and two unofficial Europeans. Local Advisory Committees will probably shortly be appointed at Calcutta and Bombay to assist the Station Directors in the arrangement and execution of their programmes. Meanwhile, broadcasting is proceeding from both the Bombay and Calcutta Stations and programmes and particulars are published in the weekly *Indian Radio Times*.

The Indian Road Development Committee's Report.—In my last Report I referred to the activities of this Committee, which was then sitting. The Committee reported in the autumn of 1928 and the following is a summary of their recommendations :—

The desirability of developing the road system of India.—The development of the road system of India is desirable for the general welfare of the country as a whole, and in particular—

- (a) for the better marketing of agricultural produce;
- (b) for the social and political progress of the rural population, which will be advanced by the increased use of motor transport;
- (c) as a complement to railway development.

The means by which road development in India could most suitably be financed.—(1) Road development in India is passing beyond the financial capacity of local Governments and local bodies, and is becoming a national interest which may, to some extent, be a proper charge on central revenues.

(2) Road development, in so far as it contributes to the general welfare of the country as a whole, is a proper charge on general revenues but no increase in the expenditure on roads from existing revenues is recommended.

(3) To meet the additional demands and requirements created by the growth of motor transport, some additional taxation might be imposed on motor transport for purposes of road development over and above the existing taxation for general revenues.

(4) A well-balanced scheme of additional taxation on motor transport for purposes of road development, should include—

- (a) a duty on motor spirit;
- (b) vehicle taxation;
- (c) licence fees for vehicles plying for hire.

(5) The duty on motor spirit might be raised again to 6 annas per gallon without affecting consumption provided that the additional 2 annas now imposed is spent on road development.

(6) The amount so realised would be Rs. 62 lakhs on the figures of 1927-28, but the consumption of petrol has been increasing annually at the rate of 30 per cent. compound interest. Further, if the time arrives when it is possible to abolish or reduce taxation on motor spirit for general revenues, the Government of India might consider the desirability of retaining the tax for purposes of road development.

(7) An effort should be made to induce the oil companies to co-operate with the railway administration in reducing the price of petrol in inland towns.

(8) The duty on motor spirit is a source of central revenue, and grant from central revenues for road development can only be made through the constitutional processes prescribed by the Government of India Act.

(9) As grants for road development cannot be used effectively unless some continuity is assured, a convention should be established for five years, whereby the Legislative Assembly would annually vote the proceeds of the additional duty on motor spirit as a block grant for expenditure on road development. This annual grant should be credited to a separate road development account and unexpended balances should not lapse at the end of the financial year.

(10) The Legislative Assembly should continue to exercise control over the expenditure of the annual grant in two ways—

(a) The general principles in accordance with which the grant should be spent should be approved by the Assembly;

(b) A Standing Committee of the Indian Legislature for Roads should be appointed, similar in constitution and functions to other departmental Standing Committees, which would advise the Governor-General in Council on all matters relating to roads; and all proposals for expenditure from the annual grant should be submitted for approval to a Finance sub-committee, consisting of the Member of the Governor-General's Executive Council in Charge as Chairman and all Members of the Standing Committee who are members of the Legislative Assembly.

(11) The annual grant should be divided as follows :—

(a) One-sixth should be retained by the Government of India as a reserve;

(b) Out of the remaining five-sixths—

(i) an apportionment should be made among the provinces in the ratio which the consumption of petrol in each province bears to the total consumption in India in each year;

(ii) The balance, representing the consumption of petrol in minor provinces and administrations and Indian States, should be allotted as a lump sum to the Government of India.

If any part of the amount apportioned to a province remains unexpended at the end of the financial year, it should be carried over for expenditure in that province in the following year.

(12) Grants should be made to each province up to the amount so apportioned to it in each year, for expenditure on projects approved by the Governor-General in Council with the advice of the Standing Committee of the Indian Legislature for Roads.

(13) The amount apportioned to Burma may for the present be spent on any scheme of road development that is approved by the local Government and the local Legislature. But if at any future time the question of road connection with India becomes a live issue, the position should be reconsidered.

(14) Vehicle taxes and licence fees for vehicles plying for hire are sources of provincial or local revenue and it is entirely for local Governments, local Legislatures and local bodies to decide what additional taxation of this kind could be borne by motor transport for purposes of road development.

(15) Except in certain areas vehicle taxation has scarcely been adopted as a method of taxing motor transport; and in view of the recent substantial reduction of central taxation for general revenues, this source of revenue for road development might with advantage be explored.

(16) There is a general desire that vehicle taxation should be provincial rather than local, and that a system of reciprocal exemptions should be arranged so that each vehicle would be taxed only at the place of registration.

(17) The scale of licence fees for vehicles plying for hire depends on local conditions, but it might be considered by the authorities concerned whether licence fees might not be pitched so as to limit the number of vehicles plying on any road to the number that the road can economically carry.

(18) The propriety of financing road development from loans must be decided by each local Government for itself according to its circumstances, but certain principles of general application are suggested.

(19) Loans should be borrowed in the ordinary way on the security of the revenues of India, and not on the security of a special road development tax.

(20) Village roads should benefit indirectly by the release of provincial revenues and local funds which are now being spent on main roads to meet the requirements of motor transport. In view of the importance of village roads in the general scheme of communications, it is hoped that they will receive more attention and larger grants from local Governments and local bodies in future.

The Co-ordination of Road Development.—(1) The appointment of a Central Road Board with executive powers, administering a separate road fund, is not recommended.

(2) A periodical Road Conference, consisting of the Member of the Governor-General's Executive Council in charge as Chairman, the members of the Standing Committee of the Indian Legislature for Roads, representatives of the departments of the Government of India concerned with roads, representatives of the Local Governments and, if so desired by them, of Indian States, should meet from time to time to discuss subjects of common interest, and might appoint sub-committees to examine questions of a technical character and report to the Conference.

(3) A separate Road Department in the Government of India would be unnecessary and undesirable; but a Road Engineer with the Government of India should be attached to the Department that deals with roads.

(4) The Government of India should reconsider the recommendations of previous Committees that all matters relating to communications and transport should be dealt with by one department.

Miscellaneous.—(1) The Indian Railways Act and the Devolution Rules should be amended so as to enable the railway administration to contribute towards the construction and maintenance of feeder roads.

(2) A contribution should be made from the Army budget towards the cost of repairing damage done to roads by military transport; and when a road or bridge is required for military reasons to be of higher class than is necessary for civil purposes, part of the cost should be borne from the Army budget.

(3) Monopolies of public motor services on roads are undesirable.

(4) Road tolls on all traffic should be abolished as soon as possible, except tolls on bridges where a definite service is provided to replace a ferry or a bad river crossing."

Action taken by the Government of India with regard to Road Development.—The Government of India took immediate action on the recommendation of the Committee with reference to the duty on motor spirit and, in the budget for 1929/30, provision was made for an increase from 4 to 6 annas per gallon of the import and excise duties on motor spirit. The estimated yield of the duty in the following year was Rs. 83 lakhs.

During 1929, the report of the Indian Road Development Committee was under discussion with local Governments and by the end of that year the decisions which had been arrived at were incorporated in the following Resolution, which was adopted by the Legislative Assembly on February 4th, 1930, and by the Council of State on March 4th, 1930 :—

This Assembly, after taking into consideration paragraphs 70 to 79 of the Report of the Indian Road Development Committee, recommends to the Governor-General in Council that :—

(1) The increase in the import and excise duties on motor spirit from 4 to 6 annas per gallon, introduced by the Indian Finance Act for the current year, shall be maintained for a period of five years in the first instance;

(2) The proceeds of the additional duty during the same period after deducting such amounts as may be required or grants-in-aid to users of petrol for aviation purposes according to rules issued by Government on a scale not exceeding the additional duty on petrol actually consumed for such purposes shall be allotted as a block grant for expenditure on road development to be credited to a separate road development account, the unexpended balances of which shall not lapse at the end of the financial year;

(3) The annual grant shall be divided as follows :—

(a) A certain proportion shall be retained by the Government of India as a reserve and such proportion shall be 10 per cent. for the two years ending March, 1931, and the position shall be reviewed thereafter and the balance, if any, on 31st March, 1931, or any subsequent date of review, which is not required for the purposes approved in paragraph 75 of the Report, shall be distributed among the Governor's provinces and the Government of India in the manner provided for the remainder in sub-clause (b);

(b) Out of the remainder—

(i) An apportionment shall be made among the Governor's provinces in the ratio which the consumption of petrol in each such province bears to the total consumption in India in the preceding calendar year;

(ii) The balance, representing the consumption of petrol in provinces other than Governor's provinces, administered areas and Indian States, shall be allotted as a lump sum to the Government of India.

(4) If any part of the amount apportioned to a Governor's province in any financial year remains unexpended at the end of that year, it shall be carried over for expenditure in that province in the following year.

(5) Grants shall be made to each Governor's province up to the amount available for it in each year, for expenditure on schemes approved by the Governor-General in Council with the advice of the Standing Committee for Roads. As an exception to this rule, the amount available for Burma may, for the present, be spent on any scheme of road development that is approved by the Local Government with the concurrence of the local legislature; but if at any future time the question of road connection with India becomes a live issue, the position shall be reconsidered.

(6) A Standing Committee for Roads shall be constituted every year after the financial year 1929-30 consisting of one nominated official member of the Legislative Assembly, a second nominated official member, three members elected by the Council of State from their body, and six members elected by the Legislative Assembly from their body. The Member of the Governor-General's Executive Council in charge of the Department that deals with roads shall be the Chairman of the Committee; and the members of the Committee who are members of the Legislative Assembly shall form its Finance Sub-Committee which shall be presided over by the Chairman of the Committee if he is a member of the Legislative Assembly, and otherwise by the official member of the Committee who is a member of the Legislative Assembly.

(7) The functions of the Standing Committee for Roads including that appointed in pursuance of the motion adopted in the Legislative Assembly on the 2nd September, 1929, shall be—

(i) To consider the annual budget and accounts of the separate road development account of the Government of India.

(ii) To consider all proposals submitted by Governments of Governor's provinces to the Government of India, for which grants from the road development account are requested; provided that the function of the Standing-Committee and of its Finance Sub-Committee shall be con-

fined to determining whether the scheme is one for which an allotment from the Central Road Development Account should be made.

(iii) To advise the Government of India generally on all questions relating to roads and traffic on roads and, in particular, on—

(a) any action to be taken by the Government of India on the proceedings of periodical Road Conferences;

(b) central research in all matters connected with roads, road construction and maintenance;

(c) statistics and intelligence, the preparation and publication of maps, and the collection and dissemination of information relating to road development, administration and finance in India and in other countries;

(d) proposals other than those relating to Indian States on which it is desired to incur expenditure out of the portions of the annual grant referred to in clauses (3) (a) and (3) (b) (ii).

(8) All proposals for expenditure from the annual grant or its accumulated balance shall be transmitted by the Standing Committee to its Finance Sub-Committee for approval before recording its final acceptance; and the Standing Committee shall not record its acceptance to any such proposal, unless it has received the approval of the Sub-Committee."

On April 3rd, 1930, the Governor-General in Council appointed a Standing Committee on Roads for the financial year 1930/31, the functions of which shall be as defined in Clauses 7 and 8 (quoted above) of the Resolution on Roads adopted by the Legislative Assembly on February 4th, 1930. The Committee comprised the member of the Governor-General's Executive Council in charge of the Department of Industries and Labour as Chairman, three members elected by the Council of State, six members elected by the Legislative Assembly and one official member (who is a member of the Railway Board). A Finance sub-committee comprising the Hon. Member for Industries and Labour as Chairman and six members of the Indian Legislature was appointed at the same time.

Mr. K. G. Mitchell of the Indian Service of Engineers who was the technical adviser to the Indian Road Development Committee has been appointed as Road Engineer with the Government of India. The Road Engineer will also be Secretary to the Standing Committee for Roads and the periodical conference referred to in paragraphs 88 and 89 of the Road Development Committee's Report.

With a view to decide which projects shall be recommended to the Governor-General in Council and in what manner road programmes should be drawn up, a conference was held in April, 1930, and was attended by provincial representatives, the members of the Standing Committee for Roads, and representatives of the Departments of the Government of India which are interested. The conference transacted certain preliminary business and at the same time the Standing Committee approved certain schemes for Governors' Provinces of works to be financed from the Central Road Development Account.

The receipts from the additional duty on petrol during 1929-30 including those for the last month of the previous year were Rs. 98 lakhs. After deducting the share of the Central Reserve, the apportionment of the road development account among the provinces

has recently been made in accordance with the terms of the Roads Resolution and the approval of the Governor-General in Council to the relevant road programmes has been conveyed to the Governments of the nine Governors' Provinces.

The Indian Roads and Transport Development Association, Ltd.—This Association, which was registered as a Limited Liability Company in 1927, is an Association of Firms and individuals interested in fostering and encouraging the development of roads and road transport in India. Its influential Committee includes well-known representatives of the principal oil, motor and tyre firms together with prominent business men. The objects for which the Association is established are :—

(a) to make representations to the Executive Government in India, Governments of Provinces, District Boards and other public bodies and/or persons concerned regarding the necessity for :—

- (1) The construction and maintenance of roads and bridges,
- (2) The improvement of methods of transport; and
- (3) The opening and connecting up of districts throughout India.

(b) to make representations to the bodies and/or persons aforesaid regarding ways and means for raising revenue to effect the above objects.

(c) to make representations to all or any of the bodies and/or persons aforesaid regarding the adjustment of taxation, Customs duty and Excise affecting motor vehicles and other modes of transport and motor accessories and the employment of the same in such a manner as to facilitate the development of road transport throughout India.

(d) to promote by its efforts and representations commercial, agricultural and industrial enterprise and to secure such enterprise from the consequences of injurious legislation.

The Association has carried out useful work in impressing upon Government the importance of the road question and the urgent need for a co-ordinated road policy throughout India. It has consistently pressed for the increase of the petrol tax in order to provide a central fund for road purposes. Its evidence before the Indian Road Development Committee was practical and valuable. Its encouragement of the Motor Vehicles Rules Standardisation Committee has resulted in the presentation to the Government of India of a set of draft licensing rules, for both light and heavy motor vehicles, based on the best of the existing provincial rules, the Road Traffic Bill and augmented or amended to suit conditions peculiar to India. In brief, the Association is undertaking a very useful work in keeping before Government and the public the need for improved road transport facilities throughout India.

The Royal Commission on Indian Labour.—In January 1929, Government announced the appointment of the Royal Commission on Indian Labour to inquire into and report on the existing

conditions of labour in industrial undertakings and plantations in British India. The personnel of the Commission comprised :—

The Right Hon. W. J. H. Whitley (Chairman).
 The Right Hon. V. S. Srinivasa Sastri.
 Sir Alexander Murray, C.B.E.
 Sir Ibrahim Rahimtoollah.
 Sir Victor Sassoon, Bart.
 Mr. N. M. Joshi, M.L.A.
 Mr. A. G. Clow, I.C.S.
 Mr. G. D. Birla, M.L.A.
 Mr. John Cliff.
 Dewan Chaman Lall, M.L.A.
 Miss Beryl M. Le Poer Power.
 Mr. Kabiruddin Ahmad, M.L.A.

Mr. A. Dibden.

Mr. S. Lall, I.C.S.

} Joint Secretaries.

The Commission assembled at Karachi in October, 1929, and during the ensuing cold weather visited the principal industrial centres such as Bombay, Calcutta, Ahmedabad, Jemshedpur, Nagpur, Cawnpore, Madras, etc., etc. Special attention was also given to the coalfields and the tea gardens. The Commission will return in the autumn of this year in order to investigate labour conditions in Burma and their report is not expected before the summer of 1931.

Royal Commission on Agriculture in India.—In my last Report I summarised the main recommendations of the Royal Commission on Indian Agriculture. The outstanding event of the past year has been the inauguration by H.E. the Viceroy on June 21st, 1929, of the Imperial Council of Agricultural Research which is probably the most important of the many steps which are being taken by Government to give effect to the recommendations of the Commission. In the appendix to the official account of the Council of State Debates, Vol. I, No. 12 dated March 18th, 1930, will be found a very full report showing the progress made in giving effect to these recommendations, both in the Central Government and also in Local Governments and Administrations.

CHAPTER II.

AN ACCOUNT OF THE FURTHER DEVELOPMENT OF PURCHASES OF GOVERNMENT STORES IN INDIA BY THE INDIAN STORES DEPARTMENT, THE RAILWAY ADMINISTRATIONS AND OTHER DEPARTMENTS OF THE GOVERNMENT OF INDIA.

In previous reports I have traced the movements towards the inauguration of a system of purchase by rupee tenders for delivery in India and in my last Report for the year 1927/28, I made a very careful analysis of the system and dealt at length with its reactions on the position of British suppliers.

Resolution of the Government of India.—The Government of India in Resolution No. S.217 of the Department of Industries and Labour dated 12th December, 1929, published the Stores Rules as finally approved and stated that, after careful consideration of the criticisms received from the various Chambers of Commerce and other organisations, the Governor-General in Council directed that these Rules should regulate the purchase of stores by all Departments and Officers of the Central Government and of the Provinces other than Governor's Provinces, with effect from January 1st, 1931. In the interval, stores may be purchased in accordance with these rules whenever it is found convenient to do so. In practice, therefore, the rules are very largely already in force.

The Revised Stores Rules.—In view of their importance to British suppliers, I append the revised rules in their final and complete form :—

Preamble.—The policy of the Government of India is to make their purchases of stores for public service in such a way as to encourage the development of the industries of the country to the utmost possible extent consistent with economy and efficiency, and the following rules, which are applicable to the purchase of stores (other than printing and stationery stores) for the Government of India and for provinces other than Governors' provinces are prescribed in accordance with this policy. These rules supersede all previous orders on the subject.

In order to give effect to the above policy preference in making purchases will be given in the following order :—

First, to articles which are produced in India in the form of raw materials, or are manufactured in India from raw materials produced in India, provided that the quality is sufficiently good for the purpose;

Secondly, to articles wholly or partially manufactured in India from imported materials provided that the quality is sufficiently good for the purpose;

Thirdly, to articles of foreign manufacture held in stock in India, provided that they are of suitable type and requisite quality;

Fourthly, to articles manufactured abroad which need to be specially imported.

Departments of the Government of India, or officers specially authorised in this behalf, may, when they are satisfied that such a measure is justified,

allow a limited degree of preference in respect of price to articles produced or manufactured in India either wholly or in part.

Rule 1.—Save as provided in Rules 7 and 8, all articles required to be purchased for the public service shall be purchased on the condition that delivery shall be made in India for payment in rupees in India.

Rule 2.—Tenders shall be invited in India, and abroad also when considered desirable, for the supply of all articles which are purchased under Rules 1 to 4, unless the value of the order to be placed is small or sufficient reasons to be recorded exist which indicate that it is not in the public interest to call for tenders. No tender which fails to comply with the condition as to delivery and payment prescribed in Rule 1 shall be accepted.

Rule 3.—All articles, whether manufactured in India or abroad, shall be subject to inspection before acceptance, and articles for which specifications and/or tests have been prescribed by competent authority shall be required to conform to such specifications and/or to satisfy the prescribed test or tests which may be carried out during manufacture or before or after despatch from the suppliers' premises.

Rule 4.—Important plant, machinery and iron and steel work shall be obtained only from firms approved by the Chief Controller of Stores, Indian Stores Department, and specified in the lists issued by him from time to time.

Rule 5.—In the case of important construction works let out on contract, articles required for the construction of such works may be supplied by the contracting firm provided that when specifications and/or tests have been prescribed for such articles they shall conform to such specifications and/or shall satisfy such tests.

Rule 6.—Nothing in these Rules shall be deemed to prohibit the purchase of articles by one Department or Railway from another.

Rule 7.—The articles enumerated in Annexure A, or any other articles of a special or unusual character, may, when suitable and economical purchases cannot be made in accordance with the preceding Rules, be obtained without reference to those Rules subject to the following conditions :—

(a) Where the value of the purchase exceeds Rs. 5,000 the purchasing officer shall place on record his reasons for not effecting the purchase in accordance with the preceding Rules.

(b) The purchasing officer may at his discretion either obtain the article that he requires by indent on the India Store Department, London, or purchase it direct from manufacturers or dealers abroad. Where resort is had to direct purchase from manufacturers or dealers abroad, tenders shall, whenever practicable, be first obtained.

(c) When articles are purchased abroad under this Rule through the agency of the India Store Department, London, payment shall be made by that Department. In other cases, payment shall be made—

(i) in countries other than Great Britain and Northern Ireland, direct to the suppliers by the purchasing officer;

(ii) In Great Britain and Northern Ireland, through the High Commissioner for India.

Rule 8.—Lethal weapons, munitions of war, technical apparatus and equipment, and any other stores required by the Naval, Military or Air Forces of the Crown in India for which drawings, patterns, specifications or designs have been issued, prescribed or announced by the Admiralty, War Office, Air Ministry, Government of India, or Commander-in-Chief in India, shall be obtained by indent on the India Store Department, London, unless they are available in India in accordance with the prescribed drawing, pattern, specification or design. Any departure from this rule requires sanction of the Government of India, and whenever an expenditure exceeding Rs. 20,000 is incurred in any individual case to which such sanction has been accorded it shall be reported to the Secretary of State for India in Council.

Annexure A (Vide Rule 7).

- (i) Seeds.
- (ii) Cinchona Bark.
- (iii) Articles for experimental purposes.
- (iv) China, glass, cutlery, plate, crockery and perishable fabrics, including linen for residences which are furnished by Government.
- (v) Copper, zinc and other non-ferrous metals produced in Australia or America.
- (vi) Timber produced in Australia or North America.
- (vii) Such articles as the Superintendents of Vaccine Depots may require for the preparation of vaccine lymph.
- (viii) Chemicals and scientific instruments.
- (ix) Preserved and tinned foodstuffs.
- (x) Articles required for Viceregal residences.

The Position of British Suppliers.—I dealt so fully with every aspect of this question in my last report for 1927/28, pages 58-65, that there would seem to be no need for further treatment of the subject. The Department of Overseas Trade, on the publication of the new Rules, circularised a large number of the firms most likely to be interested and are prepared to give advice and information with regard to representation. It is encouraging to observe that several of the more important contractors for Railway plant have established, or are considering the establishment of, an Indian organisation, but there still remain a considerable number of the smaller firms, who have so far not taken any action.

The Indian Stores Department in 1929-30.—*Note.*—I am indebted to Mr. J. S. Pitkeathly, C.M.G., C.I.E., C.V.O., C.B.E., Chief Controller of Stores, for the information which follows. The annual reports on the administration of the Indian Stores Department may be seen at the Department of Overseas Trade, 35, Old Queen Street, London, S.W.1., and should be read by all firms interested in the supply of stores to the Government of India.

The Chief Controller in his administration report for the year 1929/30 reviews the progress made during the year in the following terms :—

“ The year 1929-30 was one of marked progress in every direction of the activities of the Indian Stores Department. The industrial unrest, which adversely affected the turnover of the preceding year, had abated before the close of the year, and on the whole more tranquil conditions prevailed.

Utilisation of the services of the Indian Stores Department by Government Departments in India.—The Indian Stores Department was constituted in January, 1922, for the purpose of purchasing various classes of stores required for the public service. Though its services have been utilised, during the past eight years, by several Departments of the Central Government as well as those of Provincial Governments, Company Railways, Indian States and quasi-public bodies, in an appreciable and gradually increasing degree, recourse to the Department has been entirely optional. The question was examined by the Public Accounts Committee, when dealing with the Accounts

of the year 1927-28, in August, 1929, and they recorded the opinion that the time had come for the Government to adopt a definite and decisive policy in relation to the Indian Stores Department. They further recorded that if the Government were satisfied that the Department was so organised that it was capable of purchasing stores with efficiency and economy, on a standard comparable to that attained by the Departments when purchasing on their own account, then they should issue orders that all stores (other than stores of a special technical nature) required by any Government Department should in future be purchased through the Indian Stores Department. As a first step towards this recommendation, orders were issued that the purchase of all classes of stores, handled by the Indian Stores Department, which may be obtainable in India in conformity with the rules for the supply of articles for the public service, by the undermentioned Departments and officers, shall, in future, be entrusted invariably to the Department—

1. The Indian Posts and Telegraphs Department.
2. The Director, Geological Survey of India.
3. The Chief Inspector of Mines in India.
4. The Chief Inspector of Explosives with the Government of India.
5. The Controller of Printing and Stationery, India (except Printing and Stationery Stores).
6. The Controller of Patents and Designs.
7. The Director-General of Observatories.
8. The Principal, Indian School of Mines.
9. The Director of Civil Aviation in India.
10. The Public Works Department, Delhi Province (except special articles of furniture and fittings).
11. The Superintending Engineer, Public Works Department, Simla.
(Nos. 10 and 11, The Central Public Works Department).
12. The Department of Industries and Labour, Secretariat.

As a result of these orders, coupled with the arrangements made with the Director-General, Posts and Telegraphs Department, earlier in the year, orders to the extent of Rs. 38,68,000 or Rs. 28,65,000 in excess of the preceding year, were placed on behalf of the Posts and Telegraphs Department. There was no appreciable increase in the total demands from other Departments covered by the arrangement, but this was due mainly to a natural reduction in the demands from the Public Works Department, Delhi Province, the principal consuming Department concerned, as a result of the approaching completion of the New Capital Works. In spite of a reduction of Rs. 2,24,000 in the demands from that Department, however, the total value of orders placed by the Departments referred to (excluding the Posts and Telegraphs) exceeded the corresponding figure for the preceding year by Rs. 40,000. Apart from the effect of these orders on the figures of business entrusted by the Departments concerned to the Stores Department, they indicate an encouraging measure of confidence in the Department which will contribute materially towards its successful development. Utilisation to the fullest possible extent of the services of the Department is the only means of placing it on a sound footing, and it is very gratifying to note that the Government of India, after a careful examination of the results achieved by the Department during its eight year's working, have considered themselves to be justified in issuing orders to that effect to some of the Departments under their direct control. The question of issuing similar orders to other authorities under the direct control of the Government of India is under consideration.

Activities of the Purchase Branch.—The value of contracts entered into for the supply of stores during the year increased from Rs. 3,60,48,000 to Rs. 4,29,26,000, or by 19 per cent. in spite of the continued downward trend of

market prices, and economies effected by the extension of measures of standardisation and bulking of demands, which have marked the operations of the Department.

The fullest possible advantage was taken of the resources of India in meeting the demands placed on the Department and as a result a large quantity of business was placed with the Indian manufacturers. The textile stores purchased by the Department were, as in the past, almost entirely of Indian origin and manufacture, or were manufactured in India from imported materials. There was also a considerable increase in the value, and proportion, of engineering, hardware and miscellaneous stores, wholly or partly manufactured in India.

Activities of the Inspection Branch.—As compared with the year 1928-29, an appreciably larger volume of work was dealt with by every section of the Inspection Branch, including the Metallurgical Inspectorate and the Government Test Houses. The value and tonnage of stores inspected during the year increased from Rs. 5,42,33,106 and 2,18,764 tons to Rs. 7,47,99,137 and 3,43,109 tons. The number of tests and analyses carried out at the laboratories of the Metallurgical Inspectorate and the Government Test Houses at Calcutta and Bombay increased from 12,953 to 14,273. A substantial portion of this large increase in the turnover of the Branch is due to an unusually heavy accumulation of work in the preceding year, but even allowing for the abnormal carry over from that year, the result of the working of the year under review was very satisfactory.

Utilisation of the services of the Indian Stores Department by authorities outside India.—Enquiries were received during the year from the Principal Works and Buildings Officer, Air Ministry Works and Buildings Department, Royal Air Force, Aden, Resident Engineer, Royal Airship Base, Karachi, and the Prison Commission, London, regarding the facilities offered by the Indian Stores Department for the purchase of stores. The Government of India permitted the Department to undertake work on their behalf and orders aggregating Rs. 13,887 were placed for stores of different descriptions on behalf of the first two of these authorities.

The Crown Agents for the Colonies entrusted to the Department the inspection of certain tents and poles ordered from Cawnpore for the Palestine Government. The work was undertaken, with the permission of the Government of India, and the value of stores inspected during the year amounted to Rs. 20,740. Cast iron pipes and specials, of Indian manufacture, weighing approximately 1,000 tons, were also inspected during the year on behalf of the Singapore Municipality. One of the reasons which has been advanced in the past as militating against the consideration of tenders from Indian manufacturers for the supply of stores required by the British Crown Colonies has been the lack of suitable arrangements for the inspection and testing of the supplies before shipment. The facilities offered by the Indian Stores Department in this direction open the way to overcoming these difficulties. The Union of South Africa, to which the position was explained, through the Indian Trade Commissioner, London, has agreed to consider tenders from India for the supply of Union Government requirements, accepting inspection in India as equivalent to inspection in London.

Value of Contracts placed.—The value of the contracts placed increased from Rs. 3,60,48,074 in 1928-29 to Rs. 4,29,25,701 during the year under review, showing an increase of 19 per cent. over the preceding year and of 8 per cent. over the highest record previously attained in the year 1926-27. This result assumes greater importance when it is remembered that a further marked downward trend in prices was continued in almost all classes of stores. Moreover, appreciable savings were effected by the bulking of demands and the standardisation of qualities, thus securing in a number of cases specially favourable rates. In this connection special mention may be made of bulk contracts made for cotton waste, lubricating oils, soaps, paints.

and varnishes, etc. A saving of about Rs. 58,000 was effected by the bulking and standardisation of the requirements of cotton waste alone for State Railways in India for the year 1930-31.

The increase in the value of purchases made was contributed to principally by the following indenting authorities :—

Civil Departments of the Central Government ...	—29,77,000=	77%
Railway Administrations	—46,41,000=	45%
Indian States	—13,52,000=	653%
Quasi-Public Bodies	— 16,000=	11%

There was, on the other hand, a diminution in the demands from the Army Department. (by Rs. 13,83,000) and from the Provincial Governments (by Rs. 7,40,000). The fall in the value of purchases on behalf of the Army Department was due to a large reduction in the Army requirements of textile stores. The decrease under the head " Provincial Governments " was due to a reduction in the value of contracts placed on behalf of the Lloyd Barrage and Canals Construction Scheme.

Purchase of Stores for Railway Administrations, and the Posts and Telegraphs Department—Mention was made in paragraph 15 of the Report for the year 1928-29 of the arrangement arrived at with the Railway Board in August, 1928, under which the purchase on behalf of State Railways, of several descriptions of stores which are usually obtained on annual contracts, was entrusted to the Indian Stores Department. The arrangement was in force for the first time, for a whole financial year, during the year 1929-30. The value of stores ordered on behalf of State Railways increased during the year by Rs. 40,03,555 or 41 per cent., that is, from Rs. 98,02,309 to Rs. 1,38,05,864.

The Company-worked Railways, which were also invited to participate in the arrangement, entrusted to the Department during the year additional business amounting to Rs. 6,27,727, or 105 per cent. over and above the purchases effected on their behalf during the preceding year. The total value of orders placed during the year on behalf of Railway Administrations in India amounted to Rs. 1,50,46,000 as against Rs. 1,04,05,000 during the year 1928-29 and Rs. 76,11,000 during the year (1927-28) preceding the arrangement concluded with the Railway Board in August 1928.

The list of stores transferred to the Indian Stores Department under this arrangement was re-examined by the Railway Board, in consultation with the Department, and several additions were made to it during the year. The question of making further additions to the list in the light of experience acquired is under consideration, and it is hoped that the value of purchases on behalf of Indian Railway Administrations will very materially increase.

An arrangement was also arrived at during the year with the Indian Posts and Telegraphs Department by which that Department agreed to entrust the purchase of a larger volume of stores to the Department. As a result the value of orders placed on behalf of the Posts and Telegraphs Department increased from Rs. 10,03,767 to Rs. 38,68,485.

Details of important purchases—The more important contracts placed during the year are specified below :—

TEXTILES.		Amount.
		Rs.
1. Drill, khaki, coloured, white and grey		13,08,000
2. Cotton waste		12,36,000
3. Serges and flannel		10,31,000
4. Blankets, woollen		10,08,000
5. Tents and components		9,74,000
6. Yarns, woollen and cotton		7,05,000
7. Waistcoats, jerseys, cardigans and jackets		5,47,000
8. Pongee cloth, muslin, nainsook, calico		5,38,000
9. Paulins, flax, jute, canvas		5,27,000

	Amount Rs.
10. Socks, woollen and cotton	4,55,000
11. Ropes, manilla, cordages and twine...	3,46,000
12. Jhools and rugs	3,44,000
13. Bags, postal, all sorts	2,13,000
14. Sheets, hospital and barrack...	1,76,000
15. Carpets	1,72,000
16. Overcoats, blanketing cloths and greatcoats	1,71,000
17. Flannelette, mark III...	1,31,000
18. Hessians and gunnies...	1,30,000
19. Cotton Durries...	1,21,000
20. Dosuti	95,000
21. Putties, woollen and cotton	94,000
22. Bags, kit	93,000
23. Dhotie cloth and sheetings	86,000
24. Garments, uniform	72,000
25. Capes and coats, waterproof... ..	57,000

ENGINEERING AND MISCELLANEOUS.

26. Steel sections and steel sheets	31,74,500
27. Oil, kerosene	27,61,100
28. Oils, lubricating	24,60,600
29. Cement	20,60,000
30. Pipes and specials, cast iron	18,32,000
31. Electric lamps, fans and fittings	15,69,900
32. Wire, copper, bare	12,19,000
33. Oil, fuel... ..	10,04,300
34. Paints and dry pigments	8,00,000
35. Cables, electric... ..	7,48,800
36. Pipes and fittings, galvanised iron and mild steel...	6,41,200
37. Asphalts and road tar	5,33,000
38. Oil, gas making	4,69,300
39. Wire, galvanised iron, plain and barbed	4,68,000
40. Sheets, corrugated and plain, galvanised	4,29,000
41. Pumping plant and equipment	4,05,000
42. Electric generating sets, steam, and oil driven, and con- verting plant	4,01,000
43. Oil, Linseed, raw and double boiled	3,66,700
44. Enamels and varnishes	3,63,000
45. Oil castor	3,61,000
46. Hangars, aeroplane	3,41,000
47. Arch-centrings for bridges	3,34,000
48. Petrol	3,16,000
49. Tanks, pressed steel and staging	2,78,000
50. Steel lighters, sea-going	2,68,000
51. Motor vehicles, trucks and spare parts	2,46,500
52. Electrical distribution material	2,39,000
53. Sluice gates, canal	2,38,000
54. Pipes, Victualic	2,28,000
55. Asbestos cement sheets	2,24,000
56. Miscellaneous engineering plant and spare parts of machinery	2,20,500
57. Turpentine, genuine and substitute	2,14,900
58. Workshop machinery and tools	1,96,400
59. Sheet piling	1,94,800
60. Pig iron... ..	1,62,800
61. Suspension bridge	1,52,000
62. Steel doors and windows	1,39,000
63. Road rollers, steam	1,19,000
64. Acids and chemicals	1,05,800

	Amount, Rs.
65. Insulators, porcelain	1,03,000
66. Road making tools	96,600
67. Wireless apparatus	95,000
68. Cranes, electric and hand	88,000
69. Timber for packing cases	82,800
70. Disinfecting fluid	77,000
71. Cooking ranges	73,600
72. Meters, water	69,000
73. „ electric	62,000
74. Soap, soft and hard	58,600
75. Elements for primary cells	58,000
76. Blasting gelatine and detonators	56,500
77. Railway material, permanent way	56,000
78. Air compressors	55,000
79. Metals, non-ferrous	54,000
80. Pipes and specials, earthenware	54,000
81. Coal tar for painting purposes	53,800
82. Screws, rivets, bolts and nuts	53,000
83. Steelwork for buildings	51,000
84. Greases	50,000

Encouragement of Indian Industries and Local Purchases.—

Registration of firms at the Headquarters Office.—The possibilities of Indian sources of supply continued to be explored and as a result of enquiries made by the Department during the year 170 firms were added to the list of “Approved Contractors” and to the lists of firms maintained under the “Rules for the supply of articles for the public service.” The applications of 77 firms for registration were rejected either on the grounds of their unsuitability as suppliers or of their ineligibility under the rules for enrolment. The various lists of “Approved Contractors” maintained in the Department were overhauled in the light of the experience gained during the past years and the names of 51 firms, which were considered for various reasons of no practical use to the Department, were removed.

The table below indicates the total number of firms registered up to the end of the year, distributed amongst the various provinces and classified according to the different descriptions of stores dealt with by them :—

	Bengal	Bombay Presy :		Madras	Punja b	U.P.	Delhi	Burma	B. & O.	C.P.	N.W.F.P.	Indian States	Total
		Bombay	Karachi										
Railway materials	69	46	5	10	10	3	7	7	5	—	—	—	162
Hardware	87	62	17	17	21	28	13	10	3	—	—	7	265
Implements and tools	53	41	10	15	13	4	12	11	2	—	—	3	164
Metals... ..	88	64	17	15	21	10	15	14	5	1	—	3	253
Mechanical equipment	167	134	19	35	30	15	21	31	4	—	—	8	464
Electrical equipment	103	69	13	22	17	13	15	14	3	—	—	3	272
Oils	50	33	3	14	8	8	4	7	—	—	—	6	133
Paints	53	47	12	16	6	3	5	8	2	1	—	2	155
Chemicals (excluding medicines and drugs)	43	22	9	7	6	5	6	6	—	—	—	3	107
Textiles—													
(a) Cotton materials	75	70	2	8	26	25	9	7	—	2	—	6	230
(b) Woollen materials	24	21	2	6	9	13	1	2	—	—	1	5	84
(c) Jute, flax and hemp materials	52	24	4	2	12	5	1	3	1	1	—	—	104
(d) Silk goods	—	—	—	—	—	1	—	—	—	—	—	—	1
Leather goods	19	4	1	2	5	15	4	3	—	—	—	—	53
Structural engineering	45	14	2	6	2	4	3	7	2	—	—	1	86
Miscellaneous stores	204	145	32	38	60	52	42	28	3	8	2	10	624
Medical, surgical and scientific stores and equipment (excluding medicines, chemicals and drugs)	13	3	—	3	3	1	—	—	—	—	—	—	23
Wireless stores	2	2	—	—	—	—	—	1	—	—	—	—	5
Mathematical, drawing and surveying instruments and equipment	10	9	—	—	—	—	1	1	—	—	—	—	21
Total	1,157	810	148	216	249	205	159	160	30	13	3	57	3,207
<i>Deduct overlapping figures appearing for more than one item</i>	<i>671</i>	<i>437</i>	<i>93</i>	<i>145</i>	<i>107</i>	<i>65</i>	<i>91</i>	<i>86</i>	<i>20</i>	<i>2</i>	<i>—</i>	<i>21</i>	<i>1,738</i>
Net Total	486	373	55	71	142	140	68	74	10	11	3	36	1,469

Substitution of articles of Indian manufacture for imported articles.—The Department availed itself of every opportunity, consistently with the principles of efficiency and economy, of purchasing articles of Indian origin and manufacture in preference to those manufactured abroad. The following is a list of the more important contracts placed during the year for products which have been wholly or partially manufactured in India :—

		TEXTILES MATERIALS.			Amount
					Rs.
I.	Drill—	Rs.			
	Khaki	7,27,000	}		13,08,000
	Coloured	3,80,000			
	White and grey	86,000			
	Jean	1,03,000			
	Gaberdine... ..	12,000			
2.	Cotton waste for cleaning and axle box packing				12,36,000
3.	Blankets, woollen				10,08,000
4.	Tents and tent components				9,74,000
5.	Yarn, woollen, and cotton				7,05,000
6.	Serges, Greatcoat cloth and Broad cloth				6,96,000
7.	Waistcoat cardigans, jerseys and jackets				5,47,000
8.	Paulins				4,96,000
9.	Pugri cloth, muslin, nainsook, calico, etc.				4,57,000
10.	Socks, woollen and cotton				4,55,000
11.	Jhools and rugs				3,44,000
12.	Cordages, ropes and twine				2,25,000
13.	Bags, postal, dosuti, flax, and jute, Canvas proofed and unproofed				2,12,000
14.	Sheets, hospital and barrack... ..				1,76,000
15.	Carpets, pile, woollen... ..				1,72,000
16.	Flannelette, Mark III... ..				1,31,000
17.	Duries, cotton				1,21,000
18.	Dosuti				95,000
19.	Putties, woollen and cotton				94,000
20.	Bags, kit				93,000
21.	Overcoats of blanketting cloth and greatcoats				93,000
22.	Dhoti cloth and sheetings				86,000
23.	Blanketting cloth				78,000
24.	Capes and coats, waterproof... ..				41,000
25.	Tape and web cotton				39,000
26.	Bunting... ..				38,000
27.	Flannel				32,000
28.	Leather and leather articles				27,000
29.	Long cloth (Garah cloth), etc.				25,000
30.	Twill, cotton, khaki				25,000
31.	Wool, cotton, absorbent, surgical				23,000
32.	Canvas, flax, waterproof and sheets canvas				18,000
33.	Comforters, caps comforters and caps balaclava				17,000
34.	Dusters... ..				16,000
35.	Cloths, of various kinds				14,000
36.	Kullahs... ..				14,000
37.	Thread sewing, cotton and linen				10,000
38.	Gauze absorbent				10,000
39.	Cases, mattress, pillows, etc.... ..				10,000
40.	Covers, waterproof				10,000
41.	Druggets and curtains (furnishing fabrics)... ..				10,000
42.	Ticken, and lining cloth				10,000
43.	Umbrellas				10,000

**PLANT AND MACHINERY, STRUCTURAL STEEL
ELECTRICAL AND WATER SUPPLY STORES.**

	Amount. Rs.
44. Copper wire	10,86,000
45. Pipes, cast iron	9,29,000
46. Cables and wire	2,90,000
47. Steelwork for Hangars	2,39,000
48. Steel tanks with staging, etc.	2,25,000
49. Arch Centrings for Bridges	2,13,000
50. Steel lighter for Andamans	1,52,000
51. Steelwork for suspension bridge	1,52,000
52. Steelwork for road bridges	1,22,000
53. Steel barges	1,11,000
54. Insulators, porcelain	1,00,000
55. Pipes, earthenware	54,000
56. Steelwork for buildings	49,000
57. Electric fans, "India."	32,000
58. Pig lead, Burma	30,000
59. Target apparatus	21,000
60. Mooring buoys... ..	11,000

HARDWARE AND MISCELLANEOUS STORES.

61. Cement	21,38,000
62. Oil, axle, all weather	7,45,000
63. Steel Sections	7,16,000
64. Paints, including dry pigments	5,94,000
65. Oil, kerosene	5,63,000
66. Road surfacing material :—	
Rs.	
Road tar	94,000
Colfix	1,16,000
Colas	1,57,000
Mexaco	17,000
Pitch and tar mixture... ..	10,000
}	3,94,000
67. Linseed Oil, raw and double boiled	3,67,000
68. Castor Oil	3,61,000
69. Petrol	3,02,000
70. Oil, gas making	2,85,000
71. Sheets, black, mild steel	2,54,000
72. Turpentine :—	
Rs.	
Genuine	1,21,000
No. 2	42,000
Substitute... ..	26,000
}	1,89,000
73. Pig iron... ..	1,51,000
74. Enamels	80,000
75. Soaps, soft and hard	58,000
76. Acids	56,000
77. Timber for packing cases	56,000
78. Coal Tar for painting purposes	54,000
79. Road making tools	48,000
80. Sleepers, timber, sal and deodar	37,000
81. Oil, cleaning	31,000
82. Varnishes	30,000
83. Teak wood planks	25,000
84. Locks	20,000
85. Tallow	19,000
86. Bituminous solution	18,000
87. Safes	12,000

A contract placed in pursuance of the policy of encouraging the industries of the country deserves special notice. It relates to the purchase of turpentine produced in India, amounting to Rs. 1,62,893, in preference to the foreign product, although the course adopted entailed the payment of a slightly higher price.

Owing to the lead given by the Department in purchasing Indian made electric fans, spares and electric fittings, supplies of these articles are now being accepted by various using Departments.

The following are a few other instances in which the policy of substituting articles of Indian manufacture for those previously imported has been further developed :—

Bunting, green, dark green, emerald and red.
 Cambric.
 Drill, khaki.
 Enamel, signal red.
 Fire bricks.
 Fringes, pagri.
 Paint, buff, silicate.
 Polish, brass.
 Serge, blue.
 „ white, lining.
 Shackles, galvanised iron.
 Tape, worsted.
 Twill, khaki.
 Varnish, copal.”

Purchases of Railway Materials. *Value of Railway Materials purchased in 1928-29.* — The last published report on Indian Railways for 1928/29 deals exhaustively with the subject of stores purchases and the following information has been extracted from it :—

“ The reduction in total purchases in 1928-29, as compared with 1927-28, which is displayed in the tabulated statement below, is accounted for very largely by the reduced programme of capital expenditure in 1928-29. Messrs. Tata's works were out of commission from June to October, 1928, and this, in turn, resulted in late deliveries of rolled sections to the Indian wagon building firms and in late deliveries of rails to Indian railways. The decrease in purchases was still further accentuated by the disastrous strikes which occurred on East Indian, South Indian and His Exalted Highness the Nizam's Guaranteed State Railways. The position is analysed in greater detail below.

The value of stores purchased by Class I Railways (excluding His Exalted Highness the Nizam's Guaranteed State and Jodhpur Railways, which are mainly the property of Indian States) shows a large decrease from 35.87 crores in 1927-28 to 29.63 crores in 1928-29. The principal decreases, as indicated by the statement below, were under permanent way (340 lakhs), rolling stock (198 lakhs), tools and stores (138 lakhs), building, station and fencing material (47 lakhs), workshop machinery (12 lakhs), and other materials (39 lakhs). Against this the heads electrical plants and bridge work recorded an increase of 126 and 31 lakhs respectively.

Of the total decrease of 6.24 crores Rs. 3.89 crores were accounted for by “ imported materials ” and 2.35 crores by “ indigenous materials,” the decrease under the latter being mainly under the heads permanent way (114 lakhs), tools and stores (56 lakhs), rolling stock (11 lakhs), building station and fencing material and bridge work (20 lakhs) and other materials (36 lakhs).

Heading.	Value of Imported Materials			Value of indigenous materials.	Total purchases, 1928-29.	Total purchases, 1927-28.
	Purchased direct.	Purchased through Agents in India.	Total imported materials.			
	Rs. crores.	Rs. crores.	Rs. crores.	Rs. crores.	Rs. crores.	Rs. crores.
Rolling stock ...	3.75	1.12	4.87	0.38	5.25	7.23
Tools and stores ...	0.59	2.56	3.15	3.38	6.53	7.91
Permanent-way ...	1.45	1.08	2.53	4.47	7.00	10.40
Electric plant ...	2.78	0.81	3.59	0.05	3.64	2.38
Building and station materials and fencing ...	0.10	0.39	0.49	0.23	0.72	0.19
Bridge work ...	0.71	0.19	0.90	0.06	0.96	0.65
Workshop machinery ...	0.42	0.29	0.71	—	0.71	0.83
Engineer's plant ...	0.13	0.21	0.34	0.05	0.39	0.46
Other materials* ...	—	0.24	0.24	4.19	4.43	4.82
Total ...	9.93	6.89	16.82	12.81	29.63	35.87

* Other materials consist of coal and coke, stone, bricks, lime and ballast etc.

Purchases through the Indian Stores Department.—The marked increase in purchases through the Indian Stores Department of lubricants, paints and varnishes was due mainly to a decision (to which effect was given in August, 1928) to purchase certain categories of stores included in annual contracts of railways through the Indian Stores Department.

The purchases by Class I Railways (excluding His Exalted Highness the Nizam's Guaranteed State and Jodhpur Railways) through the Indian Stores Department for the years 1927-28 and 1928-29, were as follows:—

		(In thousands of Rs.)	
		1927-28.	1928-29.
1.	Textiles	28,12	20,45
2.	Cement	14,48	5,73
3.	Creosote	12,58	25
4.	Lubricating and other oils and greases ...	4,63	46,27
5.	Paints and varnishes	4,34	11,30
6.	Electric fans, lamps and other electrical stores	4,29	6,03
7.	Plant and machinery	4,08	6,18
8.	Water supply materials	88	2,63
9.	Structural steel work including bridge girders	17	96
10.	Soaps... ..	38	56
11.	Hardware	—	1,39
12.	Miscellaneous	33	2,71
	Total	74,28	1,03,96

Expenditure on the fabrication and manufacture of stores in India.—The previous statement showing the value of stores purchased under principal headings, does not take into account the very large expenditure incurred by

the railways on fabrication and manufacture, nor the cost of large engineering works carried out "in situ." The following statement shows the approximate expenditure on the fabrication of purchased stores, separate figures being given in the case of stores imported and stores of Indian manufacture or of indigenous origin. These figures are exclusive of the value of the stores used in the fabrication and manufacture or in the engineering works:—

	Cost of fabrication and manufacture of stores imported or of imported stores purchased in India.	Cost of fabrication and manufacture of stores of Indian manufacture or of indigenous origin.
	(In thousands of Rs.)	(In thousands of Rs.)
1. Construction of Locomotives ...	17,45	6,24
2. Construction of Boilers ...	1,50	7
3. Construction of coaching stock including underframes ...	68,33	16,18
4. Construction of goods stock including underframes ...	42,33	16,87
5. Construction of spare parts of Locomotives ...	39,89	15,02
6. Construction of spare parts of Coaching and Goods Stock ...	31,71	16,86
7. Construction of Other Stores ...	92,47	26,62
8. Work done for other Departments, i.e., departments other than that supervising the workshops ...	75,53	45,14
9. Engineer's plant ...	12,20	1,97
10. Permanent way ...	4,12	45,50
11. Bridge work... ..	9,10	1,18
12. Structural or other engineering works ...	10,64	22,86
Total... ..	4,05,27	2,14,51

The cost of structural and other engineering works carried out *in situ* was:—

	(In thousands of Rs.)
Bridge work	1,99,03
Structural and other Engineering works	5,33,27
Total	7,32,30

Purchase of Army Requirements.—The position remains largely unchanged. The bulk of the imported stores contracted for in India are purchased by the Director of Contracts at Army Headquarters, Delhi/Simla. Textile stores are purchased by the Indian Stores Department, which also deals with the engineering requirements of the Engineer-in-Chief's branch of Army Headquarters. The Deputy Director-General (Stores) of the Indian Medical Service purchases in India considerable quantities of drugs, medicines, dressings and surgical instruments and apparatus. Medical stores depots are maintained at Calcutta, Bombay, Madras, Lahore, and Rangoon. Practically all other imported

stores on Army Account are obtained from the Director-General of the India Store Department, London.

Mention should be made of the very large numbers of six-wheeled motor transport lorries, both 30 cwt. and 3 ton, which have been purchased during the last few years by the Motor Transport Section of the Quartermaster-General's Branch, Army Headquarters, Delhi/Simla. It has not yet been definitely decided whether the Rupee Tender System will, in future, apply to such purchases and to the purchases of spare parts for these vehicles, but British manufacturers would be well-advised to develop an Indian organisation on the assumption that it will be required.

Stores Purchased by the Department of Posts and Telegraphs.—The Director-General of Posts and Telegraphs in his Annual Report for 1928/29 summarises his stores transactions for telegraph stores as follows :—

	1927-28.	1928-29.
	Rs.	Rs.
Opening balance	97,32,772	83,18,275
Receipts	70,51,690	78,25,900
Issues	84,66,187	87,33,306
Closing balance	83,18,275	74,10,869

Special efforts to reduce the value of stocks to a minimum have been continued. The stock balance was reduced by Rs. 9,07,406 and the balance now represents about eight and a half months' requirements, apart from stores to the value of Rs. 20,52,000, maintained as a reserve for military mobilisation requirements. The purchase and manufacture of stores in India in preference to importation from abroad steadily increased. The expenditure under purchase of stores in India during the year amounted to more than double that in the previous year.

The Indian Canteen Contractors Syndicate Ltd.—In previous reports I have traced the origin and formation of the Syndicate and in my last report I included a note on the aims of the Company. The following note, specially contributed by Mr. A. C. Murray, the Managing Director, will be read with interest by British purveyors of provisions and canteen stores :—

“The problem of supply of Canteen comforts to British troops in past Indian Frontier campaigns has always been a difficult one, due to the Regimental Contractor System on which it was based. The system, excellent enough in peace time, came to grief too often in war, though for reasons more or less beyond the Contractor's control.

It was his task to maintain not only Canteen and Staff, but transport also, and his own supply arrangements for replenishing stocks. These stocks had to make their own perilous way up military lines-of-communication, during which perhaps it was not the wild tribesmen only who took toll.

Yet many of the old time contractors performed their campaign duties with distinction and honours, as their chits, going back to the days of the late Lord Roberts can prove.

The six-wheel motor lorry, however, has replaced the old time bullock-cart in the frontier passes. If the Indian Canteen Contractor system was to survive for war, it was necessary to give it a helping hand. Or rather to help it to help itself.

Only guidance was needed actually. The Indian Contractors were quick to see the advantages of having an importing and distributing agency of their own to supply their Canteen goods at the cheapest rates in peace times, which agency could be immediately taken over by Government in war, bringing them their goods into the line in Military Transport as Military Supplies.

Working capital of Rs. 10,80,000 was immediately forthcoming, every Contractor contributing the shares assessed to him according to the nature and strength of the Unit whose contract he holds.

The outcome was The Canteen Contractors Syndicate Limited, with the Hon. Sir Phiroze Sethna, O.B.E. as its Chairman, and the Indian Contractors themselves providing the Board of Directors. Its nominal capital is Rs. 25 lakhs, and it was launched in August, 1928.

No assistance was asked for from the Government of India, whose only contribution has been the services of Mr. A. C. Murray, who organised the scheme from the outset and is its present Managing Director.

The first year of operation had its own special difficulties, as was anticipated. There were no statistics for guidance in a trade peculiarly fluctuating, controlled as it must be by troop manoeuvres, and movements back and forth to the hills; a trade, like the Indian temperature, oscillating between extremes, only to be gauged and anticipated out of actual experience.

Yet the Syndicate at completion of its eight months trading was able to show a nett profit, though a modest one.

Trade for the current year has steadily improved. The Syndicate is already the biggest importing firm in India of many standard provision lines, since it centralises orders hitherto placed by 160 Contractors individually. Its terms of trading are prompt cash against documents at Karachi and Bombay only. Documents for shipments to its depots at Calcutta and Madras are payable at the Syndicate's Head Office at Karachi.

Though its orders in imported lines already amount to Rs. 17 lakhs per annum, the Members are even heavier buyers of cigarettes, tobaccos, tea, condensed milk, beer, Indian jams, pickles and condiments, etc., from firms in India possessing already their own machinery for distribution throughout the country. Such trade is controlled by the Syndicate, the whole of whose buying arrangements are centred at its Head Office, P.O. Box No. 113, Dunolly Road, Karachi.

The reduction in pay of the British soldier has naturally affected Canteen sales. With less money to lay out than the "old timer" the young private is more inclined to patronise "purse packs" of such lines as soaps, which have a knack of disappearing before he has had the fullest use of them. Messing Officers too, who have to make a little go the longest way, are interested in large packs of 5 lbs. and 7 lbs. of jams, fruits and tinned provisions generally. Such large packs unless proper attention is paid to the tinning are more prone to "puff," but the demand is there.

The Syndicate trade also is now sufficiently gauged to warrant its marketing standard lines, such as tinned fish, cheese, jam, etc., under its own labels or labels reserved to it. As almost universally manufacturers are conceding special terms to the Syndicate in return for contract orders and promptest payment, the special label should appeal, as it alone is guarantee that the goods are for sale in British and Indian Army Canteens only and will not find their way into the bazaar.

The Canteen Contractors Syndicate's Monthly Price List, comprising over 500 different articles and packs, will be posted to any manufacturer interested in provisions and general supplies. Enquiries will be specially welcome for the following lines: Cheap crockery, glass tumblers and cutlery suitable for canteens, mineral water bottles, tooth brushes, shaving brushes, packet stationery and writing pads, and similar sundries at prices suited to the soldiers' limited purse.

The Syndicate's Price List has proved itself an excellent Advertising Medium, terms for which may be obtained together with all other information from Mr. A. C. Murray, Managing Director, Canteen Contractors Syndicate Ltd., P.O. Box No. 113, Karachi, India."

CHAPTER III.

A STUDY OF THE EVENTS LEADING UP TO THE PASSING OF THE COTTON TEXTILE INDUSTRY (PROTECTION) ACT, 1930, TOGETHER WITH COMMENTS ON ITS PROBABLE EFFECTS ON THE LANCASHIRE COTTON TRADE, FOLLOWED BY A REVIEW OF THE ACTIVITIES OF THE INDIAN TARIFF BOARD DURING THE PAST TWO YEARS.

In previous reports I have dealt with the Cotton Tariff Board's special investigation into the Indian Cotton Mill Industry in 1926, and the resulting passage of the Indian Tariff (Cotton Yarn Amendment) Act of 1927. Conditions in the Bombay mill industry became steadily more depressed throughout 1928 and 1929. A six months strike in the former year was followed by a series of sporadic stoppages on account of labour unrest. Serious communal riots ensued early in 1929 and by the end of April 1929, the industry was again involved in a general strike. Meanwhile, imports of Japanese grey and coloured goods were increasing to a remarkable extent and the Bombay Millowners became seriously alarmed as to the possible collapse of the industry unless special measures of support were afforded. In June 1929, an influential deputation of the Millowners' Association waited upon H.E. the Viceroy at Poona, placed the seriousness of their position before him, and received a promise that their representations would be considered. Informal discussions with the Hon. Members in charge of the Commerce and Finance Departments of the Government of India followed, and on July 22nd, 1929, the Government of India issued a Press Communiqué reading as follows:—

“ The Government of India have decided to appoint Mr. Hardy, Collector of Customs, Calcutta, to examine the possibility of substituting a system of specific duties for the existing system of *ad valorem* assessment of cotton piecegoods. They have also decided in order to give effect to the promise made by His Excellency Lord Irwin, when he received a deputation from the Bombay Millowners' Association at Poona, that their representations would be considered, that Mr. Hardy should simultaneously ascertain and report what changes have taken place since the Tariff Board reported in the volume of imports, classes of goods imported and the extent and severity of external competition with the products of the Indian Mills.”

The Hardy Enquiry.—After a remarkably comprehensive investigation in the short space of four months, Mr. Hardy presented his report on November 25th, 1929 and the following is his own summary of conclusions, abstracted from his Report, which is a valuable contribution to our knowledge of the trade:—

“ (1) A revision of the statistical classifications of piecegoods is very urgently required. So long as they remain in their present form it will be very difficult to gauge the progress of competition.

(2) The first aim of the revision should be the removal of ambiguities from the headings. This can only be achieved by the issue of clear instructions as to the scope of each heading.

(3) The second aim of the revision should be the unification of the systems of classification adopted in the various returns. At present there are at least five different systems in force.

(4) The year 1927-28 typifies the normal relations which may be expected between Bombay Island and other Indian centres of production when full working in Bombay is resumed.

(5) In 1927-28 Indian production was shared as follows :—

	Per cent.
Bombay Island	49
Ahmedabad	22
Other mills in the Bombay Presidency and adjoining areas	21
Elsewhere	8
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	100
	<hr style="width: 100px; margin-left: auto; margin-right: 0;"/>

(6) Ahmedabad is the principal centre for the production of dhooties but the production in Bombay Island has increased since the Tariff Board reported. Their shares of the dhooti output in 1927-28 were 38 and 27 per cent. respectively.

(7) Bombay Island produced 61 per cent. of the grey shirtings in 1927-28 and Ahmedabad 18 per cent. The Ahmedabad share in the following year was 32 per cent.

(8) Only about one per cent. of the cloth returned as "grey or bleached" by the Indian mills is bleached. The Tariff Board were correct in estimating that the total quantity of bleached goods was considerable, but they were misled into supposing that it was plain white cloth. In actual fact about 90 per cent. of it is cloth with a coloured stripe or check, classified either as "coloured striped saris and susis" or as "coloured drills and jeans." Bombay Island and Ahmedabad each produce about 100 milyards of such cloth.

(9) Ahmedabad in 1927-28 produced about 40 per cent. of the total output of saris and susis but very little else in the way of coloured cloth. Bombay Island also produced 40 per cent. of the saris and susis and about 80 per cent. of the output of other coloured cloth.

(10) Calcutta is the principal market for grey cloth of Indian production, and 90 per cent. of the dhooties and 65 per cent. of other grey goods are sold either on the Calcutta market or in the area served in respect of imports by Calcutta.

(11) Less than 30 per cent. of the coloured goods produced in the Indian mills are sold in the Calcutta area.

(12) Hand-loom production supplies a bigger proportion of the total demand for cloth in the Madras Presidency than elsewhere.

(13) Roughly 80 per cent. of the total output of piecegoods in the Indian mills and 75 per cent. of the output of dhooties and shirtings are woven from counts below 25s. About 13 per cent. of the dhooties and shirtings are woven from yarns 26s to 30s, 9 per cent. from 31s to 40s and 3 per cent. from 41s and over.

(14) Some progress has been made in the weaving of finer counts since the Tariff Board reported but the results are not very striking.

(15) The steady rise in imports from Japan in the last 8 years is the most prominent feature of the import trade. Japan's progress since the Tariff Board reported has been rapid and uninterrupted.

(16) Imports of dhooties from the United Kingdom have remained steady while the Indian mill production has increased. The two trades overlap only to a small extent in the region of medium counts and Ahmedabad is certainly not suffering from external competition in this trade. Bombay on the other hand competes with difficulty against Ahmedabad.

(17) Japan entered the dhooti trade seriously in 1925-26. She now provides about 10 per cent. of the imports but these consist almost entirely of dhooties woven from yarns above 30s.

(18) Japan's most striking advance has been shirtings. Her progress at first was at the expense of Lancashire and imports from the United Kingdom have fallen to quite a small figure. In the last three years she has progressed at the expense of the Indian mills and the figures for the first half of the current year 1928-29 indicate very serious competition.

(19) The Bombay production of sheetings has fallen away owing to the loss of overseas makerts to which Japan has now established direct sailings. Production of sheetings elsewhere in India has not been greatly affected, but competition in heavy shirtings from Japan has reacted unfavourably on sales of Indian sheetings.

(20) The Indian mills hold their own in the production of grey drills and jeans in which the demand is almost entirely for a heavy class of goods.

(21) There is little, if any, production of the finer classes of grey goods in India. Imports which come almost entirely from the United Kingdom have fallen off since the war.

(22) Japan has not seriously invaded the import trade in white goods, most of which remains in the hands of Lancashire. It consists largely of goods whose fineness is above the limit at which production from Indian cotton is possible.

(23) There has been a considerable increase in imports of printed goods in the past three years, notably in drills and jeans from Japan, fancy "prints and chintz" from the United Kingdom and shirtings from Japan and Italy. These printed drills and jeans are of fine quality and with the printed shirtings complete with Indian woven striped shirtings. Fancy "prints and chintz" do not compete with any Indian product.

(24) Imports of dyed goods increased considerably in 1926-27 but have remained at the same level since.

(25) Imports of colour-woven goods increased up to 1926-27 but have since fallen off to a small extent. The principal competition is from Japanese striped shirtings, twills and coarse drills.

(26) Only the roughest comparison between Indian and imported coloured cloth is possible owing to the extreme diversity of the trade and the ambiguity of the statistical headings.

(27) The maintenance of the export trade in Indian coloured cloth suggests that competition is not as severely felt as in the grey goods trade.

(28) There is very little direct competition in coloured goods between the United Kingdom and the Indian mills. The only serious external competitor is Japan, though there is evidence that Italy may become a formidable rival in the near future.

(29) If allowance be made for fluctuations in the price of raw cotton there has been no general reduction in the price of Japanese cloth since the Tariff Board reported.

(30) Owing to the declining raw cotton rates the prices of both imported and local cloth have fallen appreciably during the past four months.

(31) Over a range of cloth in which the cost of raw cotton per pound of cloth does not vary appreciably the severity of competition increases with the price.

(32) The coarser imported grey cloths constitute such a range and in consequence there is a limiting price below which imported cloth is apparently unable to compete. Thus the lowest market prices of imported grey cloth in August, 1929, were about 14 annas in Bombay and about 13½ annas at other ports.

(33) The limiting prices for coloured cloths are higher than for grey goods indicating that, in general, competition in coloured goods is less severe than in greys.

(34) The fact that, area for area, fine cloth is often cheaper than coarse cloth causes indirect competition between imported fine cloths and locally made coarse cloths.

(35) A general movement of prices in any particular range of cloth is apt to react on the price of other cloths of an entirely different nature.

(36) Artificial silk yarn is being used to an increasing extent in the weaving of striped cotton goods and the borders of dhooties. To this extent artificial silk is an ally rather than a competitor of cotton.

(37) The imports of artificial silk cloth and of mixed cotton and artificial silk fabrics are in competition with real silk goods rather than with cotton goods.

(38) Specific duties are not necessarily simpler to administer than *ad valorem* duties.

(39) A check on value is often the most effective check on quantity available to the Customs officer.

(40) The determination of nett weights is not administratively practicable for goods packed in bales.

(41) The determination of nett weights for goods packed in cases is practicable but would probably necessitate the acceptance of nominal rather than actual weights and the prescription of scales of allowances.

(42) The determination of the gross weights of baled goods would be practicable.

(43) The determination of area would necessitate much the same physical checks as are now imposed but it would still be necessary to check the landed cost.

(44) The determination of class would be feasible, if the class depended on the number of threads in unit area, whether the goods were packed in cases or bales.

(45) The determination of class, if the class depended on the weight of unit area, would be feasible for goods packed in cases but not for goods packed in bales.

(46) A classification depending on the actual counts of yarn from which a cloth has been woven is not practicable.

(47) A system of specific duties, if it is to approximate in incidence to the existing *ad valorem* duty, must involve the imposition of a series of different rates on different classes of goods.

(48) Without allowing for the effect of sizing it is impossible, even by the indefinite multiplication of classes, to avoid fairly wide variations of value in each.

(49) The less the number of classes the more inequitable the incidence of the duty will be.

(50) The greater the number of classes the greater the number of disputed "border line cases" which will arise.

(51) One effect of the division into classes will be the creation of a number of ranges of goods which cannot be profitably imported in competition with others more favourably treated by the new duties. The value of the trade-marks applied to goods in these ranges will be greatly depreciated.

(52) If a unit of area is taken as the unit of assessment the greatest uniformity of incidence will be achieved by a classification dependent on the number of threads in unit area.

(53) If a unit of weight is taken as the unit of assessment the greatest uniformity of incidence will be achieved by a classification dependent on the apparent count.

(54) On administrative grounds a change from the existing *ad valorem* method of assessing duty is undesirable.

(55) If a protective duty is intended to be prohibitive the method of assessment is immaterial. It is merely necessary to fix the rates sufficiently high.

(56) The only other form of protective duty to be considered is one that aims at equalisation of prices.

(57) In deciding what form of duty is most suitable for such a purpose it is necessary to take into account variations in price over the range of articles to be subject to the duty as well as fluctuations in price over a period of time.

(58) To allow for fluctuations which affect imported and local products alike a specific duty is the more effective.

(59) To allow for other fluctuations or for variations among different qualities of goods an *ad valorem* duty is the more effective.

(60) The decision must therefore be in favour of *ad valorem* duties unless it is feasible to select classes in which the range of prices is small. Such a selection will not be feasible except among certain very limited types of piecegoods.

(61) The fact that very little grey cloth woven from yarns finer than 42s is shipped in lengths of more than 24 yards could be used to simplify the classification of grey cloth for protective purposes.

(62) The factors contributing to variation in the price of dhooties are much more diverse than with plain grey cloth and this, coupled with the fact that they are almost invariably packed in bales, leads to the conclusion that it is not feasible to apply differential rates to dhooties.

(63) If it is desired to discriminate between coarse and fine coloured goods an approximate division based on the price per pound will be the most convenient method.

(64) If a protective *ad valorem* duty were imposed on the cheaper type of goods and the present revenue duty were retained on more expensive goods it would be both desirable and feasible to bridge the gap by a specific duty based on weight.

(65) All the principal countries which have revenue tariffs have adopted *ad valorem* duties.

(66) The concentration of India's foreign trade into the five great ports, which are also the principal markets for a large hinterland, makes *ad valorem* duties and, in particular, assessment on local market value workable whereas in countries with a large number of small ports the market value system would be unworkable.

(67) There is very little trade in baled goods into the countries which have protective specific duties."

Briefly, Mr. Hardy reported that, mainly on administrative grounds, a change from the existing system of *ad valorem* assessment was undesirable. He further conclusively proved that the Indian mills were able to meet the competition from Lancashire and, in fact, had been successful in ousting Lancashire cloths from large sections of the plain grey trade, but showed that, during the past three years, Japan had progressed at the expense of the Indian Mills and had become a very serious competitor.

The Indian Budget 1930-31.—The Budget Speech of the Hon. The Finance Member, issued on February 28th, 1930, disclosed a final deficit for 1930/31 of Rs. 4,10 lakhs, to meet which increased taxation became imperative. The Government of India, therefore, proposed—among other measures—to raise the revenue import duties on all cotton piecegoods from 11 to 15 per cent. and, in addition, to impose a 5 per cent. protective duty, with a minimum of 3½ annas per lb. on plain grey goods, against all cotton piecegoods from outside the United Kingdom, this protective duty to be in force for three years only and an examination of its effects by the Tariff Board to be undertaken before the end of this period. This proposal, embodying as it does a degree of preference for British goods, is so important that it will be as well to quote, *in extenso*, the section of Sir George Schuster's speech with regard to it.

The Finance Member's Speech—" I must now explain my proposals for raising the necessary new revenue, and I will make a start with the most difficult question which we have had to consider—the cotton duties. Here two motives come into play—first, the provision of revenue; second, assistance to the Indian cotton mill industry. Our line of action must take into account both these motives, and though I, as Finance Member, am not directly concerned with the second, which properly falls within the province of my Honorable Colleague, the Commerce Member, it has been decided by the Government of India that I should take this opportunity to announce the whole of the Government's proposals.

Action taken for the provision of revenue is a straightforward matter, but the consideration of protective measures raises much more serious difficulties. Let me state, as briefly as I can, how these difficulties have appeared to us.

There is, of course, at the outset, the obvious problem of reconciling the interests of producer and consumer. Measures of protection must be so designed as to be effective for their purpose with the minimum interference as regards prices to the consumer.

But, apart from this, there are certain special difficulties in the present case. In the first place, the whole question of protection of the cotton industry was investigated by the Tariff Board a comparatively short time ago, but the case which has now been presented on behalf of the millowners claims a measure of protection greatly in excess of anything recommended by the Tariff Board. In these circumstances, a further enquiry might reasonably be considered desirable. But, as against this, we are told (and it is a fact which we cannot dispute) that the case is urgent, and that, if action is to be effective, it ought not to be delayed.

In the second place, the conditions affecting the industry are not identical throughout India. Bombay is at once the most important centre of the cotton mill industry, and the centre more seriously menaced by foreign competition. At other centres, the average profits of the mills are nowhere high in relation to the capital invested in them, but throughout the world the industry is passing through a period of depression and low profits are not a valid ground for special assistance.

In the third place, as was pointed out by the Tariff Board, the increasing competition from the upcountry mills is one of the most important factors contributing to the depression in Bombay. Therefore, whatever measure of assistance is accorded to the industry as a whole, it is likely to be ineffective in ensuring permanent recovery to Bombay, unless the industry there seizes the opportunity afforded by that assistance to reorganise itself and increase its efficiency.

Moreover, there is another aspect of this question in which the public and the Government are greatly interested. Bombay has been the scene, during the last two years, of a prolonged and exhausting struggle between capital and labour. Without pronouncing judgment on either side or anticipating the views which may be expressed by the Royal Commission on Labour which is now sitting, it is fair to say that there can be no permanent restoration of prosperity to the Bombay industry unless the relations between labour and capital can be improved and all the conditions affecting labour brought up to a higher standard. These two considerations have, in the present case, a special significance, for, Government are being asked to take emergency measures, not to protect an industry in the early stages of its development until it can find its feet, but rather to save an industry (or, more accurately, one important section of it) which is suffering from a special deterioration or atrophy.

Although the report of the Fiscal Commission admits that protective measures are justifiable in such circumstances, the Government feel that emergency action, not immediately preceded by a Tariff Board enquiry, ought to be taken only if it can be shown that inaction might inflict grave injury on the national welfare. They feel also, that, if such emergency action is taken, a special responsibility far more serious than any that exists when the protection of an infant industry is in question, rests upon them, as trustees

for the public, to take all possible steps to ensure that the assistance given will be utilised to the full. In such cases, it might sometimes be possible to make the adoption of protective measures conditional on effective reorganisation by the industry itself. But here the urgency of the situation creates a special difficulty. If action is to be effective, it must be immediate, and if the Government were to insist on certain steps being taken as a condition precedent to any measures of assistance to the industry, these measures might come too late. Nevertheless, this aspect of the matter cannot be ignored and I shall refer to it again.

I think that, in these remarks, I have sketched, in broad outline, the main frame-work of the problem which concerns us.

The conclusions which we reached fall under two heads: first, that, in view of the revenue position, a general increase in the revenue duty from 11 per cent. to 15 per cent. was justified, secondly, that while this increase in revenue duty must have an important protective effect, it might be justifiable to supplement it by some special protective measures, provided that, having regard to the special circumstances to which I have called attention, such measures were limited in duration, and also limited to purposes necessary to meet the immediate needs of Bombay. In fact, it would not be justifiable at this juncture, as regards protective measures, to attempt more than to erect a temporary shelter under which the Bombay industry can reorganise itself, and after a reasonable period, for this purpose, it will be necessary to have a Tariff Board inquiry to consider future policy, and, in particular, how the Bombay industry has reacted to the assistance given.

I refer again later to the precise significance of this purpose, but, at this stage in my account, I must turn to one aspect of the matter on which I have not yet touched. It is, of course, too well known to need remark that, in all public comments on policy as regards cotton duties, the possible reactions on British interests are always prominently mentioned, and that we as a Government are often suspected of undue solicitude on this account. Having regard to the long and troubled history of the cotton duties in India, and to the public interest in the matter, it has been our desire to put before this House as full and frank a statement as possible. Let me make it clear at the outset that the fiscal autonomy convention is a reality, and that decisions on matters of this kind are left to the Government of India, and it is on this basis that our deliberations have proceeded throughout. But, in the final stages, there has been addressed to us a communication, not by the Secretary of State, but by His Majesty's Government, to reconsider the position.

In this message, His Majesty's Government asked us to take into account both the reactions of our proposals in India and their serious effects in England, effects which they felt sure that neither we nor the Legislature would desire to create. To this we replied that, though we were deeply impressed by a message of this nature, we nevertheless felt bound to adhere to our main proposals. We pointed out the following considerations: first, that we needed revenue; secondly, that customs is our chief source of revenue; thirdly, the duty on cotton piecegoods now stood below the level of the general revenue tariff; fourthly, Indian industry was suffering from a deep depression and the Bombay mills were approaching a desperate position which might affect the whole future of this important centre of Indian commerce and finance. We recognised and deplored the possibility of serious effects in England, but we stated we felt clearly bound to put India's interests first. At the same time, we realised how important it was to India, from the political point of view, to take account of British opinion, and that, quite apart from this, we were of course concerned at this time to avoid unnecessary injury to British interests. We stated that, after careful consideration, we had decided that we could not modify the general application of the 15 per cent. revenue duty, but that we should be prepared to propose to the Assembly that, as regards any additional and temporary protective measures, their application might be limited to non-British goods, and that, in these circumstances, there should be imposed, in addition to the 15 per cent. revenue duty, a 5 per cent. protective duty, with a minimum of 3½ annas per

lb. on plain grey goods, against all cotton piecegoods from outside the United Kingdom, this protective duty to be in force for three years only, and an undertaking to be given that we should have its effects examined by the Tariff Board before the end of this period.

We explained that, in placing this proposal before the Assembly we should point out that, so far as we are aware, this is the first occasion on which the considered opinion of the Cabinet has been conveyed in this form to the Government of India and that we were impressed by the significance of the precedent so established.

We informed His Majesty's Government that it would not be right for us to ask the Assembly to commit themselves to Imperial Preference as a principle, but merely to adopt a particular course which, in our judgment, was consistent with India's interests at a critical juncture when much might depend on India's response to the British Government's appeal. We also stated that we should have to make it plain to the Assembly that, while there were grounds for treating plain grey goods specially, we could not, in any circumstances, agree, for the emergency purpose which we had in view, to an additional protective duty of 5 per cent. on all classes of piecegoods irrespective of country of origin, since the immediate benefit to the Indian producer would be wholly incommensurate with the burden imposed on the Indian consumer. Finally, we made it clear that, in a matter of this kind, after frankly stating our conclusions, we should desire to put our carefully considered views before the Legislative Assembly with whom the final decision must rest.

That is how the matter stands, and it is on this basis that our proposals are now put forward. I have thought it right frankly to put the position before Honorable Members in this way. Indeed, whatever our proposals had been, we could have consented to no other course, for we feel that it is essential, at this transitional stage of the constitution, that there should be full confidence, wherever possible, between the Government and the Legislature. There are certain points with reference to what has passed between ourselves and the British Government, and to the attitude which we adopted, on which I desire to give a further explanation.

We felt, in fact, that this method of approach from the British Government had a special significance. It affords striking evidence that the fiscal autonomy convention has become an integral part of the constitution, and that, even when British interests are most profoundly affected by tariff changes in India, the intervention of the British Government is restricted to representation and appeal. Complete freedom was accorded to the Government of India to take the final decision in whatever manner they thought right for India. It appeared to us that, subject to our paramount duty of considering Indian interests first, no Government of India could ignore such an appeal, for, to any statesmanlike view, it must be clear that India must be vitally interested in maintaining a spirit of co-operation with Great Britain. We felt, moreover, on every ground, that no member of any Government of India, be he British or Indian, would desire to introduce measures likely to inflict serious injury on British interests unless such measures were necessary for India's own development.

It is, of course, obvious that these proposals will evoke very considerable comment and will be subjected to the closest and most critical scrutiny. This we shall welcome, but I would, at the same time, appeal to all Honorable Members to exercise this scrutiny in a calm and judicial spirit before they pronounce any final judgment. It is for them to consider whether they can accept what I have indicated as the guiding principles underlying our proposals, and whether these proposals do, in fact, meet India's immediate needs, while being, at the same time, calculated to further her interests in the widest sense. It will not suffice to keep in view only those factors which, in ordinary times, might be held decisive for the times are not ordinary. Within a few months, the representatives of India will meet the representatives of Great Britain to discuss, in the fullest and frankest way, the future of this great country, and much must depend on the spirit in which they meet. I

would ask Honorable Members to give full thought to the grave importance of these wider considerations. It is obvious that any gesture of friendship which India can spontaneously and without compulsion make to the British Government in their own present grave industrial troubles, is bound to strike a responsive note. For our part, our conviction is that, if our proposals are examined without prejudice, they will be found to be better adapted to India's needs than any other scheme we could put forward, and I must explain shortly our reasons for thinking so.

In the first place, what we are aiming at in our present measures, is not to settle the policy as regards protection of the cotton industry for the distant future. We are concerned only with providing a temporary shelter under which the industry, especially in Bombay, may firmly establish its position in respect of the business for which it is already equipped. Our measures are emergency measures designed to take immediate effect, to give immediate relief, and an immediate stimulus, so that the Bombay industry may re-organise itself and start again with restored health and a new lease of life on its normal course of development.

There is therefore no relevancy for our present purpose in contentions that, taking a long view, the Bombay industry requires to organise itself for the manufacture of the finer goods, and that our present proposals will not help in this direction. Whether such a view is right or not, it could not be translated into the immediate effect which is so necessary. It must, in fact, take many years before the local industry could organise itself to undertake the manufacture of the finer qualities of goods. Incidentally, I may point out that the raising of the import duty from 11 per cent. to 15 per cent will give very considerable help in this direction; but that is outside the purpose of the emergency measures.

Looked at from this point of view, it has appeared to us that our proposals do exactly meet the needs of the case. The imposition, in addition to the increase in the normal duty, of a special additional protective duty against non-British goods, of a 5 per cent. all-round surcharge, combined with the minimum of 3½ annas per lb. on plain grey goods, must operate effectively in just that portion of the field where competition is most severely felt. A study of the statistics makes it abundantly clear that it is not competition from British goods which is now being severely felt, nor has Bombay lost any business recently as a result of such competition.

In the second place, I must, on behalf of the Government of India, make it clear that we could not feel justified in imposing for revenue purposes a higher duty than 15 per cent., and that, so far as the protective measures are concerned, it is only if their scope is limited, in the way that we propose, that we could agree to carry them so far. As I pointed out at the outset, we cannot disregard the interests of the consumer and it is contrary to all sound principles to impose a protective duty, putting a heavy burden on the consumer, if the benefit to the producer must be small or negligible. For the period covered by the purpose of our emergency measures, the production in India of those classes of goods which form the great bulk of the imports from the United Kingdom, must be very small, and, therefore, an additional 5 per cent. duty on these goods would put a burden on the consumer without a corresponding benefit to the industry which we have in view. On the other hand, on those classes of goods to which the protective duties will apply, internal competition will increasingly tend to restrict any effect on the interests of the consumer. On these grounds, we hold that our proposals combine the maximum benefit to the industry with the minimum burden on the consumer.

I need not elaborate the further arguments which have been dealt with in our telegram, but I must, before leaving this part of the subject, emphasise again one vital point which we have made. We do not, and, in fact, we could not, ask this Assembly to commit themselves, at this stage, to accepting the principle of Imperial Preference. We ask them to regard this proposal merely as a special measure designed to meet the immediate emergency. It is, acting in this spirit, that we propose that the special protective duties shall

be imposed for a period of three years only, and that, at a convenient date before the termination of this period, their effect, and the whole position of the industry, shall be re-examined in a Tariff Board enquiry.

Lest it may be argued that such an enquiry should have preceded our proposals, I must explain that we gave careful consideration to this point and decided that, quite apart from the urgency of the need for action, a further investigation by the Tariff Board at the present juncture was not advisable. It is the special duty of the Board to investigate facts and arrive at findings thereon. But owing to the labour disputes of 1928 and 1929, it is more than doubtful whether any material for investigation, beyond that available to the Tariff Board of 1926, exists. Again, conditions in the Bombay mill industry have, since 1926, been examined by the Tariff Board, the Fawcett Committee, and the Pearson Court of Enquiry, while trade conditions have recently been investigated by Mr. Hardy. In these circumstances, we felt that the proper time for a further enquiry by the Tariff Board will come when some progress in reorganisation and rationalisation has been made by the industry in Bombay, and the prospects of ultimate success or failure of the industry can be assessed.

There is one more point left for me to deal with in conclusion. I have already referred to the special duty which the Government feel to be imposed upon them in this case to satisfy themselves that effective use will be made of the assistance given, and that attention should be directed particularly to the improvement of labour conditions. We recognise that the ultimate failure or success of the mill industry in Bombay must depend entirely upon the extent to which the millowners utilise the present opportunity in order to improve their efficiency and labour conditions, and that, if full use is not made of this opportunity, the position of the industry may be no better at the expiry of the period of three years than it is to-day. We have already addressed the Bombay Millowners' Association on this subject and have impressed upon them the urgent necessity of working out schemes which may re-establish the industry on a firm basis. Although it has not been possible for us to lay down the lines on which the re-organisation should proceed, or to prescribe the particular measures which should be taken, we propose, now that our policy has been declared, to enter immediately into consultation with the Government of Bombay on this subject, which is their primary concern. It appears to us right that some method should be devised whereby the force of public opinion may be brought to bear effectively upon the situation. At the same time, it is our desire to give the Association all the assistance in our power in order to ensure that the examination of the various problems may be thorough and adequate, and that it may be carried out with the aid of the best expert advice available, whether in India or in other countries. Apart from technical assistance, it seems clear that some drastic financial reorganisation and some rationalisation of the methods of manufacture is necessary if the Bombay industry is to be put on a permanent foundation of prosperity. On this subject I cannot at present say more than this—that we are prepared to examine what is required in this direction and to consider whether any form of Government intervention is possible or appropriate. This aspect of the problem is one of great difficulty and I do not propose to lengthen my speech by enlarging further upon it at this stage.

I would add, in conclusion, that, although I have spoken chiefly of Bombay, we have also the other industry of India in view and we particularly hope that the measures which we propose will be of real benefit to the hand-loom industry throughout the country-side.

We estimate that the net increase in revenue from our proposals, allowing in full for the protective effect, will be 1,25 lakhs. The proposal to increase the revenue duty will be included in the Finance Bill, while a special Bill will be introduced by my Honorable Colleague, the Commerce Member, containing the protective proposals."

The Cotton Textile Industry (Protection) Act 1930.—The Finance Bill, containing the increased revenue duty on all cotton

piecegoods from 11 to 15 per cent., was passed by the Legislative Assembly without much difficulty, but the Cotton Textile Industry (Protection) Act 1930 was debated at great length. Strong exception was taken by a large section of the Assembly to the proposals to grant any preference to British goods, notwithstanding the convincing note by the Honourable the Commerce Member, which will be found in Appendix A on page 192 and which contains a clear statement of the economic grounds on which the Government of India held that no protective duty, in addition to the revenue duty of 15 per cent. *ad valorem*, should be imposed on goods made in the United Kingdom. An amendment by Mr. Chetty, applying the 3½ annas per lb. minimum to British grey goods as well as those of foreign manufacture, was accepted by Government and facilitated the passing of the Bill by the Assembly on March 31st, 1930, by 62 votes to 42. It was passed by the Council of State by 22 votes to 5 and received the assent of the Governor-General on April 4th, 1930.

The actual provisions of the Act will be found in Appendix B page 201.

The Practical Application of the Act. (1) The New Item 156A.—For the sake of readers who are engaged in the trade, I include the new item in the Statutory Tariff Schedule, under which the new duties are levied :—

YARNS AND TEXTILE FABRICS.

156A. COTTON PIECEGOODS (other than fents of not more than nine yards in length)—		
(a) plain grey, that is, not bleached or dyed in the piece, if imported in pieces which either are without woven headings or contain any length of more than 9 yards which is not divided by transverse woven headings—		
(i) of British manufacture	<i>ad valorem.</i>	15 per cent. or 3½ annas per pound, whichever is higher.
(ii) not of British manufacture	<i>ad valorem.</i>	20 per cent or 3½ annas per pound, whichever is higher.
(b) others—		
(i) of British manufacture	<i>ad valorem.</i>	15 per cent.
(ii) not of British manufacture	<i>ad valorem.</i>	20 per cent.

(2) *Proof of British Manufacture.*—It has been laid down in Customs Notifications that for the purpose of the Act cotton cloth shall be deemed to be of British manufacture if in its production no process, other than a process antecedent to weaving, has been

carried out elsewhere than in the United Kingdom of Great Britain and Northern Ireland. Shippers of British goods should attach to their invoices a certificate in the following form :—

Form of Certificate of Origin to be written, typed or printed on Invoices of cotton piecegoods of British manufacture for which entry into British India is claimed at the differential rate of duty.

I (1) of (2) of (3)
 manufacturer of the piecegoods enumerated in this invoice hereby declare
 M supplier
 that I [(4) have the authority to make and sign this certificate on behalf of the
 aforesaid manufacturer and that I] have the means of knowing and do hereby
 supplier
 certify as follows :—

- (1) That this invoice is in all respects correct and contains a true and full statement of the description of the said goods and the actual quantity thereof.
- (2) That in the production of any cloth which is included in this invoice, no process of manufacture other than a process antecedent to weaving has been carried out elsewhere than in the United Kingdom of Great Britain and Northern Ireland.

Dated at.....this.....day of.....19.....

Signature.....

Witness.....

1

- Notes (1) Here insert Manager, Chief Clerk, or as the case may be.
 (2) Here insert name of firm or company.
 (3) Here insert name of city or country.
 (4) The words in square brackets should be omitted where the manufacturer or supplier himself signs the certificate.

Form of Invoice.

Marks and Numbers.	Description of goods.	Quantity. No. of pieces.	Dimensions.	Gross weight of bales of plain grey goods.

(3) *Weighment of Goods.*—The Indian Customs state that for the purpose of the assessment of the duty under the Act, it will be necessary to weigh a proportion of packages in a large number of instances. The ascertainment of the actual nett weight of piecegoods would ordinarily involve the stripping of bales to find out the weight of the packings. It is realised that this procedure would

be inconvenient to importers and the weight of piecegoods in bales will be assessed at the gross weight found at the Customs weighments less the following allowance for tare :—

<i>Description.</i>	<i>British.</i>	<i>Non-British.</i>
Bales with battens on two sides ...	6%	5%
Bales with battens on four sides ...	7%	7%
Bales without battens ...	4% up to 600 lbs.	4%
Bales with corner pieces only ...	3% over 600 lbs.	
	5%	5%

(4) *Interpretation of the phrase "plain grey, that is, not bleached or dyed in the piece."*—For the purpose of the Act, the Customs Authorities interpret the above phrase to include all goods that are not bleached or dyed in the piece whether they are woven from unbleached, bleached or dyed yarn. It is admitted that this definition is not very scientific but it was found, in practice, to be difficult to devise a more simple heading. More than one Chamber of Commerce has commented adversely on the interpretation but so far (July 10th, 1930), the Government of India have adhered to it. I am informed that the numbers of coloured cloths which have been found assessable at the rate of $3\frac{1}{2}$ annas per lb. is negligible.

(5) *List of piecegoods which are admitted under Item 156-A of the Schedule.*—According to Finance Department (Central Revenues) Resolution No. 1—Customs of the 4th January, 1930, as amended by Resolution No. 23 of the 21st June, 1930, the Government of India have decided to prescribe the appended list of cotton piecegoods for the assessment of import duty under No. 156-A in Schedule II attached to the Indian Tariff Act 1894 :—

Aeroplane cloth (cotton).	Choonris.
Alhambras.	Chadars.
Angolas (cotton).	Chadar-pattas.
Apron cloth (cotton).	Coatings (cotton) including gabardines.
Austrias and Argentinas (cotton).	Corduroy and corded cloth (cotton).
Bandage cloth (cotton).	Cotton flakes.
Batistes (cotton).	Counterpanes, unhemmed (including unhemmed bedspreads and unhemmed bed covers).
Beaverteens (cotton).	Crapes (cotton).
Billiard cloth (cotton) in rolls.	Crash (cotton).
Blankets (cotton).	Crepons (cotton).
Book-binding cloth.	Cretonnes.
Brilliants.	Crimps (cotton).
Brocades (cotton).	Damask, cotton, table.
Broche.	Dawanies.
Buckram (cotton).	Delaines (cotton).
Calicoes.	Delametti.
Cambrics, plain, dyed or printed.	Denims.
Cantoons.	Dhotis.
Canvas (cotton).	Diagonals (cotton).
Canvas, French elastic (cotton).	Diapers (cotton).
Casement cloth (cotton).	Dimity.
Cashmeres (cotton).	Domestics.
Cellular cloth.	Domettes (cotton).
Checks, spots and stripes.	Dorias.
Chiffons (cotton).	
Chinese dyed cloths.	
Chintz, glazed or unglazed.	

- Dosooti.
 Dress, plain or printed (cotton).
 Drills, plain, striped or checked.
 Duck.
 Dungari.
 Dupettas.
 Dusters (when joined by the warp).
 Embroidered allovers.
 " flounces.
 Fents (cotton) more than 9 yards in length.
 Filter Cloth (cotton).
 Finduras.
 Flannelette (cotton flannel).
 Frieze cloth (cotton).
 Galateas.
 Gambroons.
 Gauze (cotton).
 Ghagras (cotton).
 Ginghams (cotton).
 Glass cloths (when joined by the warp) (cotton).
 Grenadines (cotton).
 Gumchas.
 Hair-cords.
 Handkerchiefs (in woven pieces).
 Harvards.
 Hollands and blind cloth (cotton).
 Hollands (cotton).
 Italians (cotton).
 Jaconets, plain or bordered.
 Jeans, plain, dyed or printed.
 Lace curtain cloth.
 Lace stripes.
 Lambskins (cotton).
 Lapets.
 Lastings.
 Lawns.
 Lenos.
 Limbrics (cotton).
 Linenette (cotton).
 Linings, plain, striped or mercerised.
 Longcloths.
 Lungis.
 Lustres (cotton).
 Madapollams.
 Madras cloth.
 Marcella.
 Mattee shirtings.
 Matting (cotton).
 Mattress cloth.
 Meltons (cotton).
 Mercerised cloth.
 Merinos (cotton).
 Merins.
 Mexicans.
 Moleskins (cotton).
 Molleton cloth.
 Morias.
 Moreens (cotton).
 Mulls, all kinds, plain or bordered.
- Muslins (cotton), all kinds.
 Nainsooks.
 Net (cotton).
 Nun's veiling (cotton).
 Oatmeal cloth.
 Pacalene black (cotton).
 Pagri cloth.
 Penelope canvas.
 Pillow calico, tubular.
 Piques.
 Plumettiffs (cotton).
 Plushette.
 Pocketing (cotton).
 Pompadour
 Pongees (cotton).
 Poplins and poplinettes (cotton).
 Printed crepelle.
 Prints.
 Printers (plain and coloured).
 Putsoes.
 Quiltings (cotton).
 Quilts.
 Radium cloth.
 Regattas.
 Rep cloth (cotton).
 Rugs (cotton) travelling.
 Sail cloth (cotton).
 Saris.
 Sarongs.
 Sateens, plains, dyed or printed.
 Satinette.
 Satin stripes (cotton).
 Scarves (cotton).
 Serges (cotton).
 Shawls (cotton).
 Sheetings.
 Shirtings.
 Silecia.
 Silkette, plain or stripes.
 Spanish stripes (cotton).
 Sponge cloth (cotton).
 Suraline.
 Sussi cloth.
 Suitings (cotton).
 Swansdown calico.
 Table covers, unhemmed.
 Taffettas (cotton).
 Tambours.
 Tameins (unfinished).
 Tanjibs.
 Tapestries (cotton).
 Tarlatans.
 T-cloths.
 Ticking mattress or blind (cotton).
 Towels (cotton) in woven pieces and towel cloth including Terry cloth.
 Tricot (cotton).
 Trouserings (cotton).
 Tulle (cotton).
 Turbans (cotton).
 Turkeys red cloth.

Tussor cloth (cotton) and Tussorette.	Velvets (cotton).
Tweeds (cotton).	Velveteen (cotton).
Twills (cotton) plain, dyed or printed.	Venetian cloth (cotton).
Umbrella cloth (cotton).	Vestings or waist-coatings (cotton).
Undershirt cloth (cotton).	Voiles (cotton).
Valencias.	Zephyrs.

Probable Effects of the New Duties on the Lancashire Trade.—There is no doubt whatever that the general increase of 4 per cent. in the revenue import duty on all cotton piecegoods will deal a very heavy blow to the Lancashire trade, firstly, by raising prices to the consumer and thereby reducing consumption and, secondly, by further stimulating the competitive production of the Indian mills. The Hon. the Commerce Member in his most informative statement given in Appendix A on page 192 clearly proves that the extraordinary progress made by the Indian mill industry during the past twenty years has been almost entirely at the expense of the British industry. He clearly shows by statistics that the development of the Indian industry during, and largely as a result of the war prevented the United Kingdom from regaining her position in the grey trade since the war and *it is Indian goods rather than Japanese goods which have replaced the imports from the United Kingdom.* Even in the case of grey dhooties, the average annual imports from the United Kingdom had declined from 646 million yards in the quinquennium 1909/10 to 1913/14 to 458 million yards in the quinquennium 1924/25 to 1928/29, while the average annual production in Indian mills had increased from 269 million yards to 548 million yards in the same periods. In the case of longcloth and shirtings the figures are even more striking, British imports falling from an annual average of 520 million yards in the former period to 86 million yards in 1924/25 to 1928/29, while Indian production increased from 288 million yards to 562 million yards. In coloured goods also, the United Kingdom has lost 5/12ths of her trade, partly to Japan but mainly to India.

Dealing now with the effects of the 5 per cent. preference and its incidence, we find that the total imports of grey goods of all kinds from the United Kingdom in 1928/29 amounted to 581½ million yards, of which 451½ million yards represented grey dhooties which are exempted, on administrative grounds, from the 3½ annas per lb. minimum duty and will, therefore, receive preference *vis-à-vis* dhooties imported from foreign countries. This valuable Lancashire trade will therefore only be penalised to the extent of the additional 4 per cent. revenue duty which, however, will give a fillip to the production of the Ahmedabad mills which has been increasing so rapidly of late in the coarser styles. It is satisfactory however to note that approximately 75 per cent., representing the most valuable portion, of the trade in Lancashire grey goods will receive protection against Japanese imports. So far as the balance of British plain grey goods, representing a total of 129 million yards, is concerned, these are made up of two main sections namely :—

- (a) Longcloth and shirtings 48 million yards.
 (b) Jaconets 78½ million yards.

In the case of grey shirtings the *ad valorem* incidence of the 3½ annas per lb. duty approximates 20 per cent. In some of the coarser qualities it amounts to 24 per cent and in a few of the coarsest Lancashire qualities it attains 28 per cent. One is forced to the conclusion, therefore, that our grey shirting trade with India is doomed. It had fallen from 145 million yards in 1924/25 to 48 million yards in 1928/29. This trade in future will, I believe, be entirely supplied by the Bombay mills. So far a grey jaconets are concerned, the incidence of the 3½ anna minimum ranges from 16 to 21 per cent., which is bound to result in a serious falling-off in consumption. There is practically no competition from either India or Japan in this trade, but the increased price of the goods to the consumer leads me to estimate that probably 50 per cent. of our trade in grey jaconets may be affected.

This blow to our trade in plain grey styles is particularly unfortunate in view of the fact that the efforts which are being made in Lancashire by the Joint Committee of Cotton Trade Organisations to standardise on certain qualities of grey goods and to adopt all possible means of reducing prices, e.g., by the greater use of Indian cotton, automatic looms, two-shift working, etc., etc., have as their main object the revival of this trade and will, therefore, be very largely frustrated. As an offset to this loss, however, we must place the 5 per cent. preference against Japanese dhooties, the imports of which have increased considerably of recent years.

As regards bleached and coloured goods, the 5 per cent. preference should be valuable to British interests. Although, in the case of bleached goods, Japan is only beginning to compete seriously, her contribution rose from 1 per cent. of the total imports in 1928/29 to 2 per cent. in 1929/30. The imports of Japanese white shirtings have, of recent years, been steadily increasing in number and greatly improving in quality. The new duties will, it is hoped, safeguard our trade in bleached goods, which in 1929/30 amounted to 436 million yards valued at Rs. 12 crores. The duties will also have a valuable protective effect against Japan, Italy, and Holland in the case of coloured goods and will probably just turn the scale in our favour in the case of many items of cheap prints for example, from Italy and Japan.

ACTIVITIES OF THE INDIAN TARIFF BOARD DURING THE PAST TWO YEARS.

INQUIRY INTO THE MATCH INDUSTRY.

When my last report was written in June 1928, the report of the Indian Tariff Board regarding the grant of protection to the Match Industry was under consideration by Commerce Department. The original reference to the Tariff Board dated 2nd October, 1926, was quoted in my report.

The Board recommended the continuance of the duty at Rs. 1-8-0 per gross without limit to the period of duration. This recommendation, with other conclusions, was covered by the decision of the Government of India announced in Resolution No. 235-T (24) dated 1st September, 1928, as follows :—

“ The Government of India accept the finding of the Board that the match industry in India fulfils the three conditions laid down by the Indian Fiscal Commission and should be protected. The Board recommend that the present duty of Rs. 1-8-0 per gross should be maintained and converted into a protective duty. The Government of India accept this recommendation and propose to introduce legislation during the coming session to give effect to this decision.

The Government of India agree with the Tariff Board that no limit should be fixed for the period of protection. They do not contemplate, however, the retention of the duty at the high rate of Rs. 1-8-0 per gross for any long period. This high rate of duty is necessitated mainly by the existence of an international combine with large financial resources and controlling the manufacture and sale of matches in a large part of the world, and partly by the preference displayed by the consumer for the imported article, a preference which should gradually diminish as the match made in India establishes its reputation. If it became evident that the Swedish Match Co. had definitely adopted a policy of supplying the Indian market by matches made in India, and if it appeared that the prejudice against the Indian match, similar in quality to the imported match, was disappearing, the amount of duty would be open to reconsideration.

The Tariff Board consider that the manufacture of matches is not a fit industry for development on cottage lines, and cannot recommend any special measures for the encouragement of cottage match factories. The Government of India accept this finding.

The Tariff Board recognise that in certain circumstances an excise duty may properly be levied on matches manufactured in India and the Government of India agree that conditions may arise rendering the imposition of such a duty desirable. They do not, however, contemplate the imposition of an excise duty at present.

The Government of India accept the finding of the Board that in present circumstances no action is called for against the Swedish Match Co. on the ground of unfair competition. The Board recommend that, should developments indicate that the Company is acquiring undue control to the detriment of the Indian industry, Government should take steps to safeguard this industry. The Government of India consider that if it appeared probable that the Swedish Match Co. would obtain a monopoly of the manufacture and sale of matches in India, this would create a new situation which would necessitate a re-examination of the position.”

Match Industry (Protection) Act 1928.—On 25th September, 1928, the Match Industry (Protection) Act, 1928, received the assent of the Governor-General. By this Act, the duty on matches, undipped splints and veneers was altered as follows :—

157.

MATCHES.

- | | | |
|--|---|----------------------------|
| 1. In boxes containing on the average not more than 100 matches. | Per gross of boxes. | One rupee and eight annas. |
| 2. In boxes containing on the average more than 100 matches. | For every 25 matches or fraction thereof in each box, per gross of boxes. | Six annas. |

158.	UNDIPPED SPLINTS	Pound.	Four annas and six pies.
	such as are ordinarily used for match making.		
159.	VENEERS	Pound.	Six annas.
	such as are ordinarily used for making boxes, includ- ing boxes and parts of boxes made of such veneers.		

INQUIRY INTO THE OIL INDUSTRY.

At the time that my last report was written the Tariff Board had completed their investigations, but their report had not been published. The terms of reference to the Tariff Board were given in my report.

The Board submitted a Majority Report signed by Mr. A. E. Mathias and Dr. J. Matthai, Members of the Board and a Minority Report by Sir Pudumjee Ginwala, the President of the Board.

The main conclusions recorded in these reports, are indicated in the decision of the Government of India which was given in Resolution No. 141-T (48) dated 12th September, 1928 :—

“(1) On the representation of a number of companies engaged in the production of petroleum in India asking for protection against the serious injury inflicted on them by the kerosene price war then in progress between the Standard Oil Co. of New York and the Royal Dutch Shell Group, the Tariff Board was directed to investigate the question of safeguarding the oil industry in India from injury inflicted by the sale of imported kerosene at prices below world parity. The report of the Board has been received and has been published for general information to-day.

(2) The majority of the Board finds that the sale of imported kerosene at prices below world parity has been established, but the President in his minority report dissents from this finding. The Government of India recognise that the determination of world parity in respect of kerosene prices presents difficulties and that various views may be taken. But after careful examination of the evidence taken by the Board, they consider that the following points have been established :—

(i) The average price realised by the Standard Oil Co. for all kerosene imported by it into India between September, 1927, and March, 1928, was Rs. 4-15-2 per unit, and this price was above world parity, whatever criterion is adopted to determine its level. The Standard Oil Co. imports only superior kerosene.

(ii) There is no evidence that the Standard Oil Co. took the initiative anywhere in India in cutting prices or did more than follow, to an extent which varied in different localities, the cuts made by the Burmah-Shell Co., which is the selling agency of the Asiatic Petroleum Co. (representing the Royal Dutch Shell Group) and of the companies in India which were members of the Kerosene Pool, and also of the Anglo-Persian Oil Co.

(iii) The average price realised by the Asiatic Petroleum Co. for superior kerosene imported by it into India during the same period was Rs. 3-13-6 per unit. This price was lower, by more than one rupee per unit, than the average price realised by the Standard Oil Co. and was below world parity whatever criterion is adopted, unless the very low price said to have been paid by the Standard Oil Co. for Russian Kerosene is taken as the basis.

(iv.) It follows that the only company that could be considered to have sold imported kerosene at prices below world parity was the company which was working in closest alliance with the principal producer in India, and not the company against which the application for protection was originally directed.

(3) Both the majority and minority reports comment on the failure of the applicant companies who were members of the Kerosene Pool to disclose in their representation to the Government of India the important fact that the Royal Dutch Shell Group had recognised their claim to compensation for losses suffered as a result of the price war. It appears that this question was discussed at the beginning of the struggle, and an agreement on the subject was apparently reached prior to the date on which the Government of India made the reference to the Tariff Board. But this important fact, although it was material to the issue whether there was a *prima facie* case for an enquiry or not, was not brought to the notice of the Government of India at any time. It is imperative that a complete statement of the relevant facts within their knowledge should be made by applicants for protection, and the case for protection may be irretrievably damaged if it is subsequently found that essential facts have been withheld.

(4) By a subsequent agreement, which was disclosed at the end of the enquiry, the Burmah Oil Co. undertook to make good to the other Indian members of the Pool the remainder of their losses as measured by the difference between Indian and Chinese prices. In face of these agreements, it would have been impossible for the Government of India to consider the grant of public assistance to the companies which are members of the Pool. If, however, the price war had not come to an end, it would have been necessary to examine the question whether any steps should be taken on national grounds to safeguard the two companies which were not members of the Pool, that is, the Indo-Burmah Petroleum Co. and the Attock Oil Co. The price war having ended, it is unnecessary for the Government of India to arrive at any conclusion on this point, but they see no reason for rejecting the considered opinion of the Board that no case was made out for safeguarding any company against the sale of imported kerosene below world parity.

(5) The Government of India accept the finding of the Board that petrol is not likely to be imported into India on any considerable scale for the next two years, and that no action is called for."

TARIFF EQUALITY IN RESPECT OF THE MANUFACTURE OF ELECTRIC WIRES AND CABLES.

This is one of a series of representations received by the Tariff Board for investigation under the Resolution of the Government of India in the Commerce Department No. 38-T (2) dated 28th March, 1925, reading as follows:—

"The Government of India have received a number of representations to the effect that the development of certain industries in India is hampered by the fact that the duty on the finished article is lower than the duty on the materials which have to be imported for the manufacture of that article."

The representation was received from the Indian Cable Co., Ltd., which was formed in 1920 for the purpose of manufacturing copper wire and strand for telephone, telegraph and transmission lines, rubber insulated cables and cotton covered wires.

Conclusions of the Board.—The Tariff proposals suggested by the Board were:—

“(1) That the duty on electrolytic copper rod, known as “black rod” be removed.

(2) That a duty of 5 per cent. be levied on rubber insulated electrical wires and cables other than those specified in Article 90A.”

The Indian Tariff (Amendment) Act 1929, which was passed on 22nd March, 1929, imposed the 5 per cent. duty on rubber insulated copper wires and cables as suggested by the Tariff Board.

With reference to the removal of the duty of 15 per cent. *ad valorem* on electrolytic copper rod, the Government of India found that there were practical difficulties in distinguishing electrolytic copper rod from other copper rod, and the relation of prices was such that in the event of the former being brought on to the free list, users of good quality copper for other purposes, would be led to use electrolytic copper. The Government of India therefore decided to give relief to the Indian Cable Co., Ltd. not by removal of the duty but by allowing them, under executive orders, as had hitherto been done as a temporary arrangement, to import their requirements of such rods free of duty.

TARIFF EQUALITY IN RESPECT OF THE MANUFACTURE OF PRINTING TYPE.

This was a further representation submitted to the Tariff Board alleging the existence of tariff inequality. The application was submitted by the Allahabad Law Journal Co., Ltd. on behalf of the Hindustani Type Foundry. Representations were subsequently submitted to the Tariff Board by a number of other firms.

The Tariff Board in their report dated 4th January, 1929, recommended that specific duty of one anna per lb. should be levied on printing type in place of the existing duty of $2\frac{1}{2}$ per cent. *ad valorem*.

The recommendations of the Tariff Board were approved by the Government of India who made the necessary alteration in the Tariff by a clause in the Indian Tariff (Amendment) Act 1929 which was passed on 22nd March, 1929.

TARIFF EQUALITY IN RESPECT OF THE MANUFACTURE OF MANILLA ROPE.

Representations regarding the tariff inequality in respect of manilla rope were received from the three principal manufacturers of manilla rope in India, viz., The Ganges Rope Co., Ltd., The Shalimar Rope Works, Ltd., and Messrs. W. H. Harton and Co., all of whom have their works in Calcutta.

The Board after examining the evidence put before them recommended that the duty on manilla hemp be entirely removed.

The Government of India in their Resolution No. 38-T (9) dated 8th June 1929, accepted in principle the recommendation of the Board and proposed to give effect to it when financial considerations permitted.

At the present date (July 1930) the duty of 15 per cent. on a tariff valuation of Rs. 30 per cwt. on raw hemp is still in force.

INQUIRY INTO THE SALT INDUSTRY.

This inquiry originated from the report of the Taxation Inquiry Committee in 1926. The events leading up to the reference to the Tariff Board are given in a Resolution of the Department of Commerce No. 601-T (I) dated 25th July, 1929 :—

“ The Taxation Inquiry Committee reported in 1926 that it was desirable to make India self-supporting in the matter of salt supply, if this end could be secured by the granting of a purely temporary advantage to the local manufacturer, whether by way of a rebate of duty or of a differential duty on import or both, and recommended that an inquiry should be made into this matter by the Tariff Board. This recommendation was, along with other recommendations of the Committee relating to salt, examined by the Central Board of Revenue with the assistance of Mr. D. N. Strathie, I.C.S., an officer who had had considerable experience of Salt administration in Madras. The main conclusions of the Board were briefly as below :—

(a) The problem of making the mainland of India (as distinguished from Burma) self-supporting in the matter of salt supply resolves itself into that of capturing for Indian salt the market for fine white crushed salt in Bengal, since no attempt could reasonably be made to compel the consumer in Bengal to take the ordinary Madras or Bombay salt.

(b) The cost of transporting salt to Bengal from those places in India at which salt suitable for that market could be produced, and the extent to which such transport could be made available, were factors of the greatest importance.

(c) The probable limitations upon the output of sources in India which could produce the required quality of salt were such that, on the evidence available, a reasonable probability that India could be made self-supporting in this respect could not be regarded as established.

The Central Board of Revenue, therefore, reported that there was no *prima facie* case for reference to the Tariff Board. As regards Burma, however, Mr. Strathie recommended that, in view of the special conditions there, there was a *prima facie* case for reference to the Tariff Board. The Central Board of Revenue recognised that, if that province had stood by itself, the course suggested by Mr. Strathie could have been adopted, but felt that the adoption of different rates of customs duty for goods imported into different parts of India would be a violation of important principles governing tariff policy.

The Government of India accepted the conclusion of the Central Board of Revenue that there was no *prima facie* case for reference to the Tariff Board so far as the salt industry in India (excluding Burma) was concerned. The decision of the Government of India was published in Finance Department (Central Revenues) Resolution No. 20, dated the 12th May, 1928, (vide page 290 of the Indian Trade Journal dated the 17th May, 1928). As regards Burma, they considered that means should be explored other than the grant of a differential duty in order to secure protection for the local industry. This subject is under active discussion at present with the Government of Burma.

During the last session of the Legislative Assembly the question of making a reference to the Tariff Board regarding the salt industry came under discussion in the Assembly in the course of a motion made by Mr. N. C. Kelkar to reduce the grant under the head “ Salt ” by Rs. 100. The discussion showed that there was a strong feeling in the Assembly that the question should be referred to the Tariff Board. In the course of the debate, the Honorable Sir George Rainy and the Honorable Sir George Schuster explained that the decision taken by Government not to refer the case to the Tariff Board was not final and had reference only to the circumstances at the time,

and promised that the matter would be re-examined in the light of the events that had happened since the previous decision was taken.

Subsequent to the above debate, the Honorable Finance Member and the Members of the Central Board of Revenue visited Karachi in order to inspect the progress that has been made with the manufacture of salt since Mr. Strathie reported and to assess the possibilities of increased production there and elsewhere. As a sequel to these visits, the Government of India have re-considered the position. They are still satisfied as to the essential correctness of the first two of the three conclusions cited in the opening paragraph of this Resolution; but as regards the third of these conclusions, they consider, in the light of recent experience in the production of fine white salt at Karachi and of the emergence of certain other possibilities, that it is necessary to re-examine the situation. They have now decided therefore that a reference to the Tariff Board need no longer be regarded as premature, and that, in view of the public interest which has been displayed in this matter, the Board shall be directed to set up an enquiry forthwith.

The Tariff Board will accordingly be asked to report whether, having regard to all relevant considerations, it is desirable in the national interest that steps should be taken to encourage the production of salt in India suitable for consumption in those markets which are at present largely supplied from abroad, and if so, what measures they recommend. The Board should take into account the relations between the Government of India and Aden and the conditions of the existing salt industry in the latter place and should make such special recommendations, if any, affecting the treatment of salt produced there as may seem to them to be appropriate. They should also note that it is already the settled policy of the Government of India to allow salt produced in the Indian States and transported to Bengal or Burma by sea admission to the markets in those areas, subject to reasonable safeguards to secure that the revenue accrues to the Government of India and that there is no illicit removal *en route*."

The Tariff Board commenced their inquiry in September, 1929, by investigating conditions in India, leaving for consideration at a later date the problem of imported salt in Burma. The Board visited Karachi and Sambhar Lake, the principal centres of salt manufacture in India, and took the evidence of the leading importers of salt in Bengal, the principal market in India, for imported salt.

At the present date (July, 1930) the report of the Tariff Board has not been published.*

INQUIRY INTO THE HEAVY CHEMICAL INDUSTRY.

The Department of Commerce of the Government of India in July, 1928, referred to the Tariff Board representations which they had received from the Eastern Chemical Co. and the Pharamsi Morarji Chemical Co. for the extension of protection to the following chemicals:—

Sulphuric Acid.	Aluminium Sulphate.
Hydrochloric Acid.	Sodium Sulphide.
Nitric Acid.	Zinc Chloride.
Magnesium Sulphate.	Copper Sulphate.
Ferrous Sulphate.	Glauber's Salts.
Potash Alum.	

The Tariff Board drew up a questionnaire and, in inviting firms to submit replies, pointed out that the scope of the Board's inquiry was not limited to the eleven acids and heavy chemicals detailed above.

* The Report on the Salt Industry was published on September 17th (Government of India Central Publication Branch, price 1/9).

The Board received written evidence from a number of firms between October, 1928, and April, 1929, but their recommendations have not yet been published.

OTHER ENQUIRIES WHICH HAVE BEEN REFERRED TO THE TARIFF BOARD.

Application regarding the duty on Fabricated Steel Towers for transmission systems.—In February, 1929, the Tariff Board issued the following Press Communiqué:—

“The Indian Tariff Board has received representations from Messrs. Jessop and Company Limited, Calcutta and the Punjab Engineering and Construction Company, Lahore pointing out that at present imported fabricated steel towers for transmission systems are admitted free of duty as machinery under Article 18A (3) and (5) and as a result Indian manufacturers are placed at a considerable disadvantage in competition with manufacturers overseas. With a view to remove this disability application is made that such towers should be made subject to the same duty as steel structures under Article 153 of Schedule II of the Indian Tariff Act.”

The Board invited interested parties to forward a written statement giving an expression of their views. The result of the Board's investigation has not yet been published.

Tariff inequality in respect of the manufacture of Methylated Spirit.—In May, 1929, a Tariff Board Press Communiqué stated:—

“The Tariff Board has received a representation from Messrs. Carew and Co., Ltd., Calcutta, alleging the existence of tariff inequality in regard to the manufacture of denatured or methylated spirit in India, as a result of which it is stated that the industry is placed at a disadvantage in competing with imported spirit. The Board is informed by the applicant company that the principal material from which the spirit is made in India is imported liquid or hard molasses on which the duty is 25 per cent. while the duty on imported denatured spirit is 7½ per cent. It is claimed that should a case for relief be established it should be granted to the industry either by the remission of the duty in whole or in part on imported molasses used in the manufacture of denatured spirit or in the alternative by the reduction of the duty on molasses imported for distillation to 15 per cent.”

A further communiqué was issued in September, 1929, as follows:—

“In its communiqué dated the 31st May, 1929, on the subject of the claim for tariff equality in regard to methylated spirit the Indian Tariff Board requested those interested in or likely to be affected by the enquiry to communicate their views to the Board. No representations have so far been received from consumers of methylated spirit. The applicant Company (Messrs. Carew and Co., Ltd., Calcutta) claimed that tariff equality should be secured either by the remission in whole or in part of the duty on imported molasses used in the manufacture of denatured spirit or in the alternative by the reduction of the duty on molasses imported for distillation to 15 per cent. It appears possible that the Board's communiqué may have been interpreted as limiting the inquiry to these forms of relief and with a view to removing any possible misapprehension, the Board desires to point out that tariff equality may also be secured by an enhancement of the duty of 7½ per cent. on Java rum imported for the preparation of denatured spirit.

The Board heard the oral evidence of the applicants in January 1930, but have not published the result of their investigation.

CHAPTER IV.

AN ACCOUNT OF THE PROGRESS MADE DURING THE PAST YEAR IN CERTAIN OF THE MORE IMPORTANT IRRIGATION, HARBOUR, HYDRO-ELECTRIC AND OTHER PROJECTS IN INDIA.

1. IRRIGATION.

Punjab.— I am indebted to the Chief Engineer, Irrigation Works, Punjab, for the following note on irrigation projects in the Punjab :—

The last report carried us to June, 1928, by which date the three upper Headworks (at Ferozepore, Suleimanke and Islam) of the *Sutlej Valley Project* had been completed and opened.

The present report carries us to June, 1930.

Floods and Damage.—The feature of the year 1929-30 was the occurrence of exceptionally heavy floods in the rivers Indus, Jhelum and Chenab which exceeded all previous maximum floods and caused serious damage to the Mangla Headworks (Upper Jhelum Canal), Rasul Headworks (Lower Jhelum Canal) and Marala Headworks (Upper Chenab Canal); repairs to these headworks have been completed.

There were heavy floods in the river Sutlej also but none exceeded the volume allowed for in the design of the Canal Headworks on this river; they caused however some damage to the Ferozepore Headworks.

A very serious accident to the Islam Headworks also occurred; here six bays of the Weir were wrecked and completely washed out. Very heavy repairs had to be carried out and have now been nearly completed.

Panjnad Headworks.—The construction of the headworks at Panjnad (the fourth headworks of the *Sutlej Valley Project*) which was well in hand in 1928 was completed as per original design during 1929, but the occurrence of exceptionally heavy floods in the rivers Jhelum and Chenab and the accident to the Islam Headworks necessitated re-consideration of the design of the headworks at Panjnad. It has been decided to lengthen the Weir at these headworks and construction work on this is now in progress and is expected to be completed by April 1932.

Progress on the distributary systems on the canals taking off at these headworks is well advanced; comparatively little excavation and the construction of a number of small masonry works remain.

Construction on the canals off-taking from the *Ferozepore, Suleimanke and Islam Headworks* is practically finished and only minor details, particularly in the Cholistan area of Bahawalpur State, remain.

Sales of land and colonisation is making good progress on the British side of the river; progress in the Native States is also satisfactory.

In accordance with the agreement between the Government of the Punjab and the Indian States concerned that the canals which irrigate in these States are to be handed over to State control after a trial working of six crops, the Bikaner perennial canal and practically all the non-perennial canals in *Bahawalpur State* (except that off-taking at the Panjnad Headworks, the opening of which has been delayed by the modifications mentioned in paragraph 3 have been handed over to the control of the respective States with effect from April, 1930.

New Projects.—In regard to new Canal Projects, a meeting of the Indus Discharge Committee was held at Bombay during 1929 and as a result of the agreement reached thereat, the Punjab programme is now as follows :—

- (i) *The Thal Project* is postponed for a period of 10 years;

(ii) *The Jalalpur Project* is abandoned;

(iii) *The Haveli Project*, involving the construction of a Headworks below the junction of the rivers Jhelum and Chenab, is being recast for submission to the Government of India for sanction—canals will take off on both banks of the river and will command a total area of 1,600,000 acres.

(iv) *The Bhakra Dam Project*, which contemplates a dam 500 feet high on the river Sutlej to give a storage capacity of over 4½ million foot acres equivalent to a discharge of 12,500 cubic feet per second for six months, is under consideration. This water will be utilised in increasing the intensity of irrigation in an area of nearly 12 million acres and in giving irrigation for the first time to an additional area of 4½ million acres.

The question of storage on the other rivers of the Punjab is receiving serious consideration as with the completion of the Sutlej Valley and Haveli Projects the whole of the winter supplies of the five tributaries of the Indus will be utilised and further developments depend on storage.

Waterlogging in the Punjab.—The question of waterlogging in parts of the Punjab irrigated by some of the older canals has become a matter of serious moment. A solution is being looked for in surface drainage and pumping from the subsoil.

Sind. Lloyd (Sukkur) Barrage and Canals Construction Project.—The following summary of the progress made on the Lloyd Barrage and Canals during the years 1928/29 and 1929/30 has been very courteously provided by the Chief Engineer, while I am indebted to the Public Works Department of the Government of Bombay for the list of requirements of plant and machinery during 1930/31:—

All underwater work in connection with the twelve scouring sluices and four ordinary spans of the Barrage proper were completed. The foundations, floors and piers of twenty three more spans were also completed up to the springing level of the road bridge arches. The work of raising the portions of these piers which carry the Gate Bridge was in progress during 1929. On the removal of the Cofferdams of the season 1928-29 the floors of the twelve scouring sluices as well as those of 27 river spans of the Barrage were permanently submerged with the main river flowing through them. In addition to the above, good progress was also made with the construction of the gate and road bridge arches over some of these spans.

The underwater work of the remaining 27 spans of the Barrage is being undertaken during the current season (1929-30). A huge Cofferdam covering about 46½ acres, the largest of the kind ever constructed in the world has been constructed and the underwater construction programme for 1929-30 is being carried out in this Cofferdam. Dredging within the Cofferdam to the level required for the foundations has been completed and the four rows of permanent steel sheet piling required for the foundations have been driven. On the piling the masonry floor of the Barrage is being laid and it is hoped to finish this season's work by the end of May, 1930. When these 27 spans are complete there will remain no work to be done under water in connection with the Barrage proper except for the Divide Walls and it is proposed to complete the latter during the season 1930-31. All the remaining work, viz. the Barrage superstructure, the arches and the erection and placing in position of the Barrage gates, which are now arriving, will be completed by about February, 1932, so that the whole structure will be ready for operation not later than May, 1932.

The head regulators of all the seven canals taking off above the Barrage on both Banks of the river as well as the upstream and downstream guide banks are nearly completed.

Good progress has been made with canal construction and also with the designs and construction of cross regulators and other masonry structures on the canals. The designs of the main canals and branches are completed while those of the minor and subsidiary channels are nearing completion. On the excavation of the canals 46 dragline excavators, all working three eight hour shifts per day, are employed. In addition to the work done by these excavators a very large amount of work has been turned out by manual labour. The total length of main canals, branches, etc. to be constructed is 6,230 miles of which about 2,000 miles comprising chiefly the largest sections have been completed. The quantity of earthwork to be excavated is 564 crores cubic feet of which about 347 crores cubic feet have been completed up to March, 1930.

In addition to the construction of masonry works very good progress has been made on the construction of steel bridges on the main canals and branches. Over 30 of these bridges are completed. The progress of construction of canals has been programmed with the intention of having the main canals, branches and distribution ready to start irrigation by the beginning of the hot weather of 1932.

The following statement shows the requirements of plant and machinery for the Lloyd Barrage and Canals Construction Project for the year 1930-31 :—

Serial No.	Quantity.	Description.
		<i>Lloyd Barrage Circle.</i>
		<i>Right and Left Works Divisions.</i>
1.	2,817 tons.	Steel sheet piling.
2.	36 sets.	Gates for Barrage.
3.	28 "	" " Regulators.
		<i>Power Supply Division.</i>
4.	Lump.	Water supply—Miscellaneous additions and alterations.
5.	Lump.	Electric Power Plant—Extensions and additions.
6.	252 tons.	Steel sheet piling.
7.	Lump.	Miscellaneous Plant.
		<i>Rohri Canal Circle.</i>
8.	65 Nos.	Radial gates for Regulators.
9.	334 sq. ft.	Screw gates for Regulators.
10.	9 sq. ft.	Vertical gates for Regulators.
11.	58 sq. ft.	Do.
		<i>Iron Work for Bridges.</i>
12.	—	R. S. Joists, Railings of angle iron including bolts, tie rods, etc.
		<i>Dragline Division.</i>
13.	Lump.	Spares for 300-Ruston Dragline Excavators.
14.	"	Spares for 320-Bucyrus " "
15.	"	Spares for 6-Ruston " "
16.	"	Spares for 24-Diesel " "
17.	"	Spares for 30-Bucyrus " "
18.	"	Spares for 50-Bucyrus " "
19.	"	Spares for 20-Bucyrus " "
20.	"	Ropes.
21.	"	Miscellaneous.

Madras. The Cauvery-Mettur Project.—The Engineer-in-Chief of this project has kindly supplied the following note on the progress of the scheme and the items of plant and machinery either already installed or contracted for :—

In 1924 the Secretary of State sanctioned an irrigation project in the Madras Presidency to include a reservoir of 93,500 m.c. ft. capacity on the Cauvery river and new irrigation in the Tanjore District, some 130 miles downstream of the dam amounting to 3,01,000 acres of rice crop. The estimate has since been under revision and the revised estimate sanctioned in June, 1929, amounts to 7.37 crores of rupees. Over 5 crores will be spent on building the Dam at Mettur (Headworks) and the balance on the excavation of canals, construction of regulators, syphon aqueducts, etc. Expenditure to end of March, 1930, is about 360 lakhs.

Canal System.—There will be 2 Main Canals. (1) The Grand Anicut Canal takes off from the Cauvery at the Grand Anicut and will irrigate about 2,58,000 acres. It is 67 miles long with 529 miles of distributaries. (2) The Vadavar Extension Canal, which is a continuation of the existing Vadavar Canal in the Tanjore Delta and will irrigate about 43,000 acres. It is 10 miles long with 86 miles of distributaries.

These canals are not navigable. Their velocity is high. The high velocity not only permits a smaller section of the canal but also makes silk deposits impossible. Thus they are not only cheaper in capital outlay but also in maintenance.

Excepting for a portion of the excavation which is being done by dragline excavators, the rest and other masonry works are carried out by manual labour by contract system. About 6,000 coolies and 600 artisans are employed.

Excavators.—Two dragline excavators made by Messrs. Rushton and Proctor, are working in the canal system. Each excavator does over Rs. 1,000/- worth of work a day. They cost about 3 lakhs each and work three shifts of 6 hours a day with flood lighting for night work. The bucket is of 3 cubic yard capacity and the jib is long enough to dig half the 180 feet width of the canal and deposit the soil on the bank.

These excavators have saved the project the importation of an additional 3,000 coolies.

Headworks.—The reservoir which will cover an area of about 59 square miles involves the construction of a dam containing about 50 m.c. ft. of masonry and is the biggest in the world.

Preliminary works completed consist of :—

(i) The Mettur and Salem Camps on the right and left banks of the river.

These contain Magisterial and Police buildings, Offices, Hospital, Health Laboratory and Residences. All the staff and major portion of the labour force engaged on the construction are housed. The population is about 14,000.

(ii) *Water supply.*—This is filtered and chlorinated. The scheme was completed in November, 1928. Paterson filters are used. There is now a 24 hours pure water supply.

(iii) *Drainage system.*—The underground drainage system was completed in August, 1928. It is very efficient. The sewage is collected into a well and pumped to a small farm of about 50 acres.

(iv) *Workshops.*—A well equipped workshop has been erected for repairs and maintenance of the plant in use in the construction. Attached to the workshops there is a loco repairs shop also.

(v) *Power House and Power supply.*—A Power House has been built. Originally power was being generated with the help of two 165 B.H.P. Mirrlees Bickerton sets. But an offer from the Mysore Government for transmission of power from the Sivasamudram Hydro-Electrical Station was accepted. Power was made available in November, 1928.

Mysore current is transmitted at 35,000 volts from Sivasamudram 62 miles from Mettur. It is transformed down to 3,300 volts and the frequency changed from 25 to 50 cycles before being delivered to our busbars. Transmission and distribution at Mettur is done by the Project Staff.

In addition to all the machinery which is being run by electricity, power is utilised to light the whole Camp.

Roadways.—Nearly 50 miles of bridged roads suitable for heavy lorry traffic and a road and tramway bridge over the Cauvery have been built.

Tramways.—There are about 50 miles of 2 feet gauge tramway with locos and wagons for transport of materials.

Dam.—Excavations for dam foundations began early in July, 1927, and are nearly finished except for the central section where work is progressing rapidly. To ensure that rock surface exposed is sound, holes are drilled and cores examined and if satisfactory are grouted with cement.

Pressure for grouting foundations is pneumatic. The Power House contains 7 electrically driven air compressors; 2 more are installed on the left bank at Ellis Saddle. Air is piped from these all along the Dam line and to stone quarries on each flank of the valley. Though compressed air is chiefly required for quarrying it is also used for excavation in soft rock, etc. There are about 187 pneumatic drills and picks at work.

The explosive used for quarrying and excavation is liquid oxygen. This is prepared in the Power House by the Lightfoot Refrigeration Co.

The masonry Dam was begun in July, 1928, and will be mostly of cement concrete which material was chosen not only for its strength but also because of the speed with which it can be placed.

The steel towers made by Messrs. Stothert and Pitt, Bath, are being erected. These are for placing the concrete in the Dam. Erection of one on the right bank is completed, and it is under test. Erection of the other will be finished in a few months. Both are expected to function regularly from September.

Each tower is capable of pouring 1,500 tons of concrete in a day of 10 hours. These towers are about 306 feet high, weigh about 1,530 tons each, travel by electricity along rails and can build a length of Dam 126 feet long up to the full height without moving their position. Their cost erected at site is about 26 lakhs.

Metal required for the concrete will be broken by machine. Three batteries of Hadfields' Crushers are being erected, two on the left bank and one on the right bank. One of the two on the left bank has been completely erected and is functioning now. The other two are nearing completion. These are designed for an output of 2,400 tons a day. They cost Rs. 10.38 lakhs.

Cement is supplied from Shahabad. About 1,70,000 tons of cement valued at about 90 lakhs will be used on the Dam.

Surki is added to cement in the proportion of 1 : 4 and the resultant red cement mortar is used in place of pure Portland cement mortar. The addition of surki does not impair the strength but introduces a considerable saving in cost.

A drainage gallery runs through the length of the Dam just in rear of the impervious face which is built of cement masonry. Any water that percolates into the masonry of the Dam finds its way to this gallery through drainage shafts made of porous concrete and inserted in the Dam at intervals. The water thus collecting in the gallery is discharged at the rear face by cross drainage galleries at suitable places.

Like other materials masonry contracts in cold weather and expands in hot wether and is therefore liable to crack. Expansion joints will be provided.

As regards design of Dam, its section has been made safe for a stress of 10 tons per square foot, but the concrete is so proportioned that test blocks show no sign of failure under a load of 60 tons per square foot.

Hydro-Electric Scheme in the Project.— Four rows of 8½ feet diameter pipes have been ordered for a potential power scheme and will be built into the Dam. The diameter of these pipes has been fixed so that power units may be installed of a size suitable to tie in with the Pykara-Hydro-Electric scheme. Several of the pipes and a needle valve have arrived and arrangements to fix them are well in hand.

When a market is available, a minimum power of 15,000 h.p. can be generated all the year round.

Special Tools and Plant.— A list of important items of machinery and plant already installed is as follows :—

Concrete Placing Plant.

- One concrete chuting tower with Victoria Mixer (1 c.yd.)
- Four Jaegar concrete mixers.
- Three Victoria Concrete mixers (1 c.yd. capacity).
- Three Rex mixers (2/3 c.yd).
- Two travelling concreting towers from Messrs. Stothert-and Pitt).

Stone Crushing Plant.

- One Acme patent portable stone breaker.
- Two Edgar Allen Jaw Crushers.
- Two Rotary Crushers.
- Three Hadfields' High Torque Electric Motor Driven Stone Crushing Plant.

Air Compressors.

Nine Air Compressors.

Rolling Stock.

- 32 Sentinel locos.
- 2 other locos.
- 630 one cubic yard trucks. } side tipping.
- 397 two cubic yard trucks. }
- 205 three cubic yard trucks (side discharge).

Machinery and Plant ordered out but not received.

- Guniting plant—to render the front face of the Dam water proof.
- Auto-Compressor equipment—for disposal of the hospital sewage.
- Hydro-Electric Pipes and Needle Valves—Most of them have arrived and some more remain to be received.

Bengal. The Damodar Project.— The Secretary to the Government of Bengal in the Public Works Department (Irrigation) has very courteously given me the following notes in the form of a semi-official letter :—

Progress on the Damodar Canal Irrigation Scheme has been good and it is expected that the Canal will be opened for irrigation in 1932. The headworks comprise a weir across the Damodar about three-quarters of a mile long with protective works and three under-sluices fitted with up-to-date roller gates of 60 ft. span, and also the head regulator of the canal which comprises five vents of 20 ft. each fitted with rising gates run on rollers. All gates and gearings have been supplied by Messrs. Ransomes and Rapier. Except for the central portion of the weir, practically the whole of this part of the work has been finished. The total cost of the headworks is about Rs. 26 lakhs. In regard to the canal itself, an area of about 2,00,000 acres will be irrigated, mostly comprised of paddy in an area which is periodically

exposed to scarcity and in which, in some years, no crops whatsoever have been grown in certain localities. The first reach of the canal passes through undulating ground and the excavation extends up to 40 ft. as a maximum. This work is being done by two of Ruston's dragline excavators, Nos. 135 and 75. Though the soil is very hard and would cost heavily if excavated by hand, these machines have found no difficulty in digging the earth. The total length of all canals amounts to 230 miles and will probably take some three or four years more to complete. The total cost of the whole canal is estimated at Rs. 78 lakhs. The main canal itself including excavation, weirs, etc., is very nearly finished except for the first reach.

2. HARBOUR WORKS.

Calcutta Port Extensions. Progress of the Scheme.—I am indebted to Sir Charles Stuart-Williams, until recently Chairman of the Calcutta Port Commissioners, for the following progress report on the developments during the years 1928/29 and 1929/30 :—

In the report for the year 1927-28 the progress on the construction of the King George's Dock up to the end of that financial year, namely, the 31st March, 1928, was briefly outlined and the difficult and important states which characterised the completion of this work were indicated. From the beginning of the following financial year, 1928-29, the work was pressed on to completion with all possible dispatch, and although the rainfall of the 1928 monsoon was unusually heavy, (by the end of July there had been a fall of 22 inches over normal—of which 7 inches fell in one night), the careful provision made against this contingency prevented any untoward result, other than the unavoidable delay which it involved.

In order to make possible the entry of dredging craft into the basin, work had been concentrated on the lock entrance in particular and the dredger "Bully," which was the first vessel to enter the new dock, was safely taken through the lock entrance on the 6th October, 1928. The energetic efforts made by the Construction Staff from that date up to the end of the calendar year made it possible to arrange for a formal opening of the Dock, which was duly performed by His Excellency the Viceroy on the 29th December, 1928, this date being well up to the expectations of the last few years. A considerable amount of dredging at the river entrance of the lock had, however, still to be carried out and unexpected difficulties were encountered in the shape of a submerged wall of massive construction, but it was found possible to admit the first ocean-going vessel, the P. and O. S.S. *Novara* by the 23rd February, 1929. During the next few months there was further rapid progress in completing the berths and in the dredging of the basins, so that by September, 1929, all berths were in commission.

Work on the Dry Docks was slightly behind the remaining portions of the entrance works, but it was found possible to dry-dock the first vessel, namely, the Burma Oil Company's S.S. *Badarpur* in July, 1929. Thus, before the end of the calendar year 1929 the whole of the dock in its first stage, namely, the lock entrance, the two Dry Docks, the four Import and Export Sheds, the heavy lift or lying-up berth and the river steamer berth were in full use, leaving only the river entrance of the Dry Dock to be completed. A large amount of ancillary work, such as the construction of godowns for ship repairing firms at the Dry Docks, of offices for shipping firms behind the berths, the Customs Department, Port Commissioners' Cash Office and the first Import Warehouse had all to be done in addition to the main features of the scheme, and this is now practically complete.

It will thus be seen that during the year 1929-30 the whole dock had become definitely absorbed into the Port Commissioners' system. The whole of the heavy interest charges involved were taken on to the Trust's Revenue Account as from the 1st January, 1929, the accommodation offered to the trade was

found to be well appreciated and the working of the new system in regard to marine and traffic work was well in hand.

The following figures for the year 1929-30 will show the considerable body of traffic which is now utilising this new portion of the Commissioners' system. There were 87 vessels placed at one or other of the four berths representing 84 per cent. of the accommodation available. Of these, 41 landed imports and loaded exports, 20 vessels landed imports only and 26 loaded exports only. In addition 31 vessels entered for lying-up or repair work. The tonnage of imports landed in the new Dock during the year was 177,385 tons and that of exports loaded was 217,019 tons.

Kidderpore Dock—New 80-ft. Entrance.—The difficult conditions, referred to in my last report, under which the new 80-ft. lock entrance to the old Kidderpore Dock System is being constructed remained in existence and rendered progress somewhat slower than had been anticipated at an earlier stage. The monolithic work which comprised both the side walls and the floor of the lock was, however, practically completed by the end of 1929-30, and the inner gates were put together and erected in position. The granite work in the hollow quoins, sills and caisson stops was also completed at this end. The outer gates and the granite work at the river end remain to be done and will shortly be taken in hand.

Of the floor, more than half is completed and work on the remainder is being pushed on. The monoliths for the entrance jetty are all sunk with two exceptions, and this part is on the road to completion. Though a considerable amount of work still remains—including some of a peculiarly difficult nature—it is hoped the lock will be completed within the financial year 1930-31.

Bombay Port Trust Capital Works. — The Secretary of the Bombay Port Trust has provided the following brief note on capital expenditure during 1929/30 :—

In pursuance of the Board's policy of restricting capital expenditure to urgent and essential works during present financial conditions, the amount expended on capital works during 1929-30 was approximately Rs. 24 lakhs against an original budget estimate of Rs. 30 lakhs. The principal works executed were as follows :—

1. A new transit shed at No. 16 berth, Alexandra Dock.
2. Two new sheds at Grain Depot to meet the increasing demand for covered storage accommodation from the grain and other trades.
3. A new shed on the Mazagon Sewri Reclamation for lease to the Haverro Trading Co. for storage of dyes, etc.
4. A new unattended light vessel to replace the old attended light vessel *Bombay* which has now been put out of commission.
5. Further land development at Wadala to meet additional demands for industrial sites.
6. Electric installations and subsidiary arrangements at the Pir Pau Pipe Line to allow of the discharge of bulk petrol at night.

No new loan was raised by the Trustees during the year, the expenditure being financed from loan balances in hand. No borrowings have been effected since 1924-25 and the interval of five years since the last loan flotation constitutes a record in the financial history of the Trust.

Karachi Port Improvement Scheme.—Mr. J. B. S. Thubron, C.I.E., Chairman of the Karachi Port Trust, has contributed the following note on the position :—

Four deep water berths, totalling 2,444 ft. in length have been completed with bollards and two berths have been fully equipped with ten electric cranes, five on each berth, including crane rails, piping, valves, etc.

Dredging has been carried out in front of 2½ berths to a depth of 32 feet below L.W.O.S.T.

Two transit sheds—530 ft. in length by 160 ft. in width, one at each of the first two berths, with loading platforms, are in course of construction. These sheds will be served by rail and by road and will be completed and fully equipped by October, 1930.

The new railway layout to serve the new quay and sheds is in progress and provides ample reception and marshalling accommodation.

Water supply arrangements at West Wharf.—An underground fresh water reservoir has been constructed to serve shipping, etc., and all necessary pumps for the purpose have been installed.

Extension of Thole Produce Yard.—It has been decided to reclaim a further area of 11,60,000 sq. yards to the south of the present yard at an estimated cost of Rs. 18,00,000. All preliminary arrangements such as construction of bunds, temporary roads, etc., have been completed. The actual reclamation by dredgings pumped to the site by the Pumping Plant SARAS will be commenced at an early date.

Fire protection arrangements in Thole Produce Yard.—Owing to serious fires in this yard and to an insufficient supply of fresh water, it was decided to make use of salt water for fire extinguishing purposes. This scheme is estimated to cost Rs. 4,34,350. A complete system of pipes and hydrants has been laid and an overhead tank has been erected. The pumps for pumping salt water to the distributing system have been ordered and the scheme will be completed in July, 1930.

It has also been decided to fence in the whole yard.

Reclamation at Keamari.—A further area of about 27,802 sq. yards has been reclaimed from the foreshore at Keamari for the petrol installation of the Standard Oil Co. of New York.

The following plant was received during the year :—

Quadruple Grab Hopper Self-propelling Dredger of 900 tons hopper capacity.

Harbour Developments in the Madras Presidency.—The Officiating Harbour Engineer to the Madras Government has very kindly supplied the following note on the harbour schemes at Cochin and Tuticorin :—

Cochin.—The fiscal year under review witnessed the successful completion of the capital works involved in the development of Cochin up to the stage at which steamers can enter Port and work their cargoes at moorings in the inner harbour. It may be recalled that towards the close of the working season 1927-28 the approach channel leading from the sea to the inner harbour through the bar had been cut to a bottom width of 400 feet and an average depth of 32 feet at L.W.O.S.T. and by the end of the season 1928-29 this channel was widened to 450 feet and deepened to an average depth of 35 feet at low water on its entire length of a little over three land miles.

Early in the year under report it was decided that the trade of the port, which is now mainly coastal, could in the first instance be best served by the provision of centre moorings in the berthing areas in the inner harbour, in lieu of the fore and aft moorings originally proposed. The chief factors which influenced the decision were the necessity for quick despatch to shipping and the difficulty and inconvenience anticipated in getting ships into and out of fore and aft moorings and turning them in the somewhat restricted available deep water space, especially in certain conditions of tide. The change over involved additional dredging to give the necessary deep water space and an improvement in the dredged channel widths generally.

The natural deep water available in the gut lent itself readily to the provision of two swinging berths suitable for the average size of vessels calling at the port, and the season's programme was planned to provide five such buoyed berths in all and two more for smaller vessels to cover immediate needs. The dredging carried out to this end during the season 1929-30 involved the removal of nearly one million six hundred and seventy three thousand cubic yards of material consisting mostly of hard packed heavy sand. Part of the spoil was pumped direct into the reclamation area at Venduruthy and part into a new area formed to the east of Vypeen promontory. The total area of completed reclamation made at Venduruthy up to the end of the season 1929-30 was 83 acres, while a further area of approximately 70 acres had been raised to within 18 inches of the finished level. In addition, 20 acres of land was formed at the new reclamation ground east of Vypeen.

The sinking of screws for the moorings was begun in May, 1929, and the berths were brought into use as completed. Two of the large berths capable of taking vessels up to 500 feet in length were ready in August, and a third in October, 1929. In November, the two smaller berths were buoyed and ready for use, one suitable for vessels up to 400 feet in length and the other for vessels up to 350 feet, and two more large berths came into use in December. All seven moorings have been regularly occupied since. In addition to the buoyed berths, berthage accommodation is available for a number of small steamers using their own anchors.

The outer approach channel was permanently buoyed during the year.

Capital maintenance items were carried out.

On the 2nd December, 1929, the dredger *Lord Willingdon* was put in commission for the first year's maintenance dredging in the outer channel since its completion to the final design in March, 1929.

The channel had maintained its depth well during the monsoon, the minimum depth on the major portion of its width being 30 feet L.W.O.S.T. at the end of November. The quantity and extent of the silting were much less than at the end of the monsoon of the previous year (1928).

The maintenance work was carried on continuously on day and night shifts to completion on the 5th January, 1930. Within these five weeks a length of 12,500 feet of the channel was covered and the silting shelf on the southern side (3,600 feet in length) cleaned up. The total quantity of material removed was 794,230 cubic yards, the average depth attained in the channel at the close of the operations being 35 feet at L.W.O.S.T. The maintenance dredging was carried out without interference to the free passage of shipping in the channel.

The very moderate silting in the channel, which was less than anticipated, and the speed with which the maintenance dredging was done tends to remove any doubts that may have existed as to the possibility of the cut being maintained at a moderate cost of time and money.

The question of the very necessary new and improved railway connections to the port has been taken up with Government by the local harbour authority. The port has been taken up with Government by the local harbour authority.

Tuticorin.—The capital works at Tuticorin port remained in abeyance. Alternative estimates for the construction and maintenance of a reasonably equipped harbour at Hare Island and at the existing port were put forward and were under consideration. Maintenance engineering items were in hand.

The Port of Rangoon.—Mr. J. A. Cherry, C.I.E., Chairman of the Rangoon Port Trust, has very courteously supplied the following note on the work carried out on Port Extension Schemes in 1928/29:—

Traffic in the Port of Rangoon, while continuing to reflect the unsettled trade conditions of the Province, shows satisfactory results under most heads. For the year ended 31st March, 1929, over 1,600 steamers with a net tonnage in excess of 4,000,000 entered the Port, an increase of 81 in number and 322,000 in net tonnage over the previous year.

The seaborne trade for the year ending 31st March, 1929 was 5.38 million tons (1928 : 5.55), of which 1.59 million imports (1928 : 1.96) and 3.77 millions were exports (1928 : 3.57). The reduced volume of imports still persisted in the year ending 31st March, 1930, but in comparing figures it should be mentioned that the amount of nearly 2 million tons returned in the year 1927-28 was a phenomenal one which disturbed the fairly steady upward trend experienced for the last ten years. Inland traffic over the Commissioners' premises up to the 31st March, 1929 showed a small increase of 6,000 tons over the preceding year while the rail-borne traffic was up by 120,000 tons for the same period.

The progress during 1928-29 in connection with the development schemes of Port facilities is :—

Wharves Extension and Reconstruction for sea-going vessels traffic.—The Commissioners are faced with a much more extensive programme for the extension and reconstruction of their wharves for sea-going shipping than was anticipated when the joining up of Sule Pagoda and Latter Street wharves, estimated to cost Rs. 47,75,000 was commenced on the 1st November, 1928. The rapid deterioration of Sule Pagoda wharf which is partly the result of building a new wharf on to an old structure some 25 years ago and partly, as has subsequently been ascertained, to the unsatisfactory nature of the foundation strata, is causing the Commissioners anxiety and necessitates a re-arrangement of the construction programme to give priority to the re-building of Sule Pagoda wharf. Borings and test piles are being put down to obtain the necessary data for the design of foundations and results so far go to show that in one area at least the foundation work will be difficult and will probably call for a modification of the design adopted for the Strand Market berth now in course of construction. To make space available as a works yard for the next stage in the construction programme, important clearance work has been carried out resulting in the disappearance of a number of old river-side land marks in the vicinity of Sule Pagoda wharf.

Work on joining up Latter Street and Sule Pagoda wharves with a new ferro-concrete wharf—the Strand Market berth—is progressing in accordance with anticipations, and should be completed within the estimated period, i.e. by the end of October, 1930. Owing to the condition of the site and the demands of modern requirements the work has necessarily been of a formidable character, representing all that is most up to date in heavy reinforced concrete wharf construction. Although in total value the new wharf cannot be classed as a work of great magnitude, it is nevertheless more complex than many larger undertakings, and it is remarkable on account of the size of the individual piles, cylinders and constructional members used in its make up.

In order to give working space for the investigations previously referred to, two pontoon jetties formerly at Barr Street have been removed to the foreshore opposite the Commissioners' Offices where a temporary passenger depot has been erected and the immediate area has been equipped with adequate approach roads and parking ground. Further work is now in hand to improve the amenities of this open space.

Botatoung Development for the Irrawaddy Flotilla Company's Mandalay steamers traffic.—An additional 60,000 sq. ft. of covered accommodation at this depot has been erected. Traffic along the Botatoung foreshore has been further distributed to permit of additions to the berthing facilities now available, and further to these proposals the coastal steamers' depot is being extended over the foreshore, formerly used for storage of the Commissioners' coal stocks and mooring plant, which have been transferred to a depot constructed and equipped for the purpose at King's Bank.

New Import Salt Depot at Pazundaung.—This new depot which replaced the former depot located at Lanmadaw, consists of 36 godowns with a total area of 151,560 sq. ft. and a storage capacity of 46,600 tons. An additional area of 20,700 sq. ft. included in the total area above given has now been completed and taken into use.

Military Commissariat Depot at Godwin Road.—The new Commissariat Depot at Latter Street which replaced the old depot at Godwin Road, has now been completed and occupied by the Military department in exchange for the former depot. The accommodation provides offices and storage godowns with rail, road and river connections. By this exchange of property the Commissioners have been enabled to provide an additional pontoon jetty and a cargo boat jetty along the congested Lanmadaw foreshore and considerable relief has been thus afforded to inland traffic.

Light Passenger Traffic.—Opportunity has been taken of the proposal sanctioned by the Local Government for the relayout of the area occupied by the Principal Port Officer's house and by the Public Works Department store yard to exchange certain areas of Commissioners' land for equal areas of Government land in order to improve the present facilities at Judah Ezekiel Street jetty and to provide a wider approach thereto. A new 75 ft. road has been cut along the Western Boundary of the Burma Railways coal depot and the former narrow Judah Ezekiel Street approach to the river has been given up to the Local Government. It has thus been possible to open out a large circulating area at the river end of the new road; to carry out revetment of the river bank, and to provide a pontoon jetty and sampan landing stage to deal with the considerable volume of passenger traffic which uses this locality.

Railway facilities.—The improvement of the present facilities for rail-borne traffic to and from the Commissioners' premises is being proceeded with and in accordance with Port development proposals adopted in 1925, some four acres of land at Keighley Street have been cleared and transferred to the Burma Railways in exchange for the land comprised in the Latter Street railway station. This area will shortly be merged into the wharves and will enable much needed layout improvements to be effected.

General.—While the reconstruction and extension of the wharf system must necessarily be the dominating feature of Port improvement for some years, other phases of development will proceed. Among these may be mentioned the freeing of valuable traffic areas from residential occupations which will be transferred to outlying land acquired in connection with river training schemes; the modernisation of the Commissioners' workshops; improvements to and replacement of units of the flotilla; improvements to pontoon jetties and ships' moorings; re-laying of sidings in the Port area and the prosecution of additional surveys, both hydrographic and hydrometric, over the Rangoon river system.

Traffic figures for the year ended 31st March, 1930, are not yet in final form for publication. In respect of tonnage handled over the Commissioners' premises the results approximate closely to those of the preceding year, but a substantial increase falls to be reported in the number and tonnage of steamers entering the Port; during the year 1,640 steamers with a net tonnage of 4,489,776 entered as compared with 1,609 steamers with a net tonnage of 4,202,398 during the previous year.

The Vizagapatam Harbour.—I am indebted to the Engineer-in-Chief of the Vizagapatam Harbour Construction for the sub-joined progress report covering the last two years:—

The main effort during the last two years has been devoted to dredging work. The steam dredger "Vizagapatam," which has a capacity of 1,000 tons of sand per hour, commenced operations in February, 1928, and has mainly been employed in the Harbour area proper, the dredging of the Entrance Channel and bar having for the present been deferred.

About 32 acres of water area have been dredged to a depth of 30 feet at low water. The turning basin has been completely dredged, and a portion of what will eventually be the Entrance to the Northern Basin has been commenced.

The " spoil " obtained from these dredging operations has been utilised for the reclamation of land which will in due course be required for the development of the Port. About 150 acres of what was formerly swamp land has in this wise been rendered serviceable, and it is intended for the accommodation of transit and storage sheds, office sites, mineral dumps, oil depots, Port establishment, etc. Plots are now available for office and industrial purposes.

The depth of 30 feet at low water is being adopted in all waterways intended for ocean-going ships. The need for lighter canals alongside areas intended for industrial purposes is being kept in mind in the execution of the scheme.

A quay wall comprising accommodation for three deep draught vessels is approaching completion. One berth is to be devoted to the mineral and two to the general trade, and the equipment to be provided includes transit and storage sheds with adequate road and railway facilities and a set of electric cranes. Arrangements are being made for the provision of mineral dumps of a capacity of about 100,000 tons, well served by railway sidings arranged for quick despatch of material.

Oil tankers will lie at a pontoon berth and the plans provide for the accommodation of the Oil Companies' Tank farms, factories, etc.

In addition to the above, three mooring berths are being provided, at which vessels may despatch and load by means of lighters.

The programme includes an *ad interim* stage of development in which vessels, whilst lying off the Port, as at present, will be served by lighters in lieu of the surf boats by means of which trade has now to be carried on. A start is to be made on the necessary channel, for the use of the lighters, during 1930.

A graving dock for the use of dredging craft has been provided, and this will be capable, should the need arise, of extension for the accommodation of merchant vessels. The reclaimed areas will also afford room for ship repairing establishments with water frontage and railway sidings.

A scheme is in hand by which the supply of fresh water available from municipal sources will be enhanced, and at the same time the anti-malaria measures considered necessary for the security of the harbour will be facilitated. The question of protection from malaria received early attention, and the problem has been solved.

The lines on which the harbour will develop after the present stage of construction has been a matter for much discussion, and a lay-out has been adopted under which the land resources can be utilised in the fullest measure along with the provision of adequate marine facilities, whilst at the same time a road and railway system planned on modern lines for the rapid handling of traffic can be built up as the need arises.

The Raipur-Vizianagram line is being constructed by the B.N. Railway and completion is hoped for in 1932, the year in which it is hoped that Vizagapatam Harbour will be available for the use of ocean going ships. The provision of this line will greatly shorten the rail lead between Vizagapatam and the Central Provinces.

The construction of the harbour is being undertaken by the Railway Board, out of Central Funds. The Agent of the B.N. Railway acts as Administrative Officer for the Harbour.

Port of Chittagong.—The Secretary to the Port Commissioners, Chittagong, has been good enough to furnish the following note compiled by the Port Engineer :—

River Improvements Works.—Progress with the general scheme of river improvement works has been made as follows.

The extension of the Cutting Bend Revetment to Gupta Point, approximately half-a-mile in length, was taken in hand and completed at a cost of Rs. 1½ lakhs.

The revetment of the right bank of the Patunga Channel over a distance of two miles, estimated to cost Rs. 13½ lakhs was commenced this season, and considerable progress made.

The placing of a protective stone apron across the Juldia Channel, estimated to cost Rs. 10½ lakhs, has received Government sanction, but the work has to be deferred till the Patunga Channel right bank revetment is sufficiently advanced to allow stone to be diverted to the new work.

Dredging.—The new 2,000 ton suction hopper dredger “ Patunga ” which commenced dredging in July, 1928, has increased the depth of the navigable channels over the bars by approximately three feet, to the great advantage of shipping.

The old 750 ton suction hopper dredger “ Karnafuli I ” is being maintained in working order, and takes the place of the “ Patunga ” when the latter is laid up for overhaul and repairs.

The “ Karnafuli I ” is also being retained as a supplementary dredger in cases of emergency.

Lighting of Approaches to the Port.—The lighting of the approaches to the Port has been engaging the attention of the Port Commissioners, all in accordance with their policy of improving the amenities of the Port as far as possible.

Following on the installation of an improved light at Norman's Point Lighthouse in 1927, the Port Commissioners had an improved light fitted to the light-vessel “ Sarsuti ” in 1928 and replaced the old oil burning navigation light at Juldia Signal Station with a modern type flashing light.

A scheme for the installation of an improved light at Kutubdia Lighthouse has been forwarded to Government for sanction.

Extensions to Workshops.—The Port Workshops and Stores have been considerably extended and developed during the last two years, new offices and shops having been built and new plant for foundry, smithy and machine shop installed. Further schemes for development are temporarily in abeyance on account of financial stringency.

General Developments.—The Port Commissioners' Offices have had to be extended and remodelled to meet present day requirements. New staff quarters have been built and further construction is on hand.

3. HYDRO-ELECTRIC SCHEMES.

The Punjab Hydro-Electric Scheme known as the Uhl River Project.—Progress on this great scheme has been continuous throughout the year, and contracts have now been placed (mainly in the United Kingdom) for most of the plant and machinery, including the pipe line, power station plant and the transmission system.

Lack of space prevents the inclusion of a detailed report of the scheme in this Report, but firms interested may consult, at the Department of Overseas Trade, copies of a brief non-technical address delivered by Lieut.-Col. B. C. Battye, R.E., the Engineer-in-Chief, to the members of the Lahore Rotary Club in June, 1929, together with a technical paper read before the Indian Engineering Congress in February last, and also recent half-yearly progress reports which have been submitted to the Punjab Government.

Hydro-Electric Developments in the Madras Presidency.—I am indebted to Mr. H. G. Howard, the Chief Engineer to the

Madras Government in charge of hydro-electric development, for the subjoined note on developments during the two years ended March 31st, 1930 :—

Satisfactory progress is reported in the work of the Hydro-Electric Department in Madras for the two years ending 31st March, 1930.

Glen Morgan Scheme.—The first step in development in this Presidency was taken in July, 1928, when Government sanctioned the construction of the Glen Morgan Scheme, in the Nilgiris. This is a small hydro-electric development utilising the waters of the Pykara River over a head of 680 feet, supplemented when necessary by the waters of its tributary Glen Morgan stream. A maximum of 1,650 h.p. is available from the plant. The main object of this scheme is to supply power for construction purposes to the much bigger Pykara Scheme, and incidentally to sell any surplus power to the neighbouring Municipalities of Ootacamund and Coonoor and some tea estates close by.

The cost of the whole scheme was Rs. 12 lakhs. The department undertook all civil works and the erection of the transmission lines.

The pipe line about 1,800 feet and 21 feet diameter was ordered from Messrs. Ferrums of Poland and the turbines—2 units of 500 h.p. each—from Messrs. Boving and Co. The alternators, transformers, and switchgear were obtained from Messrs. British Thomson Houston Co. (India) Ltd., who also undertook the complete erection of the pipe line and power house plant. The transmission line materials were obtained from various British firms and erected by departmental labour.

The construction was completed early in November, 1929, and power supply to Ootacamund was commenced in the latter half of that month.

The demand for power is such that a third 500 h.p. unit has since been ordered and is being erected.

The power house plant has been so designed that it may be readily dismantled on the completion of the main Pykara Scheme and many of its parts embodied in the latter.

The Pykara Scheme.—This scheme had been under study for a number of years. The Pykara river is capable of giving up to 100,000 h.p., but the demand for power in the neighbouring districts would take many years before reaching this figure. The possibility of the South Indian Railway electrifying some of their main lines such as their Trichinopoly-Madura, Coimbatore-Pollachi-Dindigul, and the Nilgiris Railway Sections was investigated with the active co-operation of the Railway authorities. Such a load would have enabled immediate development of a good proportion of the power capacity of the site. But on account of hesitancy of the Railway Board in venturing on main line electrification at present, the scheme had to be somewhat curtailed. This was sent up to the Secretary of State for sanction, but due care was taken such that the designs would always permit easy expansion to deal with increasing demand in the future.

The Secretary of State sanctioned the scheme in September, 1929. It is to develop a maximum of 21,000 h.p. for supply to the Nilgiris and Coimbatore Districts only. The estimated expenditure is Rs. 126.40 lakhs.

Construction work was started immediately and fair progress has been made. Orders for a portion of the construction tools and plant have been placed locally, and through the Director-General of Stores, London. The building of temporary and permanent quarters for the staff is nearing completion.

The civil works will be undertaken by the Department, but the electrical and mechanical parts of the schemes are to be executed through the Power Securities Corporation, London.

The specifications for the plant and equipment were sent to the Corporation early this year, and they have already called for tenders by advertisement.

It is expected that the award of contracts for all the plant will be completed by August, 1930.

The following will give an idea of the plant to be ordered:—

Penstock Pipes.—Two rows of pipes each about 9,200 ft. long varying in diameter from 27ins. to 21ins. and weighing about 2,100 tons in all. Static Head 3,080 ft.

Power Station. (1) *Generating Sets.*—3 Units of (Turbine-alternator) 6,250 KW. each.

(2) *Transformers.*—3 Units of 7,810 K.V.A. each, 3 phase, 50 cycles, 11,000/66,000/110,000 volts.

Transmission Lines.—(1) 50 miles of 66/110 KV. transmission lines between Pykara and Coimbatore, carrying two 3 phase circuits of No. 6/.208 plus 7/.069 Aluminium Steel Core Cable.

(2) 29 miles of 22/66 KV. double circuit line between Coimbatore and Tiruppur, and

(3) About 40 miles of 22 KV. double circuit line between Coimbatore and Anamalais.

Substations at Coimbatore, Tiruppur, Pollachi, Anamalais and Mettupalayam.

It is expected that the project will be completed by the end of 1932.

Side by side with the construction of the scheme, arrangements are being made to organise the distribution of power. Government power will be sold in bulk to licensees for distribution in the principal areas and there is expected to be considerable demand for plant in the electrification of towns, mills and industries.

Erode-Salem Scheme.—A small scheme for the electrification of the towns Salem and Erode has recently been sanctioned for Rs. 5.5 lakhs. The Mysore Government are at present supplying power from their hydro-electric system to the Mettur Dam Works under construction by the Madras Government. Additional power will be bought from the Mysore Government at Mettur and transmitted at 22 KV. to Erode and Salem and sold there to the local distributing authorities in bulk. Tenders have just been called for about 68 miles of 22 KV. line required for the scheme. This work will be completed within this year. The distribution at Salem and Erode will be undertaken by local licensees and will naturally involve considerable demand for electrical goods.

A few other schemes have also been investigated and reported on, of which, two may be mentioned—Papanasam and Periyar. The former is in the extreme south of the Presidency with a fall of over 300 feet and an initial capacity of over 20,000 KW. There is, however, no immediate demand for power in the surrounding district though its potentialities are great. Several industries are possible, amongst which may be mentioned the manufacture of paper pulp from a type of bamboo grown in the adjoining forests. Negotiations are in progress for the development of the site at an early date.

Investigations and hydro-metric studies are also being conducted at Kolab, Palnis, Mettur Dam and the Godavari Canals to assess their value as suitable power sites.

Ceylon. Electrical Developments During 1929-30.—The Director of Electrical Undertakings to the Government of Ceylon has supplied the following note on developments during the past year:—

The Kolonnawa Power Station was put into full commission early in 1929, and the load partly transferred from the old Pettah Station through the new Fort Rotary Converter Substation and a Frequency Changer in the Pettah Station.

Twelve new static substations were erected, and the 3-phase 4-wire, 400/230 volt distribution from these stations made considerable progress, although negotiations with the Colombo Municipality prevented the commencement of overhead distribution until May, the general system adopted being overhead bare copper mains on steel poles, the feeders being underground. In special areas underground mains were used for distribution where the overhead system cannot be allowed.

A large number of new consumers were connected during the year, both on the new 3-phase, 4-wire system and on the old single phase 100 volt system, and the change over of consumers from the old to the new system was commenced and made considerable progress in the Southern area.

A new tariff was put into force for lighting and power rates, and 3-phase power supply was commenced to the Railway Workshops and other power consumers.

The electricity supply system now in use in Colombo comprises:—

400/230 volts 3-phase 50 cycle supply for general lighting and power purposes.

100 volt single phase 60 cycles for lighting (this is being changed over as rapidly as possible to the 400/230 volt 3-phase supply).

440/220 volt 3-wire D.C. in the Fort area, and this supply will not be extended beyond that area.

550 volts D.C. supply to Tramways.

There is also a 3,800/2,200 volt 3-phase, 50 cycle supply in the Colpetty and Slave Island areas.

All electricity supply in Colombo is controlled by Government, and any information required can be obtained from the Director of Electrical Undertakings.

Revised estimates for the hydro-electric scheme were prepared during the year, and have been submitted for the consideration of the Legislative Council.

The lighting of small towns has received special attention, and at the end of 1928 twenty-one schemes were in operation. A further 21 schemes have been prepared, and five of these approved by the various local authorities during the year, while eight others are in course of preparation, financial assistance being granted by Government to facilitate the adoption of these schemes. Of the schemes in operation application for four extensions to plant were received to meet the growing demands.

Every effort is being made to popularise the use of electricity in Colombo and other parts of Ceylon, and E.H.T. lines are being erected from Colombo to supply small towns and mills, etc., within a radius of 20-30 miles from the Kolonhawa Station, which will shortly be extended to meet the growing demand for electric power. New substations are being erected in Colombo and the outlying townships, and there is every prospect of the rapid growth of electricity supply for all purposes.

The future of the Hydro-Electric Scheme has not yet been definitely decided, and I would refer interested parties to the comprehensive report on the project issued by the Government of Ceylon in February, 1930, which contains an expert survey by Mr. J. S. Pitkeathly, C.M.G., C.I.E., and comments thereon by Major Lynn, Director of Electrical Undertakings and of the Colonial Treasurer.

4. OTHER WORKS

The Calcutta Chord Railway Project and the Bally Bridge.— The following note has been very kindly supplied by the Engineer-in-Chief:—

The construction of this Railway is gradually nearing completion, and the line should be opened to traffic in another 18 months. It will be an

important link not only between the Raneegunj coalfields and the New King George's Docks in Calcutta, but will be the first substantial link between Eastern Bengal and the rest of India—by this is meant the first railway bridge which has been designed to carry the heavy type of engines and rolling-stock which has begun to become the standard for heavy mineral traffic in India.

The Chord connects the East Indian Railway and Eastern Bengal Railway, and is $8\frac{1}{2}$ miles in length. It starts at Dankuni Station on the Howrah Burdwan Chord of the East Indian Railway and terminates at Dum Dum South of the Eastern Bengal Railway.

As there are three important high level bridges besides 30 other road over-bridges and minor bridges in the $8\frac{1}{2}$ miles of its length, the cost of the Calcutta Chord Railway is considerably higher than a railway of its length would normally be.

The important bridges are, the Bally Bridge over the River Hooghly, six miles north of Calcutta, which consists of seven spans of 350 feet girders and two land spans of 80 feet girders. This bridge is built to allow a clearance of 29 feet between highest high water of the river and the underside of the girders so as to cause no interruption to the traffic of river steamers plying north of Calcutta. The other two important bridges are those over the East Indian Railway main line, near Bally, 1 span of 105 feet and 4 spans of 21 feet girders giving a clearance of 17 ft. 10 ins. above East Indian Railway main line rail level, and over the Eastern Bengal Railway main line, near Belghurria, 1 span of 100 feet and 2 spans of 45 feet girders also giving a clearance of 17 ft. 10 ins. above the Eastern Bengal Railway main line rail level.

Of the road over-bridges there are those over the Grand Trunk Road at Bally (1 span of 45 feet), a viaduct at Bally (consisting of 22 spans of 30 feet girders), bridges over the Hastie Road and Barnagore Jute Mill Siding at Barnagore (60 feet spans), and a bridge over the Barrackpore Trunk Road (80 feet span). These are the more important of the thirty lesser bridges.

The soil in the locality of the Railway is of a very treacherous and unstable nature, there is black cotton soil, peaty soil and soft flowing sand all within 10 to 15 feet of the surface, and these factors have caused the designs of the foundations of the minor bridges to be very carefully studied, and resort has had to be taken to extreme and expensive methods of providing foundations on reinforced concrete piles cast *in situ* in steel pipes 17 inches in diameter, each driven about 50 feet into the ground, and in some cases as close as 3 ft. 6 ins. apart only. These massive foundations are necessary as the loading weight of the high and massive abutments required for these minor bridges and for the heavy live load of 28 tons per axle, is considerably higher than that which the soil is capable of carrying.

The earth bank at Dankuni starts about 6 feet high, and after a rising gradient of 1 in 500 of about $2\frac{1}{2}$ miles the bank reaches a height of about 30 feet, and is nowhere less than this until it falls, on a gradient of 1 in 300, in the last mile to meet the bank of the Eastern Bengal Railway near Dum Dum at a height of about 15 feet. The approaches to the Bally Bridge are on a gradient of 1 in 400.

The construction has progressed to the extent that all the piers of the major work, i.e., the Bally Bridge across the river Hooghly, are completed, and the erection of the 350 feet span girders has actually commenced in 2 spans.

The other two important bridges are built up to the level of the girder bedstones, and the road over-bridges and other minor bridges are either completed or nearing completion. It might be taken in percentages that 75 per cent. of the bridge work is completed.

The throwing up of the earth bank between the bridges is well advanced, and by the time the monsoon season commences it would appear as if about 99 per cent. of this work will have been completed. The banks will, however, look very different after the rains are over, for there will be considerable shrinkage to make good and rain slips to repair. It is, however, expected that earthwork will be completed early next year, though even then

heavy maintenance will be necessary for 4 or 5 years to come before these banks are consolidated sufficiently to ensure satisfactory running of the line.

Details of plant and the methods of construction have been given in the two previous annual reports in this publication, but a few statistics of quantities of materials, etc., used on this project might be of interest to readers.

A total of 22,000 tons of steel work will be used on the girders and caissons of the bridges on this Railway and 20,000 tons of cement in concrete work. There are 3 million cubic yards of earthwork in the banks and 100,000 cubic yards of brick masonry in the piers and abutments of the various bridges, 100,000 cubic yards of concrete in piers and foundations, 240,000 lineal feet of 17 inches diameter reinforced concrete piling in foundations.

A total of nearly 1,000 lineal feet of well sinking (in piers of the Bally Bridge) and nearly 1,000 acres of land have been acquired for the alignment and for the excavation areas, store yards, colonies of living quarters, etc.

The Bombay Development Schemes.—The following comprehensive note has been compiled in the Bombay Development Department and supplied through the courtesy of the Director of Information to the Bombay Government :—

The Bombay Development Scheme in its widest sense represents concerted attempts by the three local bodies, the Municipality, the City Improvement Trust and the Port Trust, each working in its own sphere, and by Government, to secure the rapid and adequate development of the city and suburbs of Bombay.

The works for which Government are directly responsible are as follows :—

(a) The Industrial Housing Scheme providing one-room tenements for the working classes, to meet an actual existing shortage of accommodation as reported by the Municipal Commissioner in 1919.

(b) The Back Bay Reclamation to reduce congestion in the business area and provide residential accommodation and open spaces in the south of the city.

(c) The development of South Salsette, including Trombay, partly for residential and partly for industrial purposes.

(d) The provision for other industrial areas at greater distances.

(e) The improvement of communications to the suburban areas.

The question of special measures for the development of Bombay was under the consideration of Government for many years, but the war made it impossible then to carry out any large schemes. When the war had come to an end, it was found that owing to the large increase in the city's population during the war and high prices of materials, conditions were much worse than before and that more rapid action was necessary. Accordingly a new Development Department and Directorate, which was at once a Department of Government and an executive organisation, was constituted in 1920 for carrying out the Government development schemes outlined above. At the same time a cess of one rupee per bale was levied on cotton imported into Bombay, the proceeds of which are divided between the Bombay Municipality and Government in the proportion of 3 to 4, in order to provide the Municipality with additional revenue to carry out its large programme of expenditure and to enable Government partly to meet the loss anticipated on the Industrial Housing Scheme and partly to assist development schemes in Salsette. Some of the programme of work of the Department has since been completed, but the greater part of it has been suspended for the present owing to depression in the land market, while the construction of more chawls has been held in abeyance owing to the decrease in population since the census of 1921. The Development Directorate was therefore abolished in January, 1927, and the executive organisation reduced and reorganised. The special branch of the Government Secretariat, viz., the Development Department, which dealt with development operations, was also abolished

from 1st March, 1930. The Development Department accordingly ceased to exist as a separate department of Government from 1st March, 1930, and its work distributed among the other Departments of Government. The work in connection with the sale of land in Back Bay Reclamation Scheme and Suburban Schemes, together with that relating to the acquisition of lands in Bombay City and Suburbs, has been transferred to the control of Government in the Revenue Department. The management of the Industrial Housing Scheme has been transferred from the Land Manager, Development Department, to the Collector of Bombay under Government in the Revenue Department, while the work in connection with the town planning schemes in the Bombay Suburban District has been transferred to the control of Government in the General Department. The water supply and electric schemes for the Suburban area and the works in Back Bay Reclamation Scheme have been transferred to the control of Government in the Public Works Department. Works in connection with the Industrial Housing Scheme and the Suburban Schemes will also be carried out by the Public Works Department.

Back Bay Reclamation Scheme.—The Back Bay Reclamation Scheme at Bombay as originally sanctioned contemplated the reclamation of about 1,100 acres from the sea. This was divided into 8 areas or blocks. It was afterwards decided, however, for the present, only to proceed with the completion of four of these blocks measuring in all about 531 acres, viz., blocks Nos. 1 and 2 at the northern end, and blocks Nos. 7 and 8 at the southern end, with a marine drive along the existing foreshore connecting blocks Nos. 2 and 7. The reclamation was to be done partly by suction dredging from the bed of the sea and pumping the material so dredged into the area to be reclaimed, and partly by bringing ordinary earth, etc., in by train.

Further, it had been arranged that the southernmost block No. 8 measuring some 245 acres should be sold to the Government of India for use for military purposes.

Dredging operations were done partly in the harbour and partly in Back Bay itself, outside the area proposed to be reclaimed. From the harbour, material was obtained for the two southern blocks Nos. 7 and 8, and from Back Bay itself material was obtained for the two northern blocks Nos. 1 and 2. Owing to monsoon conditions, dredging was only possible from October or November to April or May. Into block No. 8 dredging ceased in the spring of 1926, and into block No. 7 in the spring of 1927; and thereafter the reclamation of these two blocks was continued by dry-filling brought in by train. Block No. 8 was completed on the 3rd May, 1929, and the dry-filling by train into block No. 7 is still in progress.

In regard to the two northern blocks Nos. 1 and 2, which measure about 73 acres and 78 acres respectively, dredging into block No. 1 ceased in the spring of 1928, and that into block No. 2 in the spring of 1929. The dry-filling by train into block No. 1 has been completed, and that into block No. 2, though still in progress, very nearly so.

Block No. 8 will be handed over to the Government of India in an "undeveloped" condition, i.e., without roads or sewerage system. An area of about 21½ acres in this block has already been transferred in 1927 for use as a military recreation ground. The other blocks Nos. 1, 2 and 7 will be developed by the Government of Bombay, i.e., will be equipped with roads, sewers, etc., and will then be made available for sale as building sites, excluding such areas as may be set aside for recreation grounds and for open spaces.

A representative committee has also been constituted with a view to advise Government on all important matters connected with the reclamation. A revised detailed estimate in respect of the reduced scheme is also under preparation. A layout plan for blocks Nos. 1 and 2 prepared by a specially appointed Layout Committee has been approved by Government.

Industrial Housing.—In Bombay City, apart from some minor schemes affecting Government properties, the work of the Development Department

consists of Industrial Housing and the Back Bay Reclamation. There are four housing schemes, and Government have decided that till these are fully utilised further new schemes are not to be embarked on. The schemes which are now complete are as follows:—

1. *Naigaum*—43 chawls.
2. *DeLisle Road*—32 chawls.
3. *Worli*—121 chawls.
4. *Seuri*—12 chawls.

Each chawl with one exception contains 80 rooms of 160 square feet, superficial area. There is a "nahani" in each room, and each floor has its own water supply and modern sanitary conveniences. The areas, in which the chawls are situated, are conveniently situated near the mills and other factories, and are at the same time open and healthy, and well provided with open spaces. Out of the 16,524 tenements ready for occupation, about 7,300 were occupied in December, 1928, and the number of occupied rooms stood at 7,800 in December, 1929. Provision has been made for shops in the chawls, and at Worli there is a specially constructed market place. The Bombay Municipality have opened vernacular schools in the chawls at DeLisle Road, Naigaum and Worli, and the Infant Welfare Society, the Young Men's Christian Association, the Young Women's Christian Association and the Hindu Maha Sabha are doing good work in the same areas. A Municipal dispensary has been opened at Worli.

The average economic rent of the chawls works out approximately at Rs. 16 per month per tenement, but the rents actually charged for rooms let singly are as follows:—

	<i>DeLisle Road.</i>	<i>Naigaum.</i>	<i>Worli.</i>	<i>Seuri.</i>
	Rs. As.	Rs. As.	Rs. As.	Rs. As.
Ground floor rooms	8 0	7 0	5 0	7 0
First floor rooms				
Second floor rooms				
Third floor rooms.				

On this basis there will be, when the chawls are fully occupied, an annual loss of about Rs. 17 lakhs, most of which is covered by the revenue from the cotton cess. Owing to the large number of vacancies the loss at present is much more than this. The vacancies are mostly at Worli, where 76 out of 121 chawls have not been brought into use. At Naigaum there are 4 unoccupied chawls and at DeLisle Road 6.

To large employers of labour, including Government Departments, to societies, institutions and similar organisations or bodies, and to private individuals acting on behalf of any community or section of the public, concession rents, as under, are charged if whole chawls are rented:—

<i>Chawl Area.</i>	<i>Annual rent per Chawl.</i>
	Rs.
Worli	3,862
Naigaum	5,478
DeLisle Road	6,288

The above rents include charges for maintenance and repairs, sweepers and sanitary stores plus municipal taxes which may vary. These rents are equivalent to an inclusive rent of about Rs. 4, Rs. 5-11-0 and Rs. 6-8-0 per room per mensem at Worli, Naigaum and DeLisle Road respectively. In fixing them a deduction has been made from the usual rents on account of vacancies,

bad debts and the cost of rent collection. The offer has so far been availed of by the B. B. & C. I. Railway Company, who have rented four chawls at Worli for housing their employees, by the Bombay Municipality who have taken one whole chawl for housing the employees of the King Edward Memorial Hospital and by Government for housing the City Police and the Police on the G.I.P. and M. & S. M. Railways.

As an experimental measure, some chawls at DeLisle Road and Naigaum have been converted into two and three roomed tenements. Five chawls at Worli have been provided with electric lights as an experiment.

Salsette.—In Salsette, the work of improving communications has been wound up and operations are now restricted to departmental suburban schemes and town planning schemes. Nine out of twenty-four suburban schemes are now closed. Of seven residential schemes, the most important are those at Khar, Chapel Road (Bandra) and Danda (within Bandra Municipal limits). The Khar scheme provides about 900 building plots between a new railway station of the same name and the sea. The new electric train services have shortened the journey to Bombay City (Victoria Terminus or Church Gate) to 35 minutes. Cheap bus services from and to the station and electric lights and fans have now been introduced. Plots in this scheme, under the stimulus of the State-aided building scheme described below, continue to find ready buyers. The Chapel Road Scheme of 140 building plots is complete. The roads have been transferred for maintenance to the Municipality and only two plots remain for sale. The Danda scheme of 16 acres has excellent road connection with Bandra Station. It has an excellent site and most of the plots have now been sold. The Chembur Garden Suburb Scheme in North-West Trombay has been curtailed. The St. Anthony's Homes Co-operative Society have taken up a very large area in this scheme and seem likely to make a success of their enterprise. A small scheme at Santa Cruz (Willingdon South) is also successful. The schemes at Shahar and Kiroi-North (Ghatkopar) are dormant.

The Kurla-Trombay Railway is now under the control of the G.I.P. Railway. The passenger service from Kurla to Chembur is well patronised. An extension to Mandala which serves also the new Military Explosives Depot was opened in 1927.

The Central Salsette Tramway runs from Wadhavli to Kurla and then through the Shahar area lying between the G.I.P. and B.B. & C.I. Railways, to Andheri. The line was opened to traffic in January 1928, and it was run by the G.I.P. Railway on behalf of the Government. The Railway ceased to work the line from 1st April, 1930, and the question of running the tramway service through private agency is at present under the consideration of Government.

The Salsette water supply scheme obtains water from the Bombay Municipality's Tulsi and Vehar mains and supplies it in bulk to the Municipality of Bandra and Kurla. The Development Department made its own distribution scheme in the areas of Andheri and neighbourhood, Ville Parle, Santa Cruz, Juhu, Khar, Ghatkopar and in Trombay.

In order to help people of moderate means to become owners of their homes, Government has sanctioned a scheme of financial assistance to intending purchasers of plots in the residential schemes of the Development Department. The essential feature of this scheme is that Government will advance at 6 per cent. interest, a sum equal to three-fourths of the cost of land and half the cost of the building which it is intended to erect, the advance being repayable in instalments spread over a period not exceeding 15 years. Another scheme for permanent Government servants on slightly easier terms has also been sanctioned. Government have also sanctioned the extension of the benefits of the State-aided building scheme to Co-operative Housing Societies for building houses on the tenant-ownership system. The essential feature of this scheme is that Government will advance to Co-operative Housing Societies, which acquire building plots in the estates

managed by the Development Department, subject to certain conditions, sums to the extent of three-fourths of the value of any plot plus half the estimated cost of the building proposed to be erected on it with interest at $5\frac{1}{2}$ per cent. per annum, the advance being, as in the former cases, repayable in instalments spread over a period not exceeding 15 years.

Industrial Town.—The Ambernath Development Scheme aims at creating a new township to establish industries with all modern facilities. Roads have been provided in the factory area and for staff bungalows and workmen's quarters. The existing sewage arrangements are by means of septic tanks. A market to serve the residents of the area has also been provided. The G.I.P. Railway are running a shuttle service between Kalyan and Badlapur and are remodelling Ambernath Station to deal with the traffic of the factories. An arterial siding for the factories is also being arranged by the Railway.

The water scheme is located at Badlapur five miles from Ambernath Station. The works comprise—

- (a) A barrage across the Ulhas river, about $1\frac{1}{2}$ miles from the railway station;
- (b) A set of Paterson rapid filters to filter three million gallons of water daily;
- (c) Protection wall for the Ulhas left bank.

The filtered water is pumped by electric power transmitted from Ambernath to a reservoir on the top of an adjoining hill commanding the factory area. The plant designed for a supply of three million gallons per day is capable of extension at a small cost to six million gallons per day. The reservoir has a capacity of about three million gallons. A proposal to supply the village of Badlapur with filtered water from the scheme has been sanctioned. Proposals for the supply of water to the Kalyan Municipality are under consideration.

A small power station supplies electric energy for running the permanent pumping plant at Badlapur and the factories in the area. The plant has been so laid out that it can easily be supplemented, should further demands arise in the future.

Town Planning Schemes.—The total number of town planning schemes undertaken in the Bombay Suburban District under the provisions of the Bombay Town Planning Act, 1915, is 25. The total area comprised in these schemes is 1,524.54 acres. So far 16 town planning schemes, comprising an area of 663.66 acres have been completed. The cost of works in the completed schemes amounts to Rs. 10,21,660.

Military Lands.—Arrangements have been made with the Government of India involving the relinquishment by the military authorities of practically all the lands they hold in the Fort area. The services displaced are to be reinstated partly at Deolali and partly at Colaba, where the military area is to be increased by about 245 acres at the southern end of the Back Bay Reclamation. The Government of India have to pay the Government of Bombay for this land. The cost of new buildings, etc., due to the removal of the military from the Fort is to be covered by the sale of the land to be vacated. A large area of land on the Palton Road Estate (formerly the old Palton Road Lines) has been sold to the Bombay Municipality. A few plots on the estate and another in Carnac Road have also been sold to private parties. The plots available for sale in the Mazagaon Defence Yard site have all been sold, while the small site known as the old Saluting Battery site situated at Strand Street on the Harbour Face, south of the Apollo Bunder, was sold to the Port Trust for road widening. The old town barracks in the Fort have been sold to the Bombay Municipality in connection with its Hornby Road-Ballard Pier Scheme. New Indian Infantry Lines at Carnegie Lines near Marine Lines, New Infantry Lines at Deolali, the temporary Mechanical Transport Depot at Colaba, the married Officers' quarters at

Colaba, the Pilot Bunder flats at Colaba, the quarters for the General Officer Commanding, Bombay District, at Colaba, the new Explosives Depot at Trombay and the new Building for Auxiliary Force Headquarters at Marine Lines, have been completed. The Bombay Military Lands Scheme, which was in charge of a Board of Control, consisting of the Secretary to Government, Development Department, and the General Officer Commanding, Bombay District, has, under the orders of the Government of India, been abolished with effect from the 1st June, 1929. The assets pertaining to the scheme have been taken over by the Government of India in the Finance Department, and the Government of Bombay have been authorised, subject to certain conditions, to dispose of those assets on behalf of the Government of India.

The Howrah Bridge.—The following note is supplied by Sir Charles Stuart-Williams, until recently Chairman of the Calcutta Port Commissioners : —

New Howrah Bridge.—In my report for the year 1927/28 I referred to a survey then being made by Major Gordon, R.E., of the Railway Board, in conjunction with local officers, of a railway connection over the river Hooghly at Howrah by way of a combined road and railway bridge and stated that, pending a decision regarding this combined bridge, work on the new Howrah Bridge had been suspended.

It is understood that the Railway Board finally decided against proceeding with this project and withdrew from the proposal of a combined bridge.

When this decision was made known, the firm of Rendel, Palmer and Tritton were authorised by the Port Commissioners, with the approval of the Government of Bengal, to proceed with the preparation of preliminary plans and estimates both for a floating bridge—(as being the cheapest possible type and that which was contemplated at the time the financial provisions of the new Act were drawn up) and also of a cantilever bridge, of the type which had been recommended by the Engineers Committee in 1922.

The reports and preliminary estimates prepared by the above mentioned firm were received by the Port Commissioners in September, 1929, and after full discussion and consideration, with the help of models of both types which had been prepared by their Chief Engineer, the two alternative proposals were submitted to the Government of Bengal in November, 1929, for their decision as to the type of bridge to be adopted, in accordance with the provisions of the Howrah Bridge Act.

The Commissioners in forwarding these alternative proposals to Government emphasized the fact that the probable income under the Act would barely cover the cost of the floating bridge which, after making provision for all overhead and maintenance charges, they estimated would cost approximately Rs. 16.8 lakhs per annum; but at the same time expressed their definite conviction that the cantilever bridge, the annual cost of which was estimated at approximately Rs. 23.72 lakhs, would prove in every way a more suitable and eventually a more economical type of structure.

At the close of the year 1929-30 the decision of the Government of Bengal was still awaited.

CHAPTER V.

DETAILED EXAMINATION OF THE LEADING IMPORT TRADES WITH SPECIAL REFERENCE TO CHANGES IN THE CHARACTER, VOLUME AND ORIGIN OF THE IMPORTS DURING THE FISCAL YEAR, APRIL 1ST, 1929, TO MARCH 31ST, 1930.

NOTE.—Unless otherwise stated, the statistics in this section are drawn from the publications of the Department of Statistics, Government of India, and relate to imports on private account only. Since all Indian statistics are now given in rupees and not in sterling, and in view of the labour which would be involved in converting into sterling, the lakh of rupees (Rs. 100,000 or £7,500 at 1s. 6d. exchange) has been taken as the usual unit. It is fully realised that this is not so convenient a unit as the £ sterling.

MANUFACTURED AND MAINLY MANUFACTURED GOODS.

Cotton Textiles.—Yarns.—The total imports of cotton twist and yarns rose slightly in quantity from 43,766,366 lb. in 1928-29 to 43,882,041 lb. in 1929-30, but declined in value from Rs.629 lakhs to Rs.600 laks. Imports of grey yarns declined by 2,184,000 lb. but arrivals of other descriptions all advanced, bleached yarns by 211,000 lb., coloured yarns by 435,000 lb. and mercerised yarns by no less than 1,645,000 lb. (due to large imports from Japan of mercerised two-folds).

The following table gives the imports of grey yarns arranged according to counts :—

Counts.	1928-29.	1929-30.
	lbs.	lbs.
Nos. 1 to 10	16,900	113,280
11 to 20	807,998	693,126
21 to 30	452,206	393,919
31 to 40	16,272,072	15,512,070
Above 40's	7,813,619	7,195,859
Twofolds	5,341,656	4,612,442
Total Imports (Grey)	30,704,451	28,520,696

The increased imports of 1's to 10's were almost entirely drawn from China, while the falling-off in 11's to 20's was shared equally by the British and Chinese mills. The United Kingdom supplied practically all the 21's to 30's. In the range from 31's to 40's (which are very largely 32's and 40's) imports from the United Kingdom fell by nearly 500,000 lbs. and those from China by 921,000 lb. Imports from Japan, however, advanced by 638,000 lb. Counts above 40's were almost solely drawn from the United Kingdom. The increase in two-fold spinnings was mainly contributed to by Japan and China. British two-folds fell from 2,962,456 lb. to 1,176,092 lb.

The next table sets forth the details of the imports of bleached yarns :—

Counts.		1928-29.	1929-30.
		lbs.	lbs.
Nos.	1 to 20	908	5,260
	21 to 30	35,724	60,320
	31 to 40	1,173,500	1,612,602
	Above 40's	1,139,525	1,321,509
	Twofolds	2,718,617	2,279,513
Total Imports (White)...		5,068,274	5,279,204

The satisfactory expansion in single bleached yarns of 31's and above was almost entirely obtained by Lancashire. Japanese spinnings, however, are beginning to appear, as yet in negligible quantities. Imports of British bleached two-folds fell from 2,284,959 lb. to 1,791,244 lb., while those from Japan rose from 405,921 lb. to 467,227 lb.

Coloured yarns were imported as follows :—

Counts.		1928-29.	1929-30.
		lbs.	lbs.
Nos.	1 to 20	272,593	216,703
	21 to 30	270,100	230,858
	31 to 40	2,489,382	2,922,923
	Above 40's	355,023	455,672
	Twofolds	503,751	499,452
Total Imports (Coloured) ...		3,890,849	4,325,608

The United Kingdom supplied practically all the coloured yarns below 31's. In 31's to 40's, however, there is keen competition from Switzerland, Italy and the Netherlands. Counts above 40's and two-folds are nearly all drawn from the United Kingdom.

Imports of mercerised yarns are almost entirely confined to two-folds, the total imports of which amounted to 5,661,749 lb. Japan supplied no less than 5,371,430 lb. and the United Kingdom 288,209 lb.

The sources of supply of yarns of all kinds were as follows :—

Country of Origin.	1928-29.		1929-30.	
	lbs.	Rs. (lakhs)	lbs.	Rs. (lakhs)
United Kingdom	23,094,208	3,56	20,111,892	2,96
Netherlands	—	—	35,844	$\frac{1}{2}$
Switzerland	360,431	5	694,410	10
Italy	811,127	10	1,428,840	16 $\frac{1}{2}$
China including Hong Kong	11,419,755	1,28	10,574,713	1,11
Japan	7,631,645	1,24	10,870,160	1,64
Other Countries	449,200	6	166,182	2
Total	43,766,366	6,29	43,882,041	6,00

The imports of cotton yarns into India, however, provide only a very small proportion of the total consumption in the country, which is mainly supplied by the Indian mills. The production of the Indian mills compared with the imports is shown in the following statement :—

Annual average for the five years				Imports in lbs. (1,000).	Indian Mills Production in lbs. (1,000).
1909-10 to 1913-14	...	...	41,794	646,757
1925-26	...	...	51,688	686,427
1926-27	...	...	49,425	807,116
1927-28	...	...	52,345	808,940
1928-29	...	...	43,766	648,283
1929-30	...	...	43,882	833,409

The next table compares by counts the quantities of imported cotton twist and yarn with the quantities produced in Indian mills :—

	1913-14. (pre-war year).		1926-27.		1927-28.		1928-29.		1929-30.	
	Imports.	Pro- duction.	Imports.	Pro- duction.	Imports.	Pro- duction.	Imports.	Pro- duction.	Imports.	Pro- duction.
	lbs. (1,000)	lbs. (1,000)	lbs. (1,000)	lbs. (1,000)	lbs. (1,000)	lbs. (1,000)	lbs. (1,000)	lbs. (1,000)	lbs. (1,000)	lbs. (1,000)
Cotton twist and yarn—										
Nos. 1 to 20	1,254	492,693	1,068	515,681	2,465	494,800	1,098	382,024	1,047	493,000
„ 21 to 25	896	123,995	483	168,345	416	182,235	548	140,175	290	181,000
„ 26 to 30	3,686	42,999	470	79,966	439	80,836	223	72,838	395	91,000
„ 31 to 40	23,657	19,712	24,405	27,657	27,305	33,757	19,937	37,488	20,050	46,000
Above No. 40	7,859	2,699	7,562	11,531	8,040	11,142	9,331	10,029	9,012	15,000
Twofolds (doubles)	—	—	7,146	—	13,633	—	12,604	—	13,054	—
Unspecified descriptions and waste	6,819	679	8,291	3,936	47	6,170	25	5,729	34	7,000
Total	44,171	682,777	49,425	807,116	52,345	808,940	43,766	648,283	43,882	833,000*

* Provisional.

It will be remarked that although the production of counts above 30's increases slowly but steadily there is no pronounced tendency towards finer spinning, and 91 per cent. of the total Indian mills production is still in counts of 1's to 30's and mainly in 20's, 21's, 22's, 24's and 30's.

The Bombay Millowners' Association, in their report for 1929, state that:—

“ The position of the industry in Bombay grew much worse during the course of the year. At the commencement, the stock of yarn bales stood at 6,000, out of which only 2,000 represented bales unsold. The stocks gradually increased and at the end of April amounted to 4,000 bales unsold and 10,000 bales not taken delivery of by merchants, or 14,000 in all. Production then fell off owing to the strike, but in spite of this the total unsold bales remained the same till the end of August. From this date stocks again began to accumulate and at the end of the year stood at 15,000 bales sold, but delivery not taken, and 8,000 unsold bales, or 23,000 in all. Not only did stocks of unsold bales increase from 2,000 to 8,000 but the figure for uncleared bales went up from 4,000 to 15,000, which indicates that merchants were unable to take up goods for want of finance and credit. If pieces are considered, it will be found that there was a steady deterioration from 12½ annas per lb. for 20's yarn at the beginning of the year to 10½ annas per lb. at the end.”

Piecegoods.—The following table shows the *quantities* of the three main classes of piece-goods imported during the last pre-war year and during the past four years:—

Year.	Grey (unbleached)	White (bleached)	Coloured, Printed or Dyed.
	Million yards.	Million yards.	Million yards.
1913-14	1,534.2	793.3	831.8
1926-27	748.4	571.0	447.4
1927-28	875.5	556.5	504.8
1928-29	838.6	554.1	506.9
1929-30	925.5	473.6	483.5

The next statement gives the *value* of the three main classes in the last pre-war year and during the past four years:—

Year.	Grey (unbleached)	White (bleached)	Coloured, Printed or Dyed.
	£	£	£
† 1913-14	16,966,515	9,523,204	11,907,683
* 1926-27	14,712,768	13,220,371	12,916,839
* 1927-28	15,936,124	11,562,692	13,143,102
* 1928-29	15,143,709	11,501,337	13,011,160
* 1929-30	15,694,355	9,956,641	11,359,972

† At exchange of 1/4.

* At exchange of 1/6.

While the values of the imports of grey goods from all sources have remained fairly stationary during the past three years, there have been very heavy falls in the imports of bleached, coloured, printed and dyed goods. The clue to this is given in the next table, which gives the declared value per yard of the three classes over the same period of years :—

Cotton piece goods.	1913-14.	1926-27.	1927-28.	1928-29.	1929-30.
	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.
Grey (unbleached)	0 2 8	0 4 2	0 3 11	0 3 10	0 3 7
White (bleached)	0 2 11	0 4 11	0 4 5	0 4 5	0 4 6
Coloured, printed or dyed ...	0 3 5	0 6 2	0 5 7	0 5 6	0 5 0

Whereas the average declared values of imported grey goods were less than 50 per cent. above pre-war rates, the values of bleached goods were well above that figure and the values of coloured goods slightly in excess of it.

VARIETIES OF PIECEGOODS IMPORTED.

Grey (unbleached).	1913-14. (pre-war year).	1927-28.	1928-29.	1929-30.
		(All in Million Yards).		
Dhuties, saris and scarves ...	806.1	527.6	486.7	501.0
J a c o n e t s , madapollams, mulls, etc. ...	150.4	78.9	78.9	53.0
Longcloth and shirtings ...	545.4	233.4	252.0	340.1
Sheetings ...	.2	23.0	6.5	14.7
Drills and Jeans ...	21.3	11.2	11.8	13.4
Other sorts ...	10.8	1.4	2.7	3.3
Total ...	1,534.2	875.5	838.6	925.5

White (bleached).	1913-14 (pre-war year).	1927-28.	1928-29.	1929-30.
		(All in Million Yards).		
Dhuties, saris and scarves ...	104.3	71.7	43.1	45.5
J a c o n e t s , madapollams, mulls, etc. ...	307.9	224.5	258.0	219.6
Longcloth and shirtings ...	115.3	112.1	123.0	104.0
Nainsooks ...	204.7	93.0	76.6	53.0
Drills and Jeans ...	5.7	6.9	5.7	6.6
Checks, spots and stripes ...	16.1	14.1	12.7	12.0
Twills ...	8.3	14.9	17.7	16.8
Other sorts ...	31.0	12.3	17.2	16.1
Total ...	793.3	556.5	554.0	473.6

Coloured, Printed or Dyed.	1913-14 (pre-war year).	1927-28.	1928-29.	1929-30.
		(All in Million Yards).		
Dhuties, saris and scarves ...	115.2	38.4	36.3	32.6
Cambrics, etc.... ...	113.6	50.4	49.7	43.5
Shirtings	152.6	88.7	95.0	105.4
Prints and chintz	209.7	69.9	75.0	61.1
Drills and Jeans	30.0	64.2	57.9	86.5
Checks, spots and stripes ...	19.7	18.4	22.4	26.1
Twills	31.4	40.5	47.9	36.5
Other sorts	159.6	134.3	122.7	91.8
Total	831.8	504.8	506.9	483.5

With the exception of grey jaconets there has been a recovery in all branches of the grey trade, but we shall see, when we analyse the source of the imports, that this increased trade was secured by Japan at the expense of Lancashire.

One of the most noteworthy features of the trade in bleached goods is the serious falling-off, due to changes in fashion, of the imports of white nainsooks from 204 million yards pre-war to a bare 53 million yards in 1929-30. The imports of white mulls, jaconets and other fine weaves are still well below pre-war quantities, while the reduction in bleached dhooties is due to the transfer in the customs statistics from August, 1927, of white yarn dhooties from the heading of white goods to that of grey goods.

The steady decline of the print trade is the most serious feature of the coloured goods schedule.

SOURCES OF IMPORTS.

(1) Grey Goods.—

Countries of Consignment.	1928-29.		1929-30.	
	Yards.	Rs. (lakhs).	Yards.	Rs. (lakhs).
United Kingdom ...	581,618,133	13.78	520,515,039	11.76
China	13,341,933	32	9,708,202	20
Japan	241,746,270	6.02	393,696,289	8.91
United States	1,566,850	6	916,003	3
Other countries	370,181	1	713,168	2
Total Imports ...	838,643,367	20.19	925,548,701	20.92

In 1928-29 no less than 451 million yards of the 581 million yards imported from the United Kingdom consisted of bordered dhooties. Even in this trade the competition of the Ahmedabad Mills is being felt in the coarser types of shirting dhooties. Imports of Japanese dhooties have advanced from less than a million yards in 1924-25 to nearly 35 million yards in 1928-29. Imports of British grey

shirtings have fallen from 145 million yards in 1924-25 to 48 million yards in 1928-29, synchronising with a corresponding increase in imports from Japan from 60 million yards to 191 million yards. Even the trade in grey jaconets, in which there is little competition, is a declining one. Generally speaking one may say that—with the exception of the valuable trade in grey dhooties and about 50 million yards per annum of grey jaconets—the Indian trade in plain grey goods is lost to Lancashire, primarily owing to the competition of the Indian mills, and secondly due to Japanese competition. It is to be hoped that the 5 per cent. preferential duty on grey dhooties will assist in retaining that trade for Lancashire *vis-à-vis* Japan. The increased duty, however, will give a great fillip to the Bombay mill production.

(2) *Bleached Goods.*—

Countries of Consignment.	1928-29.		1929-30.	
	Yards.	Rs. (lakhs).	Yards.	Rs. (lakhs).
United Kingdom ...	525,361,457	14.23	435,947,709	12.03
Netherlands ...	8,414,536	33	7,503,655	29
Switzerland ...	8,710,617	37	8,584,401	35
Japan ...	5,461,307	15	13,880,453	33
Other countries ...	6,130,029	25	7,667,795	27
Total Imports ...	554,077,946	15.33	473,584,013	13.27

It is significant that the Japanese more than doubled both the yardage and value of their shipments of bleached goods during a year when all other suppliers shipped reduced quantities. Japanese white shirtings and drills are being imported in increasing quantities, the bleach and finish being greatly improved.

(3) *Coloured, Printed or Dyed.*—This heading is made up as follows :—

Description.	1928-29.		1929-30.	
	Yards.	Rs. (lakhs).	Yards.	Rs. (lakhs).
Printed goods ...	244,403,870	7.41	199,942,926	5.77
Dyed goods ...	155,583,072	5.62	150,998,312	4.91
Woven coloured goods ...	106,948,571	4.31	132,534,139	4.46
Total Imports ...	506,935,513	17.34	483,475,377	15.14

The falling-off in the print trade is remarkable. The provenance of the imports was as follows :—

Countries of Consignment.	1926-28.		1929-30.	
	Yards.	Rs. (lakhs).	Yards.	Rs. (lakhs).
United Kingdom ...	335,606,433	11,99	278,620,280	9,50
Germany... ..	2,183,596	15	1,403,888	9
Netherlands ...	11,255,778	55	14,185,817	70
Belgium	2,167,840	18	917,169	8
Switzerland ...	2,291,734	17	1,586,373	10
Italy	36,112,032	1,22	22,989,915	82
Straits Settlements ...	2,146,715	11	1,489,232	7
Japan	109,798,321	2,71	154,269,631	3,45
Other countries ...	5,373,064	26	8,013,072	33
Total Imports ...	506,935,513	17.34	483,475,377	15.14

Japanese competition is keen in printed drills, jeans, twills and shirtings; in dyed drills and jeans, cambrics, flannelettes and shirtings; and in coloured woven drills and jeans, shirting and twills. The check to the steady rise in the imports from Italy is noteworthy.

(4) *Fents of all Descriptions.*—There has been a steady decline in the total trade during the past three years:—

Countries of Consignment.	1928-29.		1929-30.	
	Yards.	Rs. (lakhs).	Yards.	Rs. (lakhs).
United Kingdom ...	13,506,107	42	12,456,293	36
United States ...	22,898,854	50	23,908,034	53
Other countries ...	698,752	94	374,094	1
Total	37,103,686	2	36,738,421	90

Other countries include Switzerland, Japan and Germany. Bombay is the principal fent market in India, and New York shipping merchants now compete very keenly at prices which are difficult to meet.

SHARES OF THE PRINCIPAL COMPETITORS IN THE TOTAL QUANTITIES OF PIECEGOODS IMPORTED:—

Countries of Consignment.	1913-14. Per cent.	1926-27. Per cent.	1927-28. Per cent.	1928-29. Per cent.	1929-30. Per cent.
United Kingdom ...	97.1	82.0	78.2	75.2	65.5
Japan ... ..	.3	13.6	16.4	18.4	29.8
United States... ..	.3	.9	1.4	1.5	.5
Netherlands ... ..	.8	1.1	1.0	1.0	1.1
Other countries ...	1.5	2.4	3.0	3.9	3.1
Total	100.0	100.0	100.0	100.0	100.0

The outstanding feature of the past year has been the phenomenal increase in the Japanese share of the trade as a result of the remarkably low prices charged for their standard cloths, which would seem to be made possible by their closely-knit organisation and the results of the Toyoda automatic loom. Details of the Japanese organisation can be obtained from the report of Mr. Arno S. Pearse, late Secretary of the International Federation of Master Cotton Spinners' and Manufacturers' Association.

The next table gives the percentage shares of the two principal rivals, the United Kingdom and Japan, in each of the three main classes of goods over the same period of years :—

Cotton Piece-goods.	1913-14.		1926-27.		1927-28.		1928-29.		1929-30.	
	U.K.	Japan	U.K.	Japan	U.K.	Japan	U.K.	Japan	U.K.	Japan
Grey ...	98.8	5	78.7	20.7	74.4	24.5	69.4	28.8	56.2	42.5
White ...	98.5	—	96.4	.5	94.7	1.0	94.8	1.0	92.0	2.9
Coloured	92.6	.2	71.1	19.2	69.8	20.3	66.2	21.7	57.6	31.9

It will be noted with some concern that the imports of Japanese bleached goods, mainly white shirtings, advanced by nearly 200 per cent.

Indian Mill Competition.—The subjoined detailed statement gives the quantity (in pounds and their equivalent in yards) and description of the woven goods produced in Indian mills during the past three years. The figures for 1928-29 were unduly depressed owing to the series of strikes in the Bombay mills during that year, but it is noteworthy that—in spite of most acute depression in the Bombay mill industry during the whole of 1929-30—the yardage produced in all India during the period attained the record figure of 2,418,979,925. The steady expansion in the production of dhooties (mainly a product of Ahmedabad) is of particular interest to Lancashire, with whose cloths they are now beginning to compete, either directly in the case of low shirting dhooties, or by substitution for the higher priced Lancashire qualities. The recent report of Mr. G. S. Hardy, I.C.S., on "THE IMPORT TARIFF ON COTTON PIECE-GOODS AND ON EXTERNAL COMPETITION IN THE COTTON PIECE-GOODS TRADE" should be read by all firms interested in the Indian market, as it collates most valuable information with regard to Indian mill competition.

Description.		Twelve months, April to March.		
		1927-28.	1928-29.	1929-30.
Grey and Bleached piecegoods—				
Chadars ...	{ pounds	25,774,802	20,570,954	23,765,477
	{ yards	66,824,306	56,681,087	66,040,321
Dhuties ...	{ pounds	129,746,309	115,262,574	157,233,552
	{ yards	615,946,386	564,153,870	776,027,510
Drills and jeans	{ pounds	22,912,951	19,087,046	25,022,969
	{ yards	91,197,644	76,336,349	100,297,055
Cambrics and lawns	{ pounds	986,270	744,455	573,491
	{ yards	5,479,124	4,601,226	3,589,548
Printers... ..	{ pounds	4,608,509	4,769,783	4,150,144
	{ yards	20,245,960	22,471,220	19,464,319
Shirtings and Longcloth	{ pounds	140,831,481	107,701,083	130,270,819
	{ yards	620,027,624	474,221,488	585,215,795
T-cloth, domestics, and sheetings	{ pounds	24,630,019	19,699,114	23,733,182
	{ yards	92,163,833	75,487,815	90,665,313
Tent-cloth ...	{ pounds	2,618,279	2,946,545	3,190,893
	{ yards	6,064,123	6,935,315	7,629,360
Khadi, Dungri or Khaddar	{ pounds	41,485,313	31,575,028	43,203,288
	{ yards	116,118,753	93,688,988	124,634,578
Other sorts ...	{ pounds	9,873,922	8,568,794	10,604,798
	{ yards	40,943,836	35,015,194	41,357,002
Total ...	{ pounds	403,467,859	330,925,376	421,758,613
	{ yards	1,675,011,583	1,409,592,552	1,814,920,801
Coloured piecegoods	{ pounds	148,297,621	102,175,898	125,858,886
	{ yards	681,553,222	483,676,103	604,059,124
Grey and coloured goods, other than piecegoods	{ pounds	4,205,147	3,330,966	4,536,020
	{ dozens	992,107	786,008	1,164,778
Hosiery	{ pounds	1,213,870	1,609,033	1,908,942
	{ dozens	455,592	493,488	572,404
Miscellaneous ...	{ pounds	5,827,546	4,493,538	4,635,744
Cotton goods mixed with silk or wool	{ pounds	4,794,002	3,211,762	3,360,526
Grand Total ...	{ pounds	567,803,045	445,656,573	562,058,731
	{ yards	2,356,564,805	1,893,268,655	2,418,979,925
	{ dozens	1,447,699	1,279,496	1,737,182

The Committee of the Bombay Millowners' Association, in their review of the year 1929, state:—

“ Since the year 1923, when the Cotton Mill Industry started on its downward grade, years of severe depression have followed one another in dismal succession. The year under review was no exception; indeed it proved one of the worst. Early in February, Bombay witnessed serious communal riots, regarding which an official inquiry stated that ‘ the activities of the leaders of the Red Flag Union are the basic cause of the riots.’ In the following month—March—some of the labour leaders were arrested, and this event caused a certain amount of unrest amongst the workers. In the months that followed greater difficulties were experienced.

The new leaders of the Red Flag Union were determined to create trouble and the policy they pursued in the first few months rendered it inevitable. In spite of the attempts made by the Association to induce a peaceful atmosphere, a wanton strike was called for the purpose of paralysing the industry. The attempt ultimately failed, but the trade, commerce and industries of the city were once again dislocated. It was only the determined and sustained efforts made by the Association that broke the strike, but not before heavy losses had been inflicted on the industry and its labour. The financial position of most mills was already serious and the strike coupled with foreign competition, which was keener than ever before, put a very heavy strain on an already crippled industry. Before the close of the year, it was evident that the Cotton Mill Industry, not only in Bombay but throughout India, was in extremely serious difficulties and in urgent need of some measure of protection. This question was once again taken up by the Association with the Government of India, with the result that Mr. G. S. Hardy, Collector of Customs, Calcutta, was deputed to make a special inquiry into the nature and extent of foreign competition. After the publication of Mr. Hardy's report, a conference was held at Delhi at which representatives of the industry throughout India placed their views before the Commerce and Finance Members of the Government of India.

The year opened with comparatively small stocks—19,000 bales undelivered and 31,000 unsold, or 50,000 in all. As with yarn, stocks began to accumulate, and at the end of April, they stood at 38,000 uncleared and 56,000 unsold bales, or 94,000 in all. This was mainly due to increasing competition from abroad. On account of the strike, stocks were reduced to some extent, the figures at the end of September being 41,000 and 43,000 respectively, or 84,000 in all. During these nine months, the total imports of foreign cloth amounted to 1,489 million yards, of which Japan's share was 380 millions which, compared with the corresponding period of the previous year, showed an increase of 4 per cent. and 81 per cent. respectively. Not only did Japan continue to send increasing quantities, but she also reduced prices, compelling Indian mills to sell at a loss. At the end of the year, mill stocks in Bombay reached the figure of 58,000 undelivered and 61,000 unsold bales, or 119,000 in all. Prices for cloth showed a continuous downward tendency, although staple cotton prices did not show a corresponding decline. Further, cotton prices were somewhat favourable, full advantage could not be taken of them owing to the prevailing strike. In January, the price of standard longcloth was 15½ annas, which, at the close of the year, declined to 14½ annas. That being the state of the yarn and cloth markets, it is not surprising that the industry should be in such a depressed condition."

The Indian Trade Mission.—The Bombay Millowners' Association summarise the practical results of the Indian Trade Mission to the Near East and Africa as follows :—

" Briefly stated, the conclusions and recommendations of the Trade Mission were as follows :—

- (1) That Trade Commissioners should be appointed at—
 - (a) Alexandria—For Persia, Iraq, Egypt and the Levant ;
 - (b) Mombasa—For East Africa ;
 - (c) Durban—For South Africa.
- (2) That improvements should be made in finish, packing, sampling and making-up, etc.
- (3) That millowners should establish a combined selling organisation.
- (4) That a combined bleaching, dyeing and printing factory should be established in Bombay with Government assistance.

Besides these specific recommendations, the report also touched upon certain matters of vital importance to the Indian textile industry.

" In writing to the Government of India towards the end of May on the lines of a report submitted by their Sub-Committee, the Committee stated that the first recommendation of the Mission, viz., the appointment of Trade Commissioners, had their unqualified support, and that they were further of the opinion that the appointment of Trade Commissioners should precede all the other measures for the development of India's foreign markets. It was also pointed out that, in the opinion of the Committee and other commercial circles in India, the appointment of Trade Commissioners was long overdue; and at a time when other countries were adopting a more vigorous and aggressive commercial policy, their appointment was more than ever necessary. It was thought that the territory and extent of the market allotted by the Mission to the Trade Commissioner at Alexandria was too great, and Government might, in the future, have to appoint a separate Trade Commissioner to look after the trade with Persia, Iraq, and perhaps Syria; it was also pointed out that the need for such an additional Commissioner would be even greater if Indian exporting interests followed out the recommendations of the Mission and made a combined effort to increase their trade with these countries.

" With regard to the second recommendation, the Committee pointed out that the question of improving the making-up, sampling, packing and stamping were receiving their detailed consideration both as regards the home and the export markets, and any steps which might be found possible to take in these matters would be communicated to Government at an early date.

" In connection with recommendation No. 3, the Committee stated that, while it might be found impossible to attain the ideal aimed at by the Trade Mission, owing to the interests of many mills being confined entirely to the Indian market, there was every reason to hope that a unified system of export selling would be adopted by a large number of Bombay mills. It was also pointed out for the information of Government that a system of co-operative buying of Iraq cotton had already been agreed to by a number of mills spinning finer counts of yarn, and any success which this system met with would greatly assist towards a co-ordinated selling policy.

" With reference to recommendation No. 4, the Committee agreed that such a factory would be of considerable assistance to the industry with such an enormous market as exists in India itself for bleached, printed and dyed goods. A scheme for the establishment of a factory on the lines recommended by the Trade Mission was put forward by Messrs. James Finlay & Co. before the Government of India with a request for financial assistance and certain other concessions, and though the necessity for financial assistance from Government in a scheme of this nature had already been indicated in the report of the Indian Tariff Board, it was very unfortunate that Government turned down the scheme on the ground that it was a Provincial and Transferred subject and could not therefore be financed from Central revenues; and similarly unfortunate that the Government of Bombay were prevented from giving the scheme their support on account of financial stringency. The Committee were strongly of the opinion that the successful establishment of a bleaching, dyeing and printing factory would very materially assist spinning and weaving mills throughout India, and would give an added incentive to the production of yarn and cloths of finer counts, which were now almost wholly imported from other countries, and they therefore urged that Government should reconsider their decision in regard to the question in financing the scheme.

" In various places in the report the Trade Mission dealt with the inequities of the import tariffs of Iraq, Egypt and Portuguese East Africa in so far as their application to Indian piecegoods was concerned. The Committee urged that the Government of India should endeavour to rectify these inequities by negotiating with the respective Governments.

" In the final chapter of their report, the Trade Mission placed the export market for Indian mills in true perspective by comparing it with potential

markets in India. The conclusion which the Committee thought should be drawn from such a comparison, was that the Mission fully realised the paramount importance of the Indian market and the necessity of protecting it effectively in order to give Indian mills a more equitable share of that trade, and it was urged that Government should take immediate steps to protect the home market against any further penetration by Japanese and other goods.

"In a reply received to the above communication, the Government of India stated that the question of appointing Trade Commissioners as suggested by the Trade Mission was receiving the attention of the Government of India with a similar suggestion from the High Commissioner for India, London, for the appointment of similar officers in Europe and the United States of America. As regards the Association's remarks in connection with the establishment of a combined bleaching, dyeing and printing factory in Bombay, it was stated that the matter had been referred to the Department of Industries for further consideration.

"It is now understood that Government will appoint two Commissioners early next year, and will endeavour to complete all the appointments in 1934/35."

CONDITIONS IN THE LARGE IMPORT MARKETS.

Calcutta.—A leading authority in the piece-goods trade writes at the beginning of May as follows:—

"1929.—The usual resolutions were passed by the Marwari Chamber of Commerce early in the year prohibiting its Members from buying any goods for shipment during April/May and September. In spite of these prohibitions the market, on account of the drop in the raw material and Manchester's easier tendency owing to want of orders, has been dropping continuously during the latter part of the year and dealers generally became so nervous that at times they would resell at a loss, when there was no need for it, goods they had bought a few days previously for shipment probably two months ahead. During the latter part of the year stocks were becoming light and a good business was expected to be done, but the political situation and especially Mr. Ghandi's split with the Government made upcountry dealers curtail their activities and be content with a hand to mouth trade, as a result of which the local dealers did not buy their full requirements.

"1930.—The year opened with brisk clearances and a healthier demand from the consuming centres, this demand, however, was stopped from time to time on account of various rumours connected with the political situation. The only resolution prohibiting imports during certain months was that of the Whites Section of the Marwari Chamber for shipments during February, February/March, March/April/May and September/October. The other sections of that Chamber, however, did not pass any such resolutions, but the members concerned treated the resolutions of the previous year as holding good. A fair volume of business was done during the early part of this year and as stocks are light there were prospects of a good demand for the Poojah seasons but the political situation and the boycott has put an end to all trading. Stocks at present are estimated at about 100,000 packages and under present market conditions these stocks together with the business done for shipment up to August are likely to be sufficient for the requirements of the next five months."

Bombay.—A leading authority writes early in May as follows:—

"1929.—During the earlier part of the year trade was developing on satisfactory lines, but mill strikes followed by the communal riots and the prolonged unsettled labour conditions prevented upcountry would-be purchasers from visiting Bombay to replenish their stocks.

The Sind floods during the middle of the year, also interfered with trade to a certain extent and clearances of goods suitable for those markets were slow.

The decline in the value of the raw article caused considerable losses to buyers some of whom are still holding dearly purchased goods.

Stocks which were normal in the beginning of 1929 have increased at the close of the year.

1930.—The market is very nervous on account of the present political situation and the resolution passed by the Native Piecegoods Merchants' Association to boycott foreign cloth.

Deliveries however are good, probably due to dealers' anxiety to clear their holdings.

Stocks of imported cotton piecegoods are estimated to be slightly over 50,000 packages which is about 10,000 packages more than those of the same period of last year."

The following note has also been provided by one of the leading firms in Bombay :—

" There is no doubt that 1929 was another disappointing year and generally dealers have made little, if any, profit on their various transactions. I propose to give a very brief summary of the important features of the years trading.

1. Very cold and severe weather early in February.
2. Riots in the same month.
3. Money stringency particularly noticeable about this time.
4. Local mill strike in April.
5. Further rioting early May as a result of the Mill strike.
6. Various failures in the bazaar, a particularly large one taking place in July.
7. Bursting of the Shyok Dam in August and its effects.
8. Imports of Japanese White Shirtings first paid attention to.
9. Declines in cotton towards the end of the year.
10. Political activity prominent.
11. Increase in import duty.

I deal with the various points as follows :—

1. The very cold and severe weather experienced early in February seriously damaged the various crops, thus leaving destitute many of the poorer agricultural classes, who are dependent on the outturn of their crops for their existence.

2. The riots which occurred were of a communal nature and the market was entirely closed for 10 days, business being much affected.

3. The Imperial Bank of India's rate at this time was at 8 per cent.

4. After a little time certain popular styles became short in supply. This led to a cessation of visits by upcountry buyers with a consequent deterrent effect upon the foreign goods markets.

5. Although the principal offenders to commence with were strikers this quickly led to another communal fracas between Hindus and Moslems. The effects of these riots certainly frightened away from the city many impending buyers.

6. These occurred from time to time and the general effect ensues losses to the merchants dealing in the styles covered by the failure. The largest failure in August covered about 1,200 packages of various sorts as also credit of a large amount.

7. This catastrophe, as is well known, led to severe floods, particularly in Northern Sind. Extreme poverty was a natural result in the areas concerned, leading to a much restricted demand for the styles usually going to the districts.

8. Many of these importations were sold at extremely low prices and undoubtedly experienced a ready sale. It is certain, also, that this new competition has come to stay. Price is the prevailing factor to the Indian ryot.

9. The declines witnessed led to a lowering of replacing prices for the various styles and thus brought about losses to dealers who held previous purchases at higher limits.

10. This is too well-known to bear further comments; the effects however upon the business world have been severe.

11. The fears of an increase in Import Duty undoubtedly prevented free purchases towards the end of the year and when the facts became known early in 1930, political disturbances prevented any efforts for a spell of late buying."

Karachi.—The following report was addressed to me in May by an experienced Karachi correspondent:—

"The year 1929, as far as piecegoods is concerned, must be put down as one of the lean years. It has been an unsatisfactory year both as regards turnover and profit for those concerned in the trade. The chief reasons for this unsatisfactory state of affairs must be attributed to the gradual fall in prices, heavy floods in Sind and the Punjab, and failure of crops.

As regards the fall in prices, dealers have been hit very hard, as a study of market values ruling at the beginning and end of the year shows a decline amounting to as much as 16 per cent. This decline has meant very heavy losses to dealers on their commitments, and the resultant lack of money forced them to adopt a more or less hand to mouth policy.

In addition to this very severe handicap Sind and the Punjab were visited by the worst floods on record resulting in the destruction of thousands of fields of standing crop in addition to loss of property to the cultivators who are really the greatest consumers of piecegoods in this area. Having lost so heavily they naturally were not in a position to take up their usual requirements.

As a result of these economic conditions demand tended more and more towards the cheapest possible cloths, and it was most unfortunate from a Lancashire point of view that such a demand coincided with the failure of the Chinese market to take up their usual quantity of Japanese goods. The Japanese were forced to find another outlet, and they concentrated on India. The bulk of the goods manufactured for the China market were dumped into India irrespective of the suitability of patterns, widths or qualities, but they readily met with an enormous demand owing to the ridiculously low prices asked for. India, so long one of the most conservative markets of the world abandoned their past prejudices and eagerly bought the goods offered. Tastes which had long been catered for by Lancashire and Indian mills changed, and consumers eagerly bought up the cheap cloth despite the different widths and designs. Japan was not slow to take advantage of the changed conditions and having once gained a footing, they put forward every effort to capture the trade. Lancashire slow to realise the danger to their long established trade considered it a passing phase and were of opinion that Japan could never produce qualities capable of affecting the superior Lancashire trade.

In this respect they have had to change their point of view as Japan has become a menace to their trade which the most strenuous efforts have more or less failed to make any impression on.

In support of this report, it is necessary to study a statement of the imports into this market during 1929 in comparison with the figures of the year 1928. From this it will be seen that the total import of piecegoods into Karachi amounted to 163,698 packages against 195,585 packages in 1928, a falling-off of 31,887 packages equal to 16 per cent. Looking only at the total figures, this decline may not appear very serious, but from an analysis of the fluctuations of the imports of British and Japanese goods it will be seen that the position of Britain is much more serious. The total decrease in imports of British goods amounted to 52,972 packages equal to a decline of 32 per cent. against which Japan shows an increase of 19,592 packages or an increase of 143 per cent."

Madras.—A prominent importer writes :—

“ 1929.—There was a good retail demand practically during the whole of 1929. The importations of cloth and yarns in the Madras market were much heavier than the previous year but stocks at the end of the year were normal.

In spite however of the above mentioned good offtake, owing to the continuous decline of the home prices, dealers generally have not made any profits and a few even lost on their purchases.

1930.—Dealers in the Madras market fear that they may be forced to adopt a resolution similar to those passed by other markets boycotting foreign cloth.

There exists a small enquiry for forward goods and a fair retail demand.”

Delhi.—A banker writes as follows :—

“ For the greater part of the first six months of 1929 the market remained very dull and depressed except during March and April when sales of hot weather goods were fairly good but showed little or no profit to dealers. The fairly heavy stocks left over from 1928, combined with the political uncertainty and the threatened boycott, caused dealers to operate cautiously and their orders for summer goods were about only 60 per cent. of 1928. Every effort was made by them to liquidate their holdings and stocks of summer goods at the end of June were probably less than at the end of June, 1928.

The monsoon last year around Delhi was practically a failure and business remained in a lethargic state until just before the Poojahs when a fair demand set in but slackened off as soon as that festival was over.

The passing of the Child Marriage Act by the Imperial Legislative Assembly was responsible for a good demand during November/December owing to the majority of orthodox Hindus marrying-off their children before the Act came into force. The season constituted a record for Delhi as regards the number of marriages.

Arrivals of goods during the closing six months of 1929 were approximately 60 per cent. less than during the same period in 1928, the chief causes being :—

- (1) Large stocks carried over from the previous year.
- (2) Failure of crops owing to lack of winter rains.
- (3) Propaganda of the Congress Party for the boycott of foreign piecegoods and threats of picketing.

The actual condition of the market at the end of 1929 was apparently more satisfactory as compared to the previous year owing to low stocks on hand. Unfortunately, however, the political uncertainty and the boycott of foreign piecegoods continually advocated by the Congress Party were having a most depressing effect on the market. Dealers and importers were naturally very nervous and chary of placing orders especially as there were constant rumours that the local Congress Committee intend picketing in order to make the boycott more effective.

There were no communal riots throughout the year 1929.”

Amritsar.—A banking correspondent writes as follows :—

“ The imports of piecegoods into Amritsar market during the year 1929-30 were comparatively lower than the preceding fiscal year 1928-29. This falling-off in imports is chiefly due to the money stringency felt throughout the whole of India and the general depression in trade.

The imports of hardware metal and sundries suffered a similar setback for the aforesaid reason.

The present position is even worse in respect of all imports, but especially piecegoods which have been boycotted. The general economical conditions and the unprecedented political agitation have largely helped to make the boycott effective. The future prospects with respect to piecegoods do not appear bright.

In view of the widespread Swadeshi movement and the increase of custom duty, imports may have a further setback."

Cawnpore.—An Exchange banker in Cawnpore writes that :—

" We understand that of late years Cawnpore has been losing its importance as a distributing centre in favour of Delhi and Amritsar.

During the last year business here has been on a restricted scale, and with depressed prices dealers have not been making money. The outlook is for the time being very uncertain on account of the boycott of foreign piece-goods, and we do not expect to see much fresh business for sometime to come. The annual total of imports in foreign piecegoods to Cawnpore is estimated to be in round figures about Rs. 2 crores, of which one crore imported directly by local importers and the balance brought in from Calcutta, Bombay, Amritsar and Delhi. Indian made piecegoods turnover is estimated to be about Rs. 6½ crores, but it is possible that in the near future the figure of foreign piecegoods may alter considerably in favour of Indian piecegoods."

GENERAL FORECAST (JULY 1930).

At the time of writing it is practically impossible to make any forecast for the coming year as the future is entirely dominated by the political situation. At the present time, except in the Madras Presidency, the Indian States and Burma, there is an effective boycott of British piecegoods. The dislocation of trade in western India is complete. Meanwhile, with the raw material at approximately 7d. per lb. and the Lancashire cloth market full of weak sellers, it should have been possible to conduct a fairly extensive business with India if this political blight had not been imposed on the markets.

The first official monsoon forecast was issued on June 10th and predicts that the monsoon will be a late one, that the rains will be in excess in the Peninsula but will not depart much from the normal in north-west and north-east India. This is, on the whole, a favourable forecast and the monsoon so far has been satisfactory.

Raw Cotton.—The following statement, taken from the *Indian Trade Journal*, compares the estimates of the total out-turn of cotton in India for the last two years with the sum of exports and internal consumption. The figures of mill consumption are those supplied by the Indian Central Cotton Committee, and refer in the case of mills in British provinces to Indian cotton alone. The estimate of mill consumption in Indian States refers to all cotton, but it has been ascertained from the Indian Central Cotton Committee that the amount of foreign cotton consumed in Indian States is negligible. Import figures have not, therefore, been taken into consideration for the purposes of the comparison set forth below. A conventional estimate has as usual been made for extra factory or local consumption. It should be borne in mind that estimates of the " carry-over " from one year to another have

not been taken into account owing to complete information not being available regarding stocks.*

	Year ending 31st August.	
	1929.	1928.
	Thousand bales (400 lbs.)	Thousand bales (400 lbs.)
Exports to United Kingdom	233	215
" to Continent (Europe, excluding United Kingdom)	1,429	1,277
" to Far East	2,189	1,614
" to other countries	82	34
Total	3,933	3,140
Home Consumption—		
Mills†	1,991	(a) 1,771
Extra—factory or local‡	750	750
Total	2,741	(a) 2,521
Approximate crop	6,674	5,661
Estimated in forecast	5,673	5,963
Excess (+) or deficit (—) neglecting carry-over ...	+1,001	—302

*Stocks of cotton in Bombay were 1,011,000 bales on 31st August, 1928 and 851,000 bales on 31st August, 1929.

†The figure of mill consumption is that compiled by the Indian Central Cotton Committee, Bombay, mainly on the basis of returns made under the Indian Cotton Cess Act.

‡Conventional estimate.

(a) Revised.

The next statement shows the stocks of cotton held by Indian mills on August 1st, 1929, and on February 1st, 1930 (in bales regardless of weight), and is published by the Bombay Millowners' Association:—

	Bombay City and Island.		All-India.	
	1-8-29.	1-2-30.	1-8-29.	1-2-30.
Cotton Mill Stocks (in actual bales re- gardless of weight)—				
(a) American (linters and waste not included)	23,398	8,719	26,943	10,295
(b) East India	199,037	125,311	866,388	612,512
(c) Egyptian	1,740	880	3,622	2,751
(d) Sundries	17,409	11,507	39,221	23,677
Total	241,584	146,417	936,174	649,235

Figures from the Cotton Census taken at the request of the International Federation of Master Cotton Spinners' and Manufacturers' Associations.

The subjoined table gives the imports of raw cotton into India during the past two years :—

Countries of consignment.	1928-29.		1929-30.	
	Tons.	Rs. (lakhs).	Tons.	Rs. (lakhs).
United Kingdom	911	12	345	5
Persia	498	5	216	2
Egypt	294	7	511	8
Kenya Colony	15,045	2,23	19,039	2,81
Tanganyika Territory	191	3	571	7
United States	11,787	1,38	1,689	19
Total Imports (all sources) ...	28,882	3,90	23,981	3,42

In 1927-28 the imports of American cotton attained a total of nearly 50,000 tons valued at Rs.4,37 lakhs owing to the reduction in the margin between the price levels of American and Indian cotton. It will be seen from the above figures that, with the return of more normal prices, the imports of American cotton have reverted to previous levels. The imports from the United Kingdom represent American cotton shipped from Liverpool and show a tendency to decline with the establishment of direct connections between New York and Bombay. Large quantities of East African cotton are subsequently re-exported to Europe.

Cotton Sewing Thread.—The imports were as follows :

Countries of origin.	1928-29.		1929-30.	
	lbs.	Rs. (lakhs).	lbs.	Rs. (lakhs).
United Kingdom	1,786,262	62	1,999,751	69
Other countries	308,205	9	402,327	12
Total Imports ...	2,094,467	71	2,402,078	81

The imports from other countries in 1928-29 mainly comprised 144,095 lb., valued at Rs.4½ lakhs, from Holland, and 109,272 lb., valued at just over Rs.3 lakhs, from Austria. Small quantities were drawn from Belgium and France. This trade is expanding satisfactorily *pari passu* with the extended use of sewing machines. The average annual import during the last five pre-war years was 1,598 lb. Last year's figures constitute a record. British manufacturers are strongly represented.

Artificial Silk.—Yarns.—The total trade has fallen off during the past two years mainly due to a reduced demand from the Bombay mills owing to labour troubles. The imports were :—

Countries of consignment.	1928-29.		1929-30.	
	lbs.	Rs. (lakhs).	lbs.	Rs. (lakhs).
United Kingdom	1,685,520	31	1,426,767	20
Germany	540,566	10	362,910	5
Netherlands	707,870	13	430,037	6
France	341,660	7	882,798	12
Switzerland	344,802	6	405,886	5
Italy	3,637,717	61	3,482,784	46
Other Countries	409,933	7	361,824	
Total Imports	7,668,068	1,35	7,353,006	99

The imports into Bombay have fallen during the past three years from Rs.122 lakhs to Rs.95 lakhs, and Rs.60 lakhs during the past year. Madras takings, however, which are mainly for the handloom industry, have risen from Rs.18 lakhs to Rs.28 lakhs and Rs.30 lakhs last year. The reduction of the import duty from 15 to 7½ per cent. in 1927, with the object of assisting the Indian manufacturer whether he be a handloom weaver or whether he may own a power weaving shed, has been successful and, but for the prolonged strikes and great depression in the Bombay mill industry, we should almost certainly have seen a greatly increased manufacture of cotton and artificial silk mixture cloths during the past two years.

Piecegoods of Cotton and Artificial Silk.—

Principal countries of consignment.	1928-29.		1929-30.	
	Yards.	Rs. (lakhs).	Yards.	Rs. (lakhs).
United Kingdom	12,619,126	84	7,226,794	42
Germany	2,525,167	27	777,285	10
Belgium	854,933	7	557,567	4
Switzerland	7,047,920	53	6,842,499	43
Italy	17,805,276	93	11,472,585	51
Austria	2,500,586	18	1,682,761	9
Japan	3,778,765	30	25,038,036	1,40
Other countries	2,669,273	18	3,022,447	16
Total	49,801,046	3,30	56,599,974	3,15

The striking event of the year has been the phenomenal increase in the imports of artificial silk mixture cloths from Japan. The imports from Japan during the past five years have been as follows :—

1925-26.	9,009 yards valued at	Rs. 10,730.
1926-27.	39,753 " " "	Rs. 30,826.
1927-28.	1,134,010 " " "	Rs. 10,26,123.
1928-29.	3,778,765 " " "	Rs. 30,53,110.
1929-30.	25,038,036 " " "	Rs. 1,40,00,865.

A special investigation into this competition was conducted by H.M. Trade Commissioners at Calcutta and Bombay early in the the present year, and their reports can be seen on application to the Department of Overseas Trade.

Flax Manufactures.—The main types imported were as follows:—

Description.	1928-29. Rs. (lakhs).	1929-30. Rs. (lakhs).
Twist and yarn	—*	—†
Canvas	18	17
Piecegoods	5	3
Sewing thread	2	3
Other sorts, including bags and sacks ...	10	10
Total Imports	35	33

* 23,651 rupees.

† 4,473 rupees.

Details of the provenance of the imports in 1929-30 are not yet available. In 1928-29 the United Kingdom supplied 97 per cent. of the whole trade, the balance including Rs.10,000 worth of flax canvas from Italy, Rs.17,000 worth of sewing thread from Austria, Rs.20,000 of miscellaneous flax manufactures from Germany and Rs.11,000 from Japan.

Jute Manufactures.—There has been a further decline in the imports under this heading during the period under review. The figures are as follows:—

Countries of consignment.	1928-29. Rs. (lakhs).	1929-30. Rs. (lakhs).
United Kingdom	6	7
Ceylon	17	15
Other countries	3	2
Total Imports	26	24

The United Kingdom, in 1928-29, supplied practically the whole of the Rs.2 lakhs worth of jute canvas imported. No less than Rs. 17 lakhs worth of gunny bags were imported from Ceylon, representing second-hand bags re-exported from Australia and transhipped at Colombo. The United Kingdom supplied about 36 per cent. of the Rs.2½ lakhs worth of imported gunny cloth, the balance being drawn from Japan, Italy and Belgium.

Silk Manufactures.—The total imports of raw silk and silk manufactures amounted to over 4½ crores of rupees, but showed a decline of half a crore compared with the previous year. The imports of the various types were as follows:—

Description.	1928-29.	1929-30.
	Rs. (lakhs).	Rs. lakhs).
Raw silk	1,24	1,23
Silk yarns, noils and warps... ..	86	72
Goods of silk mixed with other materials...	40	35
Silk piecegoods	2,44	2,22
Sewing thread	2	2
Other kinds	5	4
Total Imports	5,01	4,58

China supplies practically the whole of the raw silk. Of the yarns, noils and warps, Italy contributed 41 per cent., Japan 19 per cent. and Switzerland 14 per cent. Silk mixtures were obtained from Japan (56 per cent.), Germany (17 per cent.) and the United Kingdom (10 per cent.). The valuable trade in silk piecegoods is virtually shared between Japan (Rs.1,26 lakhs) and China (Rs.81 lakhs).

The United Kingdom supplied almost the whole of the Rs.2 lakhs worth of sewing silks imported. The bulk of the imports of silk goods of all kinds enter India through Bombay, but Rangoon is also quite an important market.

Woollen Manufactures.—The various types imported were as follows :—

Description.	1928-29.	1929-30.
	Rs. (lakhs).	Rs. (lakhs).
Yarns and knitting wool	34	30
Blankets and rugs	64	51
Braids... ..	—*	1
Carpets and floor rugs	10	10
Hosiery	20	20
Piecegoods	2,84	2,33
Shawls	38	27
Other sorts	2	5
Total Imports	4,52	3,77

* 45,077 rupees.

In 1929-30, Rs.11 lakhs worth of worsted yarns for weaving were imported and Rs.19 lakhs worth of knitting wools. The United Kingdom provides the major portion of the worsted yarns and Germany the knitting wools. Italy contributed 80 per cent. of the blankets and rugs, the British share being only 6 per cent. The relatively small quantities of braids were almost entirely drawn from the Continent.

Woollen Piecegoods.—The total trade showed a further material reduction in 1929-30 and has fallen by over a crore in the last two years due to trade depression and increased local manufacture. The subjoined table gives the origin of the imports :—

Principal countries of consignment.	1928-29.		1929-30.	
	Yards.	Rs. (lakhs).	Yards.	Rs. (lakhs).
United Kingdom	5,469,845	1,22	3,732,331	91
Germany	1,705,287	38	1,151,506	25
Netherlands	201,175	7	245,184	8
Belgium	320,607	8	222,401	5
France	4,439,224	62	3,952,441	60
Italy	2,655,200	31	2,129,390	30
Japan	325,588	2	711,535	5
Other countries	868,520	14	416,087	9
Total Imports	15,985,446	2,84	12,560,875	2,33

Half the woollen piece-goods imported enter India via Bombay. Karachi, as a distributing centre for the Punjab, North-west Frontier Province and Afghanistan, is increasing in importance, whereas Burma as a market shows a tendency to decline. The fluctuations in the prices of woollen piece-goods are shown in the declared values per yard during the month of March, 1928, 1929 and 1930, which were Rs.1-14-10, Rs.1-15-4 and Rs.2-3-0 respectively. It is noteworthy that the reduction in the trade is so largely borne by the British exporters and tends to prove that while the market was just able to afford the productions of France and Italy, the higher-priced British goods were beyond the purchasing power of the masses. As I stated in my last report, the principal markets are being actively canvassed by an increasing number of Continental commercial travellers who closely study the psychology and prejudices of Indian importers and endeavour to supply cloths which, although frequently lower in quality, are suitable for the purpose for which they are intended and come in at a lower price.

Woollen Shawls.—There has been a marked decline in the total trade during the past two years. The latest figures are as follows:—

Countries of consignment.	1928-29.		1929-30.	
	Number.	Rs. (lakhs).	Number.	Rs. (lakhs).
United Kingdom	110,917	4	73,101	3
Germany	366,410	23	290,247	16
Other countries	459,270	11	294,923	8
Total Imports	936,597	38	658,271	27

Calcutta is the most important market, followed by Bombay, Rangoon and Karachi. Imports into Madras are on a small scale.

Carpets and Floor Rugs.—There has been a remarkable falling off in imports since the peak returns of 1927-28, which were due to very heavy shipments from Italy:—

Principal countries of consignment.	1928-29.	1929-30.
	Rs. (lakhs).	Rs. (lakhs).
United Kingdom	6	3
Italy	*—	4
Persia	2	2
Other countries	1	1
Total Imports	9	10

It would appear that the trade in cheap Italian printed tapestry rugs had been overdone. The reduction in the British carpet trade is noteworthy.

* 27,985 rupees.

Machinery and Millwork.—The total imports of machinery were well maintained at the high level of 18,23 crores of rupees, which is only Rs.13 lakhs below the peak figures of 1928-29. The industrial demand for boilers, prime movers, textile machinery, oil crushing and refining machinery, electrical machinery, &c., &c., continued buoyant, while the Government programmes for railway, irrigation and public works schemes, most of which are outlined in Chapter IV, provided valuable orders for plant of all kinds. It is feared, however, that the returns for the present fiscal year will show a marked decline owing to the severe curtailment of the railway construction programme due to financial stringency, the disinclination of the Government of India on financial grounds to make sterling purchases, the approaching completion of some of the principal public works projects and the depression in the engineering industries of the country. The following table shows the origin of the imports during the past two years :—

Countries of consignment.	1928-29.	1929-30.
	Rs. (lakhs).	Rs. (lakhs).
United Kingdom	14,09	13,69
Germany	1,14	1,73
Belgium	17	18
Japan... ..	5	6
United States	2,07	1,75
Other countries	84	82
Total Imports	18,36	18,23

The next table shows the relative importance of the three principal suppliers before the war and during the past three years :—

Principal countries of consignment.	1913-14.	1927-28.	1928-29.	1929-30.
	Per cent.	Per cent.	Per cent.	Per cent.
United Kingdom	90	78.5	76.5	74.7
United States	3	10.1	11.3	9.5
Germany	6	6.7	6.4	9.5
Other countries	1	4.7	5.8	6.3
	100.0	100.0	100.0	100.0

There was a further slight setback to the British position due to reduced imports of British specialities, such as tea machinery, cotton textile machinery, paper mill machinery, &c., and also to intensified competition from Germany in industrial plant of all kinds, and notably in electrical machinery, railway locomotives and cotton textile machinery. The German manufacturers are strengthening their local organisation by appointing efficient technical agents and, in the case of electrical plant, operate their own branches. Swiss manufacturers of prime movers and pumping sets are competing keenly and are well represented. American competition is mainly experienced in electrical plant, mining machinery, machine tools and typewriters. Generally speaking, however, the British machinery manufacturer enjoys a very high reputation in India for design, quality and service. His selling and technical organisation is, in most cases, second to none, and provided that he is prepared to meet the changing and more exacting conditions of the market by adaptability in design, increased technical service on the spot and compliance with certain Indian political requirements such as locally registered companies with Indian representation on the Board, &c., &c., I have little doubt that he will be able to maintain his position.

The following brief analysis of the principal types of machinery imported will be of interest :—

Cotton Textile Machinery.—

	1927-28. Rs. (lakhs).	1928-29. Rs. (lakhs).	1929-30. Rs. (lakhs).
Cotton spinning machinery ...	1,01	1,24	1,25
„ weaving machinery ...	72	67	66
„ bleaching and dyeing machinery ...	5	4	3
„ printing machinery ...	(a)	(a)	(a)
Other sorts ...	19	20	17
Total... ..	1,97	2,15	2,11

(a) a trifling amount not exceeding Rs. 31,000.

The provenance of the above imports were as follows :—

Countries of consignment.	1927-28. Rs. (lakhs).	1928-29. Rs. (lakhs).	1929-30. Rs. (lakhs).
United Kingdom	1,84	1,98	1,90
Germany	7	6	13
United States	2	5	2
Other countries	4	6	6
Total... ..	1,97	2,15	2,11

American competition is largely confined to patent winders, but the import of German specialities, such as cotton waste spinning

machinery and low grade dobbies, is increasing. "Other Countries" mainly includes Dutch specialities. It is likely that there may be some expansion in the trade this year as the activity of the Indian mills will inevitably increase as a result of the additional measure of protection. The imports from the United Kingdom may, however, be adversely affected by the strong anti-British political movement in Bombay and Ahmedabad.

Woollen Manufacturing Machinery.—This trade has shown some slight improvement due to increased activity in the woollen mills at Cawnpore and Bombay, and increased imports via Karachi—probably from Afghanistan. The figures of total imports were:—

1927-28.	1928-29.	1929-30.
Rs. 2 lakhs.	Rs. 2 lakhs.	Rs. 6 lakhs.

Jute Manufacturing Machinery.—The imports during the past three years were as follows:—

1927-28.	1928-29.	1929-30.
Rs. lakhs. 94	130	144

The trade is almost entirely in British hands. The present year will probably show some decline owing to the depression in the Indian jute mills.

Electrical Machinery.—The subjoined table gives the main types of electrical plant imported during the last two years:—

	1928-29.	1929-30.
	Rs. (lakhs).	Rs. (lakhs).
Control and switchgear	30	38
Generators, alternators and dynamos	43	44
Motors	45	44
Transformers	11	19
Turbo-generating sets	6	8
Other sorts	1,02	88
	<hr/>	<hr/>
	2,37	2,41
	<hr/>	<hr/>

This valuable trade is certain to expand during the next few years owing to the large contracts on account of power schemes, both from water and coal, in the Punjab, Madras and elsewhere. The provenance of the imports was as follows:—

Countries of consignment.	1927-28. Rs. (lakhs).	1928-29. Rs. (lakhs).	1929-30. Rs. (lakhs).
United Kingdom	1,66	1,85	1,83
Germany	9	13	16
United States	15	26	20
Other countries	10	13	22
Total... ..	2,00	2,37	2,41

The United Kingdom, thanks to the excellent local sales, technical and service organisation of the principal British groups, is maintaining its position fairly well and, judging by the contracts recently placed, will continue to do so. Prices, however, are very closely cut and the contracts for large power plants are frequently taken at rates which show little if any profit.

Boilers.—The imports were as follows :—

Countries of consignment.	1927-28. Rs. (lakhs).	1928-29. Rs. (lakhs).	1929-30. Rs. (lakhs).
United Kingdom	1,04	1,07	1,04
Germany	1	4	2
Other countries	4	4	3
Total... ..	1,09	1,15	1,09

Imports from other countries are either from the United States or else represent German boilers shipped from other Continental ports. The powerful and efficient local organisation of the British manufacturers enables them to hold their own. There may be some decline in the trade during the coming year owing to general industrial depression in India.

Prime Movers (other than Electrical).—The total imports were classified as follows :—

	1928-29. Rs. (lakhs).	1929-30. Rs. (lakhs).
<i>Locomotives—</i>		
Oil engines	3	2
Oil engines (parts of)	1	1
Steam engines	13	16
Steam engines (parts of)	8	8
Railway locomotive engines and tenders and parts... ..	96	1,97
Others	1	2
<i>Other than Locomotives—</i>		
Gas engines	2	3
Gas engines (parts of)	1	1
Oil engines	1,01	1,04
Oil engines (parts of)	19	22
Steam engines	38	19
Steam engines (parts of)	18	34
Others... ..	3	3
Total	3,04	4,12

The figures under this main heading have been swollen since April 1st, 1928, by the addition of railway locomotive engines and tenders and parts.

Details of the provenance of the imports for 1929-30 are not yet available, but it is safe to say that British makers control 85

per cent. of the trade. The remarkable increase in the demand for oil engines continues. British makers supply 85 per cent., but competition from the United States, Germany, Switzerland and Italy is growing. Switzerland is competing in high-grade steam engines. The number of gas engines imported amounted to 201 in 1928-29, of which no less than 142 were small gas engines from the United States, the total value of which was only Rs.65,000.

Agricultural Machinery.—After remaining stationary for several years, the returns for the past three years provide clear evidence of the increased attention which is being given to the use of improved methods as a result of the Report of the Royal Commission on Indian Agriculture. This is mainly reflected in an increased demand for tractors as the following figures show :—

	1927-28. Rupees.	1928-29. Rupees.	1929-30. Rupees.
Agricultural tractors and parts	5,47,559	7,57,371	8,35,506
Ploughs and parts	1,78,924	2,02,682	2,02,401
Others	4,68,739	4,68,046	4,60,811
Total Imports	11,95,222	14,28,099	14,98,718

In 1928-29 the United States supplied 85 per cent. of the tractors and parts, the United Kingdom contributing 9 per cent. Of the ploughs and parts, the United States supplied 74 per cent. and the United Kingdom 23 per cent. Of miscellaneous types of agricultural machinery, however, the United Kingdom sent 61 per cent., the United States 22 per cent. and Germany 15 per cent. Although these figures are almost pitiful in the case of a predominantly agricultural country such as India, there are distinct signs that, at last, serious attention is being given to the problem both by the Authorities and also by Zamindars and large landholders. The experiments which are being made by the Burmah Shell Oil Storage and Distributing Co. of India, Ltd., in encouraging the use of tractors, &c., are encouraging as showing a realisation of the needs of the country. As I have frequently stated, the most likely solution of the problem would be the extension of the activities of Government agricultural departments in the stocking and distribution of improved implements.

Mining Machinery.—

Countries of consignment.	1928-29. Rs. (lakhs).	1929-30. Rs. (lakhs).
United Kingdom	39	22
Germany	2	1
Belgium	2	2
United States	37	36
Other countries... ..	—	—
Total	80	61

With the exception of American competition in coal cutting machines the United Kingdom supplies practically the whole of the colliery plant. American competition is very keen in plant required in the oil fields of Burma, Assam and the Punjab and in the non-ferrous mining industry in Burma.

Metal Working Machinery (including Machine Tools.)—This comprehensive classification consists mainly of machine tools :—

	1927-28.	1928-29.	1929-30.
Rupees ...	40,79,454	32,98,133	35,73,357

In 1928-29 the United Kingdom supplied 71 per cent., the United States 18 per cent. and Germany 6 per cent. The large groups of British machine tool manufacturers are very active and supply the full range of tools required. The curtailment of the railway workshop programme and the industrial depression will probably result in a reduced demand during the coming year.

Oil Crushing and Refining Machinery.—There has been a slight expansion as compared with 1928-29, but the imports are greatly in defect of those during 1927-28 :—

Country of origin.	1927-28. Rs. (lakhs).	1928-29. Rs. (lakhs).	1929-30. Rs. (lakhs).
United Kingdom	56	24	29
Germany	8	11	10
United States	4	3	2
Other countries	2	2	1
Total... ..	70	40	42

The principal ports of entry are Calcutta, Bombay and Rangoon.

Paper Mill Machinery.—The figures for 1928-29 were swollen by the imports of the plant for the large new mill in the Punjab. There has been no fresh development on such a scale during the past year.

	1927-28.	1928-29.	1929-30.
Rupees ...	9,43,165	34,60,279	7,08,342

In 1928-29, the last year for which detailed figures are available, the United Kingdom supplied 84 per cent. and Germany 14 per cent.

Refrigerating Machinery.—The expansion of recent years was fairly well maintained :—

	1927-28.	1928-29.	1929-30.
Rupees ...	11,99,131	22,99,753	20,24,229

In 1928-29 the United States share was nearly 80 per cent., due to very large imports of domestic refrigerators, in which the American makers have, until recently, enjoyed almost a monopoly of supply. The British share of 19 per cent. comprised the heavier types of refrigerating plant.

Rice and Flour Mill Machinery.—The imports continue to expand :—

Countries of consignment.	1927-28. Rs. (lakhs).	1928-29. Rs. (lakhs).	1929-30. Rs. (lakhs).
United Kingdom	6	7	12
Germany	13	10	7
United States	3	2	3
Other countries	1	2	3
Total... ..	23	21	24

Germany has a strong hold on the rice mill machinery business, both in Burma and Bengal. British flour milling plant is still the standard.

Sawmill and Woodworking Machinery.—

Countries of consignment.	1927-28. Rs. (lakhs).	1928-29. Rs. (lakhs).	1929-30. Rs. (lakhs).
United Kingdom	7	5	6
Other countries	1	2	3
Total... ..	8	7	9

The keenest competition is from the United States, which, in 1928-29, supplied 24 per cent. Burma is the principal market, but the Indian railways have important woodworking plants in their carriage and wagon shops.

Sewing and Knitting Machines (including Parts).—There has been a slight setback to the steady expansion in this trade, which had been such a feature of post-war years. The imports of complete machines were as follows :—

Countries of origin.	1927-28. Rs. (lakhs).	1928-29. Rs. (lakhs).	1929-30. Rs. (lakhs).
United Kingdom	58	57	55
Germany	13	19	16
Other countries	2	1	1
Total... ..	73	77	72

Cheap German machines show a tendency to find favour, but the efficient and widespread organisation of the Singer Sewing Machine Co. with their depots, schools and hire-purchase arrangements is a great asset to the trade in British machines. The following are the statistics of parts of sewing and knitting machines:—

Rupees (lakhs) ...	1927-28. 18	1928-19. 13	1929-30. 13
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Sugar Machinery.—There were very few new plants erected during the year, and the imports represent, largely, extensions and renewals to existing works.

Countries of origin.	1927-28. Rs. (lakhs).	1928-29. Rs. (lakhs).	1929-30. Rs. (lakhs).
United Kingdom	7	16	8
Other countries	2	1	1
Total... ..	9	17	9

Tea Machinery.—Periods of depression in the tea industry are soon reflected in the import figures of tea machinery. Moreover, there has been some increase in the manufacture in Calcutta of certain parts of the machinery used in the tea factories. The figures for the past three years are as follows:—

Rupees ...	1927-28. 36,06,477	1928-29. 39,65,221	1929-30. 28,47,123
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The imports are exclusively British.

Typewriters.—There has been a decline both in the number and value of imported typewriters during the year. The figures are as follows:—

Countries of origin.	1928-29.		1929-30.	
	Number.	Value (Rs.)	Number.	Value (Rs.)
United Kingdom	1,069	2,25,929	1,206	1,93,017
United States... ..	19,816	26,69,264	13,766	19,04,617
Other countries	602	86,750	802	95,159
Total	21,487	29,81,943	15,774	21,92,793

British machines are coming into favour and there has been a considerable improvement in the service organisation of one or two of the leading British makers. As I have repeatedly stated, the secret of the American success has been the service given after sale and the attention paid to the training of stenographers. The British firms should realise that, in order to compete successfully with the American organisation, they must give personal atten-

tion to the building up of an equally efficient distributing sales and service organisation in India. It is hoped that the returns for 1930-31 will show a marked improvement in the British position.

Other Sorts of Machinery.—This comprehensive heading includes all types of machinery and plant not specially classified in the customs returns. The total values were as follows :—

Rupees	1927-28.	1928-29.	1929-30.
...	2,74,70,613	3,80,98,971	3,11,64,197

In 1928-29 the United Kingdom contributed 66 per cent., the United States 14 per cent., Germany 6 per cent. and Holland 3 per cent. Lesser values were supplied by Sweden, Denmark, Switzerland, Italy and Japan. The rapid expansion of the imports of miscellaneous industrial plant from Germany during the past five years has been remarkable.

Iron and Steel.—The following statement, giving the total imports of iron, steel and iron or steel into India during the past three years, shows that, in spite of reduced output from the Tata Iron & Steel Works due to labour unrest, there has been a material decline from the high-water mark of 1927-28 :—

Total Imports.	1927-28. Tons.	1928-29. Tons.	1929-30. Tons.
Iron	11,081	10,195	8,642
Steel	279,155	248,557	235,459
Iron or steel	907,025	911,175	728,584
Total... ..	1,197,261	1,169,927	972,685

The decline during the past year has been principally in galvanised sheets and plates, which fell by 68,685 tons; beams, channels, pillars, girders and bridgework, which were lower by 31,000 tons; plain sheets (18,000 tons); iron or steel sleepers and keys (20,000 tons); rails, chairs and fishplates (22,000 tons).

The Committee of the Calcutta Import Trade Association, in their report for 1929, state that :—

“ Galvanised sheet importers experienced another bad year owing to the continued fall in makers' prices all through the year. In January the home market opened at £13/15/0 per ton f.o.b. and at the end of the year purchases could be made at £12 which is the lowest quotation recorded since 1914. Imports were again higher than this market can comfortably consume, being 158,637 tons compared with 151,071 tons in 1928 or 86,455 tons in 1924. Belgian made sheets again showed a tremendous increase, shipments to British India from January/October being 45,417 tons compared with 27,055 tons for the same period of the previous year.

The total imports of structural steel showed a decided decrease being 120,193 tons compared with 157,624 tons in 1928. It should, however, be remembered that in 1928 imports were high on account of the Tata Iron & Steel Company's strike. British makers' rates, which are still controlled,

and which had remained unaltered since June, 1927, were suddenly raised at the end of the year by five shillings per ton. Continental makers' prices were fairly steady during the first nine months, but fell a few points towards the end of the year."

Production and Development of the Tata Iron and Steel Works.—I am indebted to the Tata Iron & Steel Co., Ltd., for the following authoritative statement showing the production and the main items of development at Janshedpur during the year ended 31st March, 1930 :—

Production of Pig Iron.—

Number of furnaces in existence on 31-3-30	5
Pig iron production	Tons 740,565
Pig iron used in works	" 580,305
Ferro-Manganese produced for works use ...	" 5,348

Furnaces and Converters.

	No. in existence on 31-3-30.
Bessemer converters acid	3
Open hearth furnaces	10

Production of Ingots.—

Open hearth basic	Tons 241,779
Duplex "	" 338,974

Rolling Mills.—

	No. in existence on 31-3-30.
Cogging mills... ..	2
Rail heavy section mills	2
Plate mills	1
Light section, bar and merchant mills ...	4
Sheet mills	9
35" roughing mill	1

Production of Semi Finished Steel.—

Blooming mills	Tons 500,590
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Sheet Bar and Billet Mill :

(1) Billets	} Rolled from blooms produced on the Blooming Mills shown above.	" 100,180
(2) Sheet bars and sleeper bars		" 56,144
(3) Tinbar and wide flats		" 49,920

Billet received from other works for re-rolling	" 11,077
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Production of Finished Steel.—

Rails 50 lbs. and over (first class only) ...	Tons. 135,683
" 30 " and under	" 1,763
Fishplates (first class only)... ..	" 3,674
Sleepers (first class only)	" 8,183
Angles, channels and tees	" 44,320
Beams... ..	" 18,761
Rounds, squares, flats, octagons and tie bars	" 76,269
Flats 3/10" thick and over	" 31,701
Sheets 1/8" and under, other than galvd. sheets	" 21,329
Galvanised sheets	" 18,476
Blooms and billets for sale	" 1,866

362,025

Blast Furnaces.—" A " Furnace was shut down for relining from 26th January, 1930.

" B " Furnace which was under relining and re-construction, came into operation from April, 1929. Its capacity has been increased from 350 tons to approximately 1,000 tons per day due to enlargement of hearth and bosh.

" D " Furnace was blown out in May, 1929. It will most probably come into operation in July, 1930, with an increased capacity of approximately 1,200 tons per day.

Duplex Plant.—The Third Furnace which was under construction in 1928/29 has been operating since October, 1929.

The 35 ins. Roughing Mill came into operation in November, 1929.

Origin of the Imports of Iron and Steel.—The following statement shows the chief sources of supply of iron and steel with the percentage share of each country in the import trade :—

CHIEF SOURCES OF SUPPLY OF IRON AND STEEL.

	From the United Kingdom.		From Germany.		From Belgium.		From France.		From the United States.		From Other Countries.		Tons.
	Tons. (thousand).	Share. per cent.	Tons. (thousand).	Share. per cent.	Tons. (thousand).	Share. per cent.	Tons. (thousand).	Share. per cent.	Tons. (thousand).	Share. per cent.	Tons. (thousand).	Share. per cent.	Total. (thousand)
1913-14 ...	609	59.8	200	19.6	173	17.0	2	.1	22	2.2	12	1.3	1,018
1919-20 ...	269	63.0	1	.2	13	3.1	—	—	135	31.6	9	2.1	427
1920-21 ...	498	70.0	15	2.1	69	9.7	2	.3	113	15.9	15	2.0	712
1921-22 ...	280	45.7	60	9.8	160	26.1	9	1.5	84	13.7	20	3.2	613
1922-23 ...	359	48.1	90	12.1	229	30.7	7	1.0	38	5.1	23	3.0	746
1923-24 ...	429	56.7	61	8.0	217	28.7	5	.5	18	2.4	26	3.7	756
1924-25 ...	439	50.5	88	10.1	273	31.4	16	1.8	17	2.0	36	4.2	869
1925-26 ...	489	55.3	69	7.8	229	25.9	45	5.1	23	2.6	29	3.3	884
1926-27 ...	406	48.1	79	9.3	257	30.4	33	3.9	29	3.4	41	4.9	845
1927-28 ...	685	57.2	79	6.6	316	26.4	48	4.0	16	1.4	53	4.4	1,197
1928-29 ...	650	55.5	70	6.0	333	28.5	54	4.6	18	1.5	45	3.9	1,170
1929-30 ...	486	49.9	58	6.0	312	32.1	35	3.6	16	1.6	66	6.8	973

The following statement shows the principal headings under which competition was encountered during 1929-30 :—

Description.	From the U.K.	From U.S.A.	From Belgium	From Germany	Total Imports.
	Tons.	Tons.	Tons.	Tons.	Tons.
× Steel bars (other than cast steel)	32,296	*	81,517	10,353	169,304
× Beams, channels, girders, pillars, and bridgework ...	51,482	239	30,347	6,845	104,861
× Nuts and bolts	3,659	393	5,543	1,924	12,551
✓ Hoops and strips	16,228	*	17,248	3,013	39,218
✓ Nails, rivets and washers ...	6,398	*	4,970	1,550	16,682
✓ Cast pipes and fittings ...	4,297	*	444	*	5,760
× Galvanised sheets and plates	200,295	1,615	50,974	*	257,552
× Tinned plates	21,848	9,315	*	*	31,165
✓ Plates not galvanised or tinned	45,207	52	14,312	1,056	61,733
✓ Wrought tubes, pipes and fittings	17,867	1,531	2,744	6,294	34,072
✓ Wire Nails	419	*	5,132	2,414	12,505
✓ Wire rope	2,898	16	*	*	3,335
× Rails, chairs and fishplates...	17,680	*	5,360	*	26,065
✓ Sleepers and keys of steel or iron for railways	10,396	*	50,802	*	65,759

* Not separately distinguished.

Belgian competition is most acute in bars, structural sections, plates and plain sheets, hoops and strips, steel sleepers, wire nails, &c., particularly where the British standard specification is not insisted upon. Perhaps the outstanding feature of the past few years has been the remarkable increase in the imports from Belgium of galvanised sheets. This competition is almost entirely due to the quotation of lower prices. Importers of British sheets have also been handicapped owing to the serious rain water damage to sheets, mainly those from South Wales, sustained in open wagons before shipment. Insurance companies now refuse to accept this risk and the onus is thrown on the importers in India, who cannot afford to carry it and are turning their attention to Continental sheets, which do not suffer in the same way. This question calls for immediate attention by the manufacturers and shipping merchants concerned.

Luxemburg shipped 38,011 tons of steel bars, while Sweden and Norway supplied considerable quantities of nails, rivets and washers. American competition is not serious except in tinplates, and this trade is now subject to the agreement of 1928 between the British and United States manufacturers whereby the combined exports of the two countries, with certain exceptions, are shared in the ratio of 70 and 30. Generally speaking Belgian and German steel dominates the bazaar trade, although the sales of the Tata products are only limited by the productive capacity of the works.

The following brief comments under each heading analyse the position in 1929-30 as compared with the figures for the previous year : —

Bars (other than cast steel).—Imports under this heading remained practically stationary at 169,304 tons valued at Rs. 192½ lakhs. The British share, however, fell from 46,616 tons (Rs. 62½ lakhs) to 32,296 tons (Rs. 47½ lakhs). Belgian shipments rose from 80,233 tons (Rs. 83 lakhs) to 81,571 tons (Rs. 85½ lakhs). Arrivals from Luxemburg also advanced from 15,805 tons (Rs. 16½ lakhs) to 38,011 tons (Rs. 38½ lakhs), while imports from Germany were reduced from 13,716 tons (Rs. 14 lakhs) to 10,353 tons (Rs. 11½ lakhs).

Beams, Channels, Pillars, Girders and Bridgework.—The total imports fell from 135,801 tons valued at Rs. 163½ lakhs to 104,861 tons valued at Rs. 132 lakhs. The British share dropped from 67,608 tons (Rs. 100½ lakhs) to 51,482 tons (Rs. 79 lakhs). Arrivals from Belgium fell from 44,637 tons (Rs. 41 lakhs) to 30,347 tons (Rs. 29 lakhs). French shipments were also reduced from 20,558 tons (Rs. 18½ lakhs) to 14,110 tons (Rs. 13½ lakhs).

Bolts and Nuts.—This trade also suffered a setback from 15,857 tons (Rs. 48 lakhs) to 12,551 tons (Rs. 39 lakhs). The British share fell from Rs. 21 to Rs. 14 lakhs, that of Belgium from Rs. 14½ to Rs. 12½ lakhs, while German imports remained fairly steady at Rs. 6½ lakhs.

Fencing Materials (including Fencing Wire).—A slight rise is to be recorded in the total imports from 9,825 tons (Rs. 26 lakhs) to 10,048 tons (Rs. 26½ lakhs). The British share fell from Rs. 5 to Rs. 4.6 lakhs, the Belgian from Rs. 6½ to Rs. 5½ lakhs, but the German shipments rose from Rs. 7½ to Rs. 10½ lakhs.

Hoops and strips.—This trade increased slightly from 38,583 tons (Rs. 54.7 lakhs) to 39,218 tons (Rs. 54.9 lakhs). Arrivals from the United Kingdom fell from 17,013 tons (Rs. 25½ lakhs) to 16,228 tons (Rs. 24½ lakhs), those from Germany from 5,196 tons (Rs. 8 lakhs) to 3,013 tons (Rs. 4½ lakhs), while Belgian shipments advanced from 13,335 tons (Rs. 17½ lakhs), to 17,248 tons (Rs. 22½ lakhs).

Nails, Rivets and Washers (other than Wire Nails).—The total imports declined from 18,671 tons valued at Rs. 51½ lakhs to 16,682 tons valued at Rs. 48½ lakhs. The British share remained steady at Rs. 17 lakhs. Imports from Norway fell from Rs. 9 to Rs. 7½ lakhs, those from Germany from Rs. 4½ to Rs. 4 lakhs and those from Sweden from Rs. 6½ lakhs to under Rs. 6 lakhs.

Cast Pipes and Fittings.—The total imports fell sharply from 10,305 tons valued at Rs. 22½ lakhs to 5,760 tons valued at Rs. 15½ lakhs. The British share declined from 4,446 tons (Rs. 13 lakhs) to 4,297 tons (Rs. 12 lakhs), that of Belgium from 4,356 tons (Rs. 6 lakhs) to 444 tons (Rs. 73,000), while the contribution from "other countries" fell from 1,503 tons (Rs. 3½ lakhs) to 1,019 tons (Rs. 2½ lakhs). It is satisfactory to note that British suppliers are firmly maintaining their hold on this trade.

Rails Chairs and Fishplates (including those for Railways).—This trade again showed a heavy decline from 48,135 tons valued at Rs. 61 lakhs to 26,065 tons valued at Rs. 35½ lakhs. The British share dropped from 40,862 tons (Rs. 52½ lakhs) to 17,680 tons (Rs. 25½ lakhs). That of Belgium rose from 3,439 tons (Rs. 4 lakhs) to 5,360 tons (Rs. 6 lakhs), while "other countries" fell from 3,834 tons (Rs. 4.6 lakhs) to 3,025 tons (Rs. 4 lakhs).

Galvanised Sheets and Plates.—There has been a further heavy reduction in this valuable trade from 326,237 tons valued at Rs. 711 lakhs to 257,552 tons valued at Rs. 556 lakhs. The British share fell from 286,046 tons valued at Rs. 626 lakhs to 200,295 tons valued at Rs. 437½ lakhs. On the other hand, there was a further remarkable rise in the imports from Belgium from 32,063 tons valued at Rs. 65½ lakhs to 50,974 tons valued at Rs. 103½ lakhs. Considerable price cutting took place throughout the year and Belgian sheets were purchased in large quantities owing to the exceptionally low price at which they were quoted.

Tinned Plates.—Owing to the disturbed labour conditions in the Indian tin plate industry, the imports advanced from 27,177 tons valued at Rs. 87 lakhs to 31,165 tons valued at Rs. 100 lakhs. The British share rose from 14,813 tons (Rs. 46 lakhs) to 21,848 tons (Rs. 68½ lakhs), while that of the United States of America declined from 12,297 tons (Rs. 41 lakhs) to 9,315 tons (Rs. 31½ lakhs). The Indian Tin Plate Co. are now resuming full scale production and it is likely that the imports will fall off during the present year.

Sheets and Plates (not Galvanised or Tinned).—The total imports fell from 79,999 tons (Rs. 108½ lakhs) to 61,733 tons (Rs. 82 lakhs). This decline was borne by the United Kingdom whence arrivals fell from 54,331 tons (Rs. 78½ lakhs) to 45,207 tons (Rs. 62½ lakhs) and by Belgium whose shipment fell from 23,991 tons (Rs. 28 lakhs) to 14,312 tons (Rs. 16½ lakhs).

Sleepers and Keys of Steel or Iron for Railways.—The total imports fell from 85,036 tons (Rs. 80 lakhs) to 65,759 tons (Rs. 64½ lakhs). The British share dropped from 16,639 tons (Rs. 24 lakhs) to 10,396 tons (Rs. 15 lakhs), that of Belgium from 59,687 tons (Rs. 49 lakhs) to 50,802 tons (Rs. 45 lakhs) and "other countries" from 8,710 tons (Rs. 7 lakhs) to 4,561 tons (Rs. 4½ lakhs).

Wrought Tubes, Pipes and Fittings.—The total trade fell slightly in quantity from 35,488 tons to 34,072 tons but rose in value from Rs. 94½ lakhs to Rs. 101 lakhs. The British share advanced from 16,655 tons (Rs. 51 lakhs) to 17,867 tons (Rs. 57½ lakhs) and that of Germany from 6,412 tons (Rs. 15½ lakhs) to 6,294 tons (Rs. 18½ lakhs). Belgian shipments fell, however, from 5,449 tons (Rs. 11½ lakhs) to 2,744 tons (Rs. 6½ lakhs) and French shipments from 3,800 tons (Rs. 7½ lakhs) to 2,732 tons (Rs. 6½ lakhs).

Wire Nails.—This trade declined from 17,911 tons valued at Rs. 30 lakhs to 12,505 tons valued at Rs. 22 lakhs. The British share, as usual, amounted to a negligible quantity (Rs. 87,000). Belgian shipments, however, fell from 8,961 tons (Rs. 15 lakhs) to 5,132 tons (Rs. 9 lakhs) and German shipments from 2,903 tons (Rs. 5 lakhs) to 2,414 tons (Rs. 4 lakhs). Arrivals from "other countries" were reduced from 5,564 tons (Rs. 9½ lakhs) to 4,540 tons (Rs. 7½ lakhs).

Wire Rope.—In this trade also the total imports fell from 4,270 tons valued at Rs. 23½ lakhs to 3,335 tons valued at 19½ lakhs. Arrivals from the United Kingdom dropped from 3,593 tons (Rs. 20½ lakhs) to 2,898 tons (Rs. 17½ lakhs), those from the United States of America from 108 tons (Rs. 96,000) to 16 tons (Rs. 25,000) and those from "other countries" from 569 tons (Rs. 2 lakhs) to 421 tons (Rs. 2 lakhs).

Aluminium.—There has been a noteworthy expansion in the imports of aluminium circles, the raw material of the Indian hollow-ware industry, and the year's imports constitute a record :—

	1928-29.		1929-30.	
	Cwt.	Rs. (lakhs).	Cwt.	Rs. (lakhs).
<i>Unwrought.</i>				
Ingots, blocks, bars ...	1,349	1	980	1
<i>Wrought.</i>				
Circles	111,765	92	157,576	1,28
Sheets	5,134	4	3,944	3
<i>Other manufactures</i>	8,343	11	8,525	11
Total Imports	126,591	1,08	171,025	1,43

Particulars relating to the origin of the imports in 1929-30 are not yet available, but in 1928-29, 15 per cent. of the unwrought ingots, &c., were obtained from the United Kingdom, 43 per cent. from Italy and 27 per cent. from the United States. Of the circles 34 per cent. were drawn from the United Kingdom, 40 per cent. from the United States and 10 per cent. each from France and Switzerland. Sheets were obtained from the United Kingdom (25 per cent.), United States (58 per cent.), Germany (6 per cent.) and Switzerland (6 per cent.). The imports of "other manufactures," comprising mainly wire and utensils, were received from Belgium (37 per cent.), Germany (23 per cent.) and the United Kingdom (21 per cent.). There is very keen rivalry between the two principal British and American groups, both of whom employ their own sales organisation in the market.

Brass, Bronze and Similar Alloys.—Mixed or Yellow Metal for Sheathing.—There was a material reduction in this valuable trade :—

Countries of consignment.	1928-29.		1929-30.	
	Cwt.	Rs. (lakhs).	Cwt.	Rs. (lakhs).
United Kingdom	152,857	71	82,491	43
Germany	234,224	1,11	231,884	1,13
Japan	62,929	31	47,893	26
Other countries	6,302	3	1,118	1
Total Imports	456,312	2,16	363,386	1,83

The falling off in the British share during the past five years is most disquieting. British sheets are preferred if their price is competitive, but the disparity between British and Continental quotations has for some time been too great to be bridged.

Other Manufactures (Wrought).—The imports were as follows :—

	1928-29. Rs. (lakhs).	1929-30. Rs. (lakhs).
Rods	5	6
Sheets	3	4
Tubes	1	1
Wire	4	5
Other sorts	24	22

Copper (Wrought).—The imports of wrought copper during the past two years have been made up as follows:—

	1928-29. Rs. (lakhs).	1929-30. Rs. (lakhs).
Braziers	—	1
Sheets	1,09	63
Rods	4	6
Tubes	2	3
Wire (excluding telegraph and telephone wire)	2	2
Other manufactures	7	7

The next table gives the provenance of the imports:—

Countries of consignment.	1928-29.		1929-30.	
	Cwt.	Rs. (lakhs).	Cwt.	Rs. (lakhs).
United Kingdom	77,426	42	32,234	22
Germany	89,962	49	47,754	31
Belgium	20,246	10	8,054	5
France	40,690	21	29,397	18
U.S.A.	3,514	2	1,547	1
Other countries	256	—	7,394	5
Total	232,094	1,24	126,380	82

German Silver (including Nickel Silver).—A marked decline in the total trade is to be recorded:—

	1927-28.	1928-29.	1929-30.
Quantity (cwt.)	17,213	24,184	19,528
Value (Rs. lakhs)	15	21	17

Railway Plant and Rolling Stock.—The issue of combined statistics under this heading has been discontinued since April 1st, 1928. Rails and permanent way material are now classified under iron and steel, locomotives appear under machinery (prime movers), while carriages and wagons are included under vehicles. As, however, it has always been the practice to bring them together in these reports, I propose to continue doing so in order to facilitate comparison with previous reports.

State-operated Lines.—The figures available from the Monthly Trade Returns for Government Railway Stores are now extremely meagre. No provenance tables are given, while large items such as steel sleepers and permanent way material, locomotives, &c.,

&c., are not even separately classified. The important item of six-wheeled motor transport for army purposes, amounting to nearly £1,000,000 sterling, is included in the heading "Vehicles, other kinds."

Company-worked Lines.—The imports of railway material entering India as private merchandise on account of the companies' lines were as follows:—

Rails, Chairs and Fishplates.—

Country of origin.	1928-29.		1929-30.	
	Tons.	Rs. (lakhs).	Tons.	Rs. (lakhs).
United Kingdom	40,862	52	17,680	26
Belgium	3,439	4	5,360	6
Other countries	3,834	5	3,025	4
Total	48,135	61	26,065	36

Sleepers and Keys of Steel or Iron for Railways.—

Country of origin.	1928-29.		1929-30.	
	Tons.	Rs. (lakhs).	Tons.	Rs. (lakhs).
United Kingdom	16,639	24	10,396	15
Belgium	59,687	49	50,802	45
Other countries	8,710	7	4,561	4
Total	85,036	80	65,759	64

Railway Locomotive Engines and Tenders and Parts.—

Country of origin.	1928-29. Rs. (lakhs).	1929-30. Rs. (lakhs).
United Kingdom	81	1,46
Germany	4	45
United	4	4
Other countries... ..	7	2
Total	96	1,97

Railway Carriages and Parts.—

Country of origin.	1928-29. Rs. (lakhs).	1929-30. Rs. (lakhs).
United Kingdom	93	96
Germany	4	3
Belgium	2	6
Other countries... ..	3	5
Total Imports	1,02	1,10

Railway Wagons and Parts.—

Country of origin.	1928-29. Rs. (lakhs).	1929-30. Rs. (lakhs).
United Kingdom	40	56
Germany	7	3
Belgium	10	13
Other countries... ..	1	1
Total Imports	58	73

The London offices of the company-operated lines are now following the practice of the Government of India by purchasing in the cheapest market irrespective of country of origin. This accounts for the increase of German and Belgian competition during recent years.

Motor Vehicles and Cycles.—Motor Cars.—The total number of cars imported was as follows :—

Year.	United Kingdom	United States.	Canada.	France.	Italy.	Other countries	TOTAL.
1913-14 (pre-war)	1,669	868	—	111	7	225	2,880
1925-26 ...	2,399	4,143	4,775	367	860	213	12,757
1926-27 ...	2,546	4,030	4,476	607	1,416	122	13,197
1927-28 ...	3,600	6,031	3,400	538	1,367	186	15,122
1928-29 ...	3,645	7,943	6,568	277	967	167	19,567
1929-30 ...	3,759	4,912	7,024	364	1,150	189	17,398

It will be remarked that there has been a check to the steady expansion in the import of motor cars, which has been such a feature of post-war years. This reduction is entirely accounted for by the decline in arrivals from America. The imports of British cars continue to advance in number but the total value was slightly reduced owing to the greater number of small seven horse power models. The United Kingdom now supplies 21 per cent. of the number and 25 per cent. of the value of the cars imported. While the British position is certainly better than it was a few years ago, it cannot be considered to be satisfactory in view of the great potentialities of the market. As I have repeatedly stated, the problems to be overcome are those of representation and marketing. I appeal to the heads of the two or three leading British suppliers to India to consider the desirability of forming Indian companies, in which their distributors and dealers might have an interest, in order to supervise the distribution, finance, advertising, propaganda, spare parts and general service organisation, and to give that personal attention to the market which is given in the case of our leading foreign competitors. Three well-known British firms have their own sales organisations in India, a few others are more or less adequately represented by local agents, but in a great many cases the local organisation is totally inadequate to the needs of the market.

The Assembly Depot in Bombay of General Motors (India), Ltd., is active and—quite apart from such advantages as actually attach to the assembly of cars—gives them a valuable local centre for the direction of all their Indian activities and enables them to state that they are an Indian company, employing Indian labour, and therefore able to claim national status.

The Ford Motor Company of India, Ltd., in August, 1929, also opened an assembly plant at Multan, in the Punjab. Vehicles are shipped from Canada to this plant in knocked down condition and, after being assembled in Multan, the cars and trucks are distributed direct to their dealers throughout the Punjab. Multan is a railway centre which lends itself to easy and efficient distribution through north-west India. The plant has a maximum capacity of 150-200 vehicles per month.

There is little doubt that the expansion of motor transport in India will continue to increase at an even more rapid rate now that serious attention is at last being given to the extension of roads throughout the country. The market is one of the most promising ones in the Empire and deserves all the attention and care that can be given to it. The Department of Overseas Trade will be glad to give advice with regard to general conditions and the forms of representation best suited to individual requirements.

The following statement shows the number of motor vehicles registered in British India up to 31st March, 1930 :—

Provinces.	Motor cars including taxi-cabs.	Motor cycles, including scooters and auto-wheels.	Heavy motor vehicles (lorries, buses, etc.).	Total.
Bengal (including Calcutta) ...	30,308	4,552	3,696	38,556
Bombay City	12,640 (a)	880 (a)	980 (a)	14,500 (a)
Bombay Presidency (excluding Bombay City & Sind) ...	9,430 (a)	1,020 (a)	125 (a)	10,575 (a)
Madras City	11,344	2,876	1,711	15,931
Madras Presidency (excluding Madras City)	7,061	1,777	6,392	15,230
United Provinces	11,087	3,275	5,043	19,405
Punjab... ..		(not yet available).		
Burma	10,208 (b)	1,243 (b)	6,381 (b)	17,832 (b)
Bihar and Orissa	7,620	1,123	1,781	10,524
Central Provinces	4,590	1,035	2,165	7,790
Sind	3,580	1,035	154	4,769
Delhi		(not yet available).		
North-West Frontier Province	2,737	1,657	1,264	5,658
Ajmer-Merwara	438	132	152	722
Assam		(not yet available).		

(a) Represent number of vehicles re-registered during the year ending 31st March 1930.

(b) Represent numbers actually running at the end of June 1930.

Motor Cycles.—The total trade has remained almost stationary during the past three years, and it is difficult to foresee any material expansion until there is a considerable extension and improvement in the roads of the country and until the Indian becomes more mechanically minded. At present the Indian consumer who can afford motor transport prefers a cheap car, in which he is driven by a chauffeur, to the trouble of driving a motor cycle himself. The total imports were:—

Countries of consignment.	1928-29.		1929-30.	
	Number.	Rupees.	Number.	Rupees.
United Kingdom	1,611	9,23,947	1,842	10,42,831
United States	55	37,730	35	24,421
Other countries	136	54,805	79	33,860
Total	1,802	10,16,482	1,956	11,01,112

It is satisfactory to note that British makers are strengthening their position. Calcutta is the principal port of entry, followed by Madras, Bombay, Karachi and Rangoon in order of importance.

Motor Omnibuses, Vans and Lorries.—The imports show a remarkably steady expansion from 2,162 vehicles in 1924-25 to 15,305 vehicles in the year under review. Omnibus services now connect upcountry villages with each other and with the nearest railway station. The principal towns are all supplied with services and longer distance traffic, e.g. between towns like Lahore and Amritsar, is growing rapidly. The vehicles were imported as follows:—

	1928-29.	1929-30.
	Number.	Number.
Vehicles imported with bodies	1,952	4,965
Chassis	10,838	10,340

The next table gives the provenance of the imports:—

Countries of consignment.	1928-29.		1929-30.	
	Number.	Rs. (lakhs).	Number.	Rs. (lakhs).
United Kingdom	473	21	399	18
Canada	6,373	81	10,044	1,25
United States... ..	5,809	1,10	4,770	97
Other countries	135	5	92	2
Total Imports	12,790	2,17	15,305	2,42

Apart from the large cities such as Calcutta, Bombay and Rangoon, where the tramways and other transport companies operate

fleets of heavy vehicles, which are mostly British, the services throughout the country are almost exclusively composed of light vehicles of the American type, &c., &c. The reason for this is that the Indian who promotes a transport organisation has usually only a limited amount of capital. He is therefore attracted by cheap American and Canadian vehicles, which he usually purchases on the hire-purchase system, runs them to death and scraps them after a couple of years or so, thus avoiding the necessity for any repair and maintenance organisation. So long as these conditions prevail and due weight is not given to the longer life of the British vehicle it is difficult to see how British types can obtain an entry into this business. Wherever transport companies are operated on modern scientific lines and attention is given to maintenance and repairs, the British truck has a better chance, but such companies are still comparatively rare in India.

Cycles (other than Motor Cycles and Parts thereof) and Accessories.—There has been a check to the remarkable boom in the cycle trade which had persisted for upwards of five years. The figures are:—

	1927-28.	1928-29.	1929-30.
Number of cycles imported, entire or in sections	138,783	163,432	142,052
	Rs. (lakhs).	Rs. (lakhs).	Rs. (lakhs).
Values of parts of cycles and accessories (excluding rubber tyres)	55	61	60

The total imports of cycles, parts and accessories were drawn as follows:—

Countries of origin.	1927-28.	1928-29.	1929-30.
	Rs. (lakhs).	Rs. (lakhs).	Rs. (lakhs).
United Kingdom	1,01	1,07	97
Germany	14	17	13
Other countries	2	5	9
Total... ..	1,17	1,29	1,19

Thanks to the remarkably low prices at which certain British manufacturers in the Midlands can land their machines in India we are still able to retain 81 per cent. of the trade. Attention, however, should be called to the increased trade in Japanese frames and other parts, which are imported at very low rates, are

assembled in the bazaars, and it is becoming a very prevalent practice for these Indian firms who assemble to attach the transfer of a well-known British make and sell the machine as a British one. It is to be hoped that the local representatives of British firms will prosecute in every case where they can establish proof, as this practice is seriously threatening our trade.

Provisions.—There has been a further reduction in the total trade in 1929-30, due to a further falling off in the imports of vegetable products (vegetable ghee, vegetable fats or solidified vegetable oil as they are variously known). This is reflected in a corresponding reduction in the imports from the Netherlands. The subjoined table gives the source of the imports of provisions during the past two years :—

Countries of consignment.	1928-29. Rs. (lakhs).	1929-30. Rs. (lakhs).
United Kingdom	2,25	2,35
Netherlands	2,04	1,57
Straits Settlements (including Labuan)	36	32
China (including Hongkong)	15	16
United States	44	48
Australia	9	9
Other countries... ..	87	66
Total	6,21	5,63

After eliminating Rs.120 lakhs worth of vegetable product from Holland which is non-competitive, and also the imports from the Straits Settlements and China which consist of Oriental produce, we find that the United Kingdom supplied 60 per cent. of the competitive trade.

The most important articles imported were the following :—

Principal Articles.	Average of 5 years 1909-10 to 1913-14.	1928-29.	1929-30.
	Cwt.	Cwt.	Cwt.
Farinaceous and patent foods ...	255,900	434,426	370,964
Canned and bottled provisions ...	86,100	90,179	114,028
Biscuits and cakes	72,900	70,047	65,245
Milk (condensed and preserved) ...	103,300	245,153	242,611
Jams and jellies	17,400	15,063	15,745
Bacon and hams	14,500	15,409	14,519
Cocoa and chocolate	4,600	6,298	3,556
Cheese	11,700	11,121	10,876
Vegetable products	*	458,184	321,126

* Not separately recorded—pre-war.

Detailed information with regard to the provenance of the imports under each heading in 1929-30 are not yet available, but in 1928-29 the Straits Settlements provided 23 per cent. of the farinaceous

and patent foods, Java 12 per cent. and the United Kingdom 44 per cent. The United States contributed 57 per cent. of the canned fruits and 60 per cent. of the canned fish. Condensed and preserved milk was mainly drawn from Holland, the United Kingdom and Switzerland. Of the biscuits and cakes, 83 per cent. came from the United Kingdom and small quantities from the Straits, Holland, Belgium and Germany. The imports of jams and jellies were divided between the United Kingdom (68 per cent.) and Australia (26 per cent.). The United Kingdom again supplied practically the whole of the bacon and hams but only half the cocoa and chocolate, competition being from Holland in cocoa and from Switzerland in chocolate. The imports of cheese were drawn from the United Kingdom (24 per cent.), Holland (55 per cent.) and Switzerland (10 per cent.).

Vegetable Products.—The imports of vegetable products increased at a phenomenal rate until 1927-28, when they reached their zenith with a total of Rs.192 lakhs. The reduction in the past two years, in 1928-29 to Rs.177 lakhs and in 1929-30 to Rs.120 lakhs, is probably due to the agitation, carried on largely by interested parties, against their use. They are almost entirely drawn from Holland and find their market in the Punjab and north-west India.

Liquors.—*Ale, Beer and Porter.*—The following table gives the imports, both quantities and values, during the past two years :—

Countries of consignment.	1928-29.		1929-30.	
	Gallons.	Rs. (lakhs).	Gallons.	Rs. (lakhs).
United Kingdom	2,805,132	61	3,148,384	69
Germany	1,022,017	28	1,048,282	30
Netherlands	254,690	5	336,809	7
Japan	230,727	4	288,218	4
Other countries	57,836	2	41,833	1
Total	4,370,402	1,00	4,863,526	111

During the year 1928-29, 1,552,099 gallons of beer were imported in bulk, mainly for the use of the troops, of which the United Kingdom supplied no less than 98 per cent. Of the beer imported in bottle, amounting to 2,653,950 gallons, the United Kingdom shipped 42 per cent., Germany 40 per cent., Holland 9 per cent. and Japan 8 per cent. The steady increase in the imports of British light beers in bottle during the past few years is most satisfactory and shows that British brewers are at last meeting the competition of German light beers of the lager type which are specially brewed to stand the climate. The imports of stout and porter, amounting to 208,826 gallons, were almost entirely drawn from the United Kingdom.

Spirits.—The following table shows the quantities and values of the principal kinds of spirit imported into India :—

Description.	1928-29.		1929-30.	
	Gallons.	Rs. (lakhs).	Gallons.	Rs. (lakhs).
Brandy	426,160	46	438,890	47
Gin	113,874	10	121,428	11
Liqueurs	17,860	3	19,165	3
Rum	64,630	2	205,922	3
Whisky	548,131	92	545,893	93
Spirit present in drugs	151,935	41	157,548	45
„ perfumed	15,107	12	13,749	11
„ denatured	730,978	9	853,910	10
Other sorts	46,248	11	57,404	13

The next table shows the countries of consignment of all spirits :—

Countries of consignment.	1928-29.		1929-30.	
	Gallons.	Rs. (lakhs).	Gallons.	Rs. (lakhs).
United Kingdom	752,583	1,36	760,532	1,41
Germany	61,476	7	59,916	6
France	415,571	52	426,228	53
Java	785,827	10	1,053,769	12
U.S.A.	58,366	17	66,130	19
Other countries	41,100	4	47,334	5
Total	2,114,923	2,26	2,413,909	2,36

Brandy is almost entirely obtained from France, with negligible quantities from the United Kingdom and Germany. The United Kingdom supplies 91 per cent. of the gin and Holland 7 per cent. The immense trade in whisky is practically a monopoly of the Scottish distillers, but in 1928-29 Germany sent Rs.41,090 worth of cheap spirit for the bazaar trade. Of the spirit present in drugs, medicines and chemicals, the United Kingdom contributed 44 per cent., the United States 40 per cent. and France 8 per cent. Perfumed spirit was drawn from the United Kingdom (42 per cent.), France (36 per cent.) and Germany (16 per cent.). Java supplies practically the whole of the denatured spirit, which is almost entirely denatured at Indian Custom Houses immediately on arrival and before clearance.

Wines.—The imports of wines fell slightly from 292,068 gallons valued at Rs.30 lakhs in 1928-29 to 289,632 gallons valued at Rs.29 lakhs in 1929-30. Of the total imports in the former year the United Kingdom supplied 36 per cent., France 38 per cent., Italy 10 per cent. and Portugal 4 per cent. The United Kingdom

figures represent, of course, British re-exports from French, Portuguese and Spanish sources.

Paper and Pasteboard.—The total imports showed an encouraging advance from 2,312,557 cwt. valued at Rs.330 lakhs in 1928-29 to 2,741,084 cwt. valued at Rs.372 lakhs in 1929-30. The subjoined table shows the percentage shares of the principal countries in the total imports:—

	1913-14. (pre-war year). Per cent.	1927-28. Per cent.	1928-29. Per cent.
United Kingdom	56.2	36.4	37.3
Norway	5.1	11.4	11.3
United States ... ..	.8	4.4	2.5
Sweden	3.2	9.3	7.4
Netherlands	2.5	8.4	7.6
Japan	1.0	2.4	2.3
Germany	17.3	11.7	13.2
Austria	8.3	6.5	9.2
Hungary		—	—
Other countries	5.6	9.5	9.2
Total	100	100	100

Packing Paper.—After a slight setback in 1928-29 the steady advance in this trade continued in the year under review, as the following figures show:—

Countries of consignment.	1928-29.		1929-30.	
	Cwt.	Rs. (lakhs).	Cwt.	Rs. (lakhs).
United Kingdom	16,936	5	15,309	4
Sweden	67,540	12	106,424	19
Norway	9,245	2	10,195	2
Germany	61,605	10	65,490	10
Netherlands	19,101	3	19,966	3
Other countries	54,100	10	69,466	12
Total	228,527	42	286,850	50

Scandinavia, owing to its resources of cheap pulp, largely controls this trade, the shipments from Germany largely representing transshipment goods. Other countries include Austria and Czechoslovakia.

Printing Paper.—After a sharp fall in the imports in 1927-28 the trade has now more than recovered its position.

Countries of consignment.	1928-29.		1929-30.	
	Cwt.	Rs. (lakhs).	Cwt.	Rs. (lakhs).
United Kingdom	115,848	24	97,520	21
Sweden	31,220	4	50,041	8
Norway	197,982	23	258,709	34
Germany	89,942	15	90,849	14
Netherlands	45,207	9	43,934	8
Belgium	13,608	3	13,392	3
Austria... ..	126,000	17	156,799	21
Other countries	71,894	11	94,960	14
Total	691,701	1,06	806,204	1,23

The above imports were divided according to their subjection to the protective duty as follows :—

	1928-29.	1929-30.
	Rs. (lakhs).	Rs. (lakhs).
Protected	36	36
Not Protected	70	87

It will be noted that the protective duty has created a stationary position in the types subject to it, and that the development has occurred in types which do not compete with country made papers.

Writing Paper and Envelopes—The total trade shows a steady advance notwithstanding the protective duty of one anna per lb. on writing paper of all kinds.

Countries of consignment.	1928-29.		1929-30.	
	Cwt.	Rs. (lakhs).	Cwt.	Rs. (lakhs).
United Kingdom	78,573	31	79,174	31
Sweden	10,679	2	11,554	3
Norway	44,554	10	64,821	14
Germany	19,007	5	22,462	6
Netherlands	21,092	5	24,979	5
Other countries	45,117	11	41,917	10
Total	219,022	64	244,907	69

The competition is most keen in writing paper in large sheets and is met with from Norway, Holland, Germany and Sweden, also Austria and Belgium. The United Kingdom retains the major portion of the note and letter paper and envelopes, but meets with severe competition from Germany in envelopes imported separately.

Miscellaneous.—

	1927-28. Rs. (lakhs).	1928-29.* Rs. (lakhs).	1929-30. Rs. (lakhs).
Old newspapers in bags and bales ...	38	39	46
Other kinds of paper	23	30	34
Paper manufactures	12	13	13

After making a striking incursion into the British trade in old newspapers, shipments from the United States have shown a steady decline from the peak figures of 1926-27.

Chemicals and Chemical Preparations (*excluding Chemical Manures and Medicines*).—The total imports classified under this important heading after a setback in 1928-29 continued their great forward movement in the year under review. The figures are:—

	Rs. (lakhs).
1925-26	2,03
1926-27	2,44
1927-28	2,64
1928-29	2,48
1929-30	2,79

Details with regard to the provenance of the imports in 1929-30 are not yet available, but the principal details in 1928-29 are given in the Review of the Trade of India as follows:—

“ The total imports of chemicals (excluding chemical manures and medicines) declined by Rs. 17 lakhs from Rs. 2,65 lakhs to Rs. 2,48 lakhs, of which soda compounds accounted for Rs. 1,13 lakhs or 46 per cent. as compared with Rs. 1,12 lakhs or 42 per cent. in the preceding year. The United Kingdom supplied, as usual, the bulk of sodium carbonate, imports of which totalled 1,076,600 cwts. valued at Rs. 62 lakhs as against 1,061,200 cwts. valued at Rs. 60 lakhs in the preceding year. Caustic soda, derived chiefly from the United Kingdom and the United States, was imported to the extent of 173,600 cwts. valued at Rs. 19 lakhs, almost the same as in the preceding year. Among other soda compounds, sodium bicarbonate, sodium bichromate, borax, sodium cyanide and sodium silicate showed small increases, while sodium sulphide registered a decrease. Imports of acids during the year amounted to 22,400 cwts. valued at Rs. 8½ lakhs and showed an increase of 6,000 cwts. in quantity and of Rs. 2 lakhs in value. Under the stimulus of lower prices sulphuric acid registered a further increase from 3,400 cwts. to 4,900 cwts. Imports of tartaric acid also increased from 1,600 cwts. to 3,000 cwts. There was a further decline in the imports of alum from 55,900 cwts. to 49,800 cwts., but aluminous sulphates recorded an increase from 64,200 cwts. to 71,200 cwts. The quantity of ammonia and salts thereof, imported, increased from 23,500 cwts. to 32,800 cwts., the value rising from Rs. 8½ lakhs to Rs. 9 lakhs. Owing to the greatly reduced demand from the Bombay mills, the imports of bleaching materials declined from 100,700 cwts. to 91,100 cwts. in quantity and from Rs. 9 lakhs to Rs. 5½ lakhs in value.

There was a noticeable decline in the imports of sulphur which fell off from 337,000 cwts. valued at Rs. 20 lakhs to 301,000 cwts. valued at Rs. 16 lakhs. The supplies from Italy dropped from 305,000 cwts. to 209,500 cwts., while those from Germany rose from 71,500 cwts. to 89,100 cwts. Among other chemicals, there were noticeable decreases in the imports of calcium carbide, zinc compounds, magnesium compounds and lead compounds, while there were increases under disinfectants and potassium compounds. The quantity of glycerine imported rose from 4,400 cwts. to 5,600 cwts., but the value showed a slight decline.”

The following table shows the position of the principal countries during the years 1927-28 and 1928-29, the last years for which details of provenance are available:—

Principal countries of consignment.			1927-28. Rs. (lakhs).	1928-29. Rs. (lakhs).
United Kingdom	...	...	1,47	1,47
Kenya Colony	...	...	5	6
Norway	...	...	6	4
Germany	...	...	57	41
Netherlands	...	...	6	5
Belgium	...	...	4	4
Italy	...	...	18	14
Japan	...	...	3	4
United States	...	...	9	12
Total Imports (all sources)	...	...	2,14	2,48

The next table gives the percentage share of the principal countries of consignment over a period of years:—

	1913-14. (pre-war year). Per cent.	1926-27. Per cent.	1927-28. Per cent.	1928-29. Per cent.	1929-30. Per cent.
United Kingdom	74.7	57.9	55.4	59.4	57.2
Germany	12.4	21.5	21.5	16.7	15.7
United States	.3	2.7	3.3	4.7	4.2
Italy	5.2	5.9	6.7	5.8	7.6
Kenya Colony	—	1.4	1.8	2.5	2.6
Norway	.5	1.7	2.6	1.7	2.0
Japan	1.5	1.4	1.2	1.4	1.9
Other countries	5.4	7.5	7.5	7.8	8.8
Total	100.0	100.0	100.0	100.0	100.0

The widespread and efficient distributing organisation of Imperial Chemical Industries (India), Ltd., is being systematically strengthened and extended, and the effect of this enterprise is likely to be seen in a steady improvement of the British position, which has already recovered by two points in the past two years. Competition from the German "I.G.," working through the Havero Trading Co., is formidable, and both groups realise the immense potentialities of the market if it is adequately developed.

Dyeing and Tanning Substances.—*Dyes obtained from Coal Tar.*—*Alizarines.*—The imports were derived as follows:—

Countries of consignment.	1928-29.		1929-30.	
	lbs.	Rs. (lakhs).	lbs.	Rs. (lakhs).
United Kingdom	1,168,137.	6	1,404,684	7
Germany	3,660,039	20	3,584,571	18
Netherlands	730,644	4	212,750	1
Belgium	21,280	—	112	—
Other countries	105,946	1	123,298	1
Total	5,686,046	31	5,325,415	27

The slight recovery in the British position is encouraging.

Anilines.—

Countries of consignment.	1928-29.		1929-30.	
	lbs.	Rs. (lakhs).	lbs.	Rs. (lakhs).
United Kingdom	507,930	9	989,614	14
Germany	9,720,174	1,30	9,171,076	1,02
Netherlands	547,508	8	80,620	1
Belgium	131,489	2	54,930	1
France	121,125	3	38,062	1
Switzerland	386,754	9	706,557	19
Italy	1,020,502	15	736,309	7
United States	1,158,903	13	1,512,846	15
Other countries	55,950	1	30,333	—
Total Imports	13,650,335	1,90	13,320,347	1,60

Although the German manufacturers have largely regained their position in the market they are now having to meet serious competition from Switzerland, the United States and the United Kingdom. During the post-war years the British dyestuff industry has been struggling to meet the home demands. Now that the great bulk of these can be met from British works the producers are turning their serious attention to overseas markets and their progress will be watched with great interest.

Soap.—The value of the imports in this valuable trade are now more than 60 per cent. above the pre-war average and the trade recovered from the temporary setback of 1928-29. The various types imported were as follows :—

Description.	1928-29.		1929-30.	
	Cwt.	Rs. (lakhs).	Cwt.	Rs. (lakhs).
Household and laundry soap	342,343	1,02	383,656	1,11
Toilet soap	47,701	50	50,862	51
Other sorts	15,841	6	13,421	5
Total Imports	405,885	1,58	447,939	1,67
<i>of which from—</i>				
United Kingdom	362,132	1,39	393,629	1,46
Other countries	43,753	19	54,310	21
Total	405,885	1,58	447,939	1,67

The household soap trade is the British stronghold, and any recovery in that trade is reflected in any improvement in our

position. In toilet soaps American competition is keen, and in 1928-29 accounted for 15 per cent. of the total (United Kingdom 77 per cent., France $2\frac{1}{2}$ per cent. and Germany 2 per cent.). The American productions are of high grade and of world-wide repute. They are extensively advertised and are actively distributed by travellers and agents. Tribute should be paid to the active selling organisation and great market experience of the leading British group, which—by sheer effort coupled with the excellence of its products—maintains its position in a remarkable way.

Paints and Painters' Materials.—Paints and Colours.—The imports of paints and colours remain fairly stationary and are likely to do so in view of the growing paint industry in India, which is now being developed on modern lines by some of the leading British makers. The position is as follows :—

Countries of consignment.	1928-29.		1929-30.	
	Cwt.	Rs. (lakhs).	Cwt.	Rs. (lakhs.)
United Kingdom	281,820	79	251,028	75
Germany	37,998	8	97,664	11
Japan	14,456	3	14,137	3
United States	16,361	8	19,420	9
Other countries	91,218	14	110,452	16
Total Imports	441,853	1,12	492,701	1,14

German competition, which is becoming keener each year, is mainly in the unspecified, cheap descriptions for the lower grade bazaar trade. Imports from the United States are principally high grade products for the European demand. The imports from Japan are almost entirely red lead.

Painters' Materials.—These comprise :—

Description.	1928-29.		1929-30.	
	Cwt.	Rs. (lakhs).	Cwt.	Rs. (lakhs).
Genuine Turpentine	6,349	2	9,482	2
Turpentine Substitute	2,518	1	2,971	1
Varnish	34,389	20	37,199	21
Other kinds	Not recorded.	9	Not recorded.	9
Total	—	32	—	33

Genuine turpentine is drawn equally from the United Kingdom and Sweden. The small quantities of turpentine substitute are mostly obtained from the United Kingdom and the United States.

The valuable trade in varnish, which is principally used by the railway carriage shops, is divided between the United Kingdom (85 per cent.), Germany (5 per cent.) and the United States (5 per cent.). The British makers have their own branches in India and the position is strongly held.

Drugs and Medicines (*excluding Chemicals and Narcotics*).—The trade is a very valuable one and is showing consistent expansion. The principal items are:—

	1928-29. Rs. (lakhs).	1929-30. Rs. (lakhs).
Camphor	28	32
Cod liver oil	1	1
Preparations of opium and morphia...	1	1
Proprietary and patent medicines ...	43	49
Quinine salts	24	29
Total imports of all kinds	2,02	2,26

Details with regard to the trade last year are not yet available, but in 1928-29, of the total imports of all kinds, the United Kingdom supplied 44 per cent., Germany 18 per cent., Japan 12 per cent. and the United States 9 per cent. Camphor is mainly drawn from Japan but German imports advance steadily. Cod liver oil is 62 per cent. British and 24 per cent. Dutch. The valuable trade in proprietary and patent medicines is divided between the United Kingdom (54 per cent.), the United States (14 per cent.), Germany (12 per cent.) and France (8 per cent.). Of the quinine salts the United Kingdom contributed 61 per cent., Germany 23 per cent. and Java only 5 per cent. The Java trade has fallen off in recent years, being replaced by German imports.

India still remains without a Pure Food and Drugs Act, although the Government of India have been consulting Local Governments on the subject for some years. Reliable European suppliers are thus constantly undersold by their competitors whose drugs do not conform to the standard of the British Pharmacopœia, and Indian consumers have drugs foisted on them which are frequently quite worthless if not positively harmful.

Apparel (*excluding Hosiery, Boots and Shoes*).—The following table shows the imports under each main heading:—

Article.	1928-29. Rs. (lakhs).	1929-30. Rs. (lakhs).
Apparel (including drapery, uniforms and accoutrements)	86	75
Gold and silver thread... ..	33	37
Hats, caps, bonnets and hatters' ware	32	30
Lametta	11	7
Secondhand clothing	17	19
Waterproofed clothing	4	3
Total imports of all kinds	1,83	1,71

In 1928-29 the United Kingdom supplied 56 per cent. of the apparel, the main competitors being Japan, Germany, the United States and Italy. Gold and silver thread is still almost entirely drawn from France, although German exports are increasing. Hats, caps, &c., are drawn from the United Kingdom (34 per cent.), Italy (35 per cent.), Japan (7 per cent.), Czechoslovakia (9 per cent.) and Austria (6 per cent.). Lametta is almost exclusively obtained from France and Germany. There has been a marked decline in recent years in the imports of second-hand clothing from the United Kingdom which has synchronised with a steady increase in imports from the United States. In 1928-29 the United Kingdom supplied 37 per cent. and the United States 63 per cent. Karachi still remains the principal market, but imports via Bombay are growing. The small imports of waterproofed clothing are almost entirely drawn from the United Kingdom. The provenance of the total imports was as follows :—

Countries of consignment.	1928-29.		1929-30.	
	Rs. (lakhs).		Rs. (lakhs).	
United Kingdom	70	...	59
Germany	22	...	17
France	33	...	36
Italy	13	...	12
Japan	20	...	19
United States	13	...	16
Other countries...	12	...	12
Total	1,83	...	1,71

Hosiery—Cotton.—The figures show a slight reduction :—

	1928-29.		1929-30.	
	Rs. (lakhs).		Rs. (lakhs).	
Stockings and socks	20	...	20
Underwear	1,20	...	1,19
Other Sorts	5	...	5
Total	1,45	...	1,44
<i>of which from—</i>				
United Kingdom	1	...	1
Japan	1,25	...	1,23
United States	3	...	4
Other countries	16	...	16
Total	1,45	...	1,44

British cotton hosiery makers cannot compete with Japan in the cheap qualities demanded by the Indian bazaars. They are even beaten by the American manufacturers of the higher grade hosiery for European use, who possess well-known brands which are extensively advertised.

Woollen.—The imports of woollen hosiery have remained stationary for some time.

	1927-28.	1928-29.	1929-30.
Rupees ...	20,51,290	20,05,958	20,04,313

In 1928-29 the United Kingdom supplied 86 per cent., Germany 5 per cent., small quantities being also imported from France, Italy and Japan.

Haberdashery and Millinery.—A sharp fall occurred in the total trade, which is made up of the following headings:—

Article.	1928-29. Rs. (lakhs).	† 1929-30. Rs. (lakhs).
Lace and embroidery ...	43	24
Towels not in the piece ...	10	15
Other sorts ...	81	65
Total ...	<u>1,34</u>	<u>1,04</u>

The provenance of the imports are as follows:—

Principal countries of consignment.	1928-29. Rs. (lakhs).	1929-30. Rs. (lakhs).
United Kingdom ...	27	26
Germany ...	40	23
France ...	5	4
Switzerland ...	14	9
Italy ...	12	9
Japan ...	20	20
Other countries...	16	13
Total ...	<u>1,34</u>	<u>1,04</u>

Lace and embroidery, which was formerly a Swiss trade, is now derived from Germany (40 per cent.), Switzerland (21 per cent.), Italy (13 per cent.), the United Kingdom (6 per cent.), and lesser values from Austria, Japan and Czechoslovakia. Of the towels not in the piece 88 per cent. comprise cheap towels from Japan of a non-competitive grade. The United Kingdom sent 8 per cent., almost all high-grade towels. The comprehensive heading of "other sorts" was contributed to by the United Kingdom (29 per cent.), Germany (28 per cent.), Japan (11 per cent.), Italy 8 per cent.), Switzerland (6 per cent.), and lesser values from France Austria, Czechoslovakia and the United States.

Boots and Shoes.—The imports of boots and shoes has more than doubled in quantity during the past year owing to a phenomenal imports from Japan of the cheapest type of footwear, mostly either wholly of rubber or with rubber soles. The following statement gives the position at a glance:—

	Pre-war average.	1926-27.	1927-28.	1928-29.	1929-30.
Pairs (in 1000) ...	2,323	1,915	2,773	3,320	6,761
Rupees (in 1000)	56.73	57.13	66.98	68.12	87.81

Dividing the total quantities into the total values it will be seen that the average price per pair of boots or shoes imported last year was Rs.1.3 (say, 1s. 11d.). The provenance of the imports was as follows :—

Countries of consignment.	1928-29.		1929-30.	
	Pairs.	Rs. (lakhs).	Pairs.	Rs. (lakhs).
United Kingdom	702,367	27	634,291	22
Germany	497,293	7	551,727	7
Austria	232,237	3	219,308	3
Czecho-Slovakia	60,786	3	47,103	2
Japan	527,990	3	4,043,733	29
Canada	250,343	5	548,683	10
United States	828,354	16	537,509	10
Other countries	220,429	4	179,011	4
Total	3,319,799	68	6,761,365	87

It will be remarked that the average price of the Japanese footwear imported was only Rs.0.72 (say, 1s. 0½d.), per pair. The imports were divided, according to kinds of boots and shoes, as follows :—

	1928-29.		1929-30.	
	Pairs.	Rs. (lakhs).	Pairs.	Rs. (lakhs).
Of canvas with rubber soles ...	1,901,080	32	2,781,488	41
Of leather	480,134	25	426,397	21
Of other materials	938,585	11	3,553,480	25

In 1928-29 British manufacturers supplied 80 per cent. of the imports of leather boots and shoes, their principal competitors being Czechoslovakia (mainly the Bata Works of Zlin) with 8½ per cent. and Germany with 3 per cent. The imports of canvas shoes with rubber soles were drawn from the United States (44 per cent.), Germany (17 per cent.), Canada (16 per cent.) and the United Kingdom (10 per cent.). Japanese imports were negligible in that year. The shoes manufactured of other materials were obtained from the United Kingdom (30 per cent.), Japan (24 per cent.), the United States (11 per cent.), with lesser values from Germany, Austria, Czechoslovakia and Italy.

Leather.—The imports of unmanufactured leather were as follows :—

Description.	1928-29.	1929-30.
	Rs. (lakhs).	Rs. (lakhs).
Hides, tanned or dressed	4	3
Skins, tanned or dressed	5	7
Unwrought	12	13
Leather cloth (including artificial leather)	4	6

The imports of tanned or dressed hides were obtained from the United Kingdom and Ceylon. Dressed or tanned skins are drawn from the United State and the United Kingdom. Unwrought leather was obtained from the United States (66 per cent.) and the United Kingdom (26 per cent.). Leather cloth is imported from the United Kingdom (58 per cent.) and the United States (34 per cent.). American competition is growing steadily.

The more important import is of leather manufactured goods :—

Description.	1928-29. Rs. (lakhs).	1929-30. Rs. (lakhs).
Bags and trunks	2	1
Pickers	8	8
Picking bands and straps	8	9
Roller skins	6	7
Saddlery and harness	1	1
Other sorts	13	13

The United Kingdom supplied 63 per cent. of the bags and trunks in 1928-29. Although British makers still supply the bulk of the leather specialities for the jute and cotton mills, competition is increasing from Holland in pickers and from France, Holland, Germany and Belgium in picking bands. Practically the whole of the roller skins and of the harness and saddlery is imported from the United Kingdom. The United States sent over Rs.2½ lakhs worth of fancy manufactured leathers.

The following table shows the countries of consignment of the total imports of leather and leather goods :—

Principal countries of consignment.	1928-29. Rs. (lakhs).	1929-30. Rs. (lakhs).
United Kingdom	40	42
Germany	3	3
Ceylon	1	1
United States	15	17
Other countries	5	5
Total	64	68

Belting for Machinery.

Cotton Belting.

Countries of origin.	1928-29. Rs. (lakhs).	1929-30. Rs. (lakhs).
United Kingdom	11	12
Other countries	1	1
Total	12	13

Germany sent half a lakh's worth in 1928-29.

Leather Belting.—The trade is fairly well maintained in view of the depressed state of many Indian industries.

Countries of origin.				1928-29. Rs. (lakhs).	1929-30. Rs. (lakhs).
United Kingdom	...	...	...	26	27
United States	...	...	...	7	9
Other countries	...	...	...	3	4
Total	...	...	...	36	40

The imports of American high-grade belting of two or three well-known brands are increasing, largely due to the progressive efforts of the American makers in supporting their local agents in every possible way. Other countries in 1928-29 included Japan (Rs.1.37 lakhs), Holland (Rs.47,000), Germany (Rs.37,000) and Belgium (Rs.31,000).

Belting of other Materials (including coir).—

Countries of origin.				1928-29. Rs. (lakhs).	1929-30. Rs. (lakhs).
United Kingdom	...	...	...	29	29
Germany	...	...	...	4	3
United States	...	...	...	2	2
Other countries	...	...	...	1	3
Total	...	...	...	36	37

This heading mainly includes balata belting. Some idea of the industrial development of India may be gained from the remarkable advance in the imports of belting since 1913. The average of the total imports of 1912-13 and 1913-14 was only Rs.39½ lakhs, whereas in 1927-28 it was Rs.87 lakhs, in 1928-29 Rs.83 lakhs and in 1929-30 Rs.90 lakhs. The principal markets are Calcutta and Bombay followed, in order of importance, by Rangoon, Madras and Karachi.

Bobbins.—In spite of the strikes and depression in the Bombay cotton industry the imports of bobbins are well maintained. The figures are:—

Countries of origin.				1927-28. Rs. (lakhs).	1928-29. Rs. (lakhs).	1929-30. Rs. (lakhs).
United Kingdom	...	...	...	34	32	35½
Germany	...	...	...	2	½	½
Other countries	...	...	...	3	3½	4
Total	...	...	...	39	36	40

The imports of Japanese bobbins are steadily increasing (Rs.2.24 lakhs in 1928-29) in contrast to imports from Germany which, in 1928-29, only totalled Rs.39,000.

Books and Printed Matter.—The total imports were:—

	1927-28.	1928-29.	1929-30.
Rupees ... ..	...61,97,992	66,27,876	71,81,903

In 1928-29 the United Kingdom supplied 84 per cent., the United States 9 per cent. and Germany 2 per cent. British publishing and scholastic supply firms are well represented and maintain their position.

Stationery (excluding Paper.)—The trade advances consistently year by year, until the value of the imports is now twice the pre-war figure:—

Countries of consignment.	1927-28. Rs. (lakhs).	1928-29. Rs. (lakhs).	1929-30. Rs. (lakhs).
United Kingdom	53	55	55
Germany	23	27	27
Japan	6	7	7
United States	4	5	5
Other countries	6	7	11
Total	92	1,01	1,05

Of the pencil trade Germany secures nearly 60 per cent., Japan 19 per cent. and the United Kingdom 14 per cent. German and Japanese competition is in the cheap stationery for the bazaar trade, which is sold at prices which are practically non-competitive for most British makers. Imports from the United States largely include high-grade pens, pencils, &c. As I have frequently stated, the British position largely rests on the supply of office stationery and requisites by the local branches of British manufacturers.

Tobacco.—The fact that the imports of cigarettes have increased fourfold since 1913 while the output of Indian factories must have advanced to a very much greater extent is certainly a sign that there has been a rise in the standard of life of the community. The main forms in which tobacco was imported are as follows:—

Description.	1927-28. lbs.	1928-29. lbs.	1929-30. lbs.
Unmanufactured Tobacco... ..	3,984,951	6,760,716	4,551,848
Cigars	35,973	34,490	39,553
Cigarettes	5,595,966	4,952,083	5,282,965
Tobacco for pipes and cigarettes	254,257	217,694	223,253
Other sorts	56,898	29,589	32,991
Total Imports	9,928,045	11,994,572	10,130,610

The provenance of the imports of cigarettes was as follows :—

Countries of consignment.	1927-28. Rs. (lakhs).	1928-29. Rs. (lakhs).	1929-30. Rs. (lakhs).
United Kingdom	2,38	1,99	2,11
Aden and Dependencies ... ..	.3	.2	.1
Egypt ... ..	.8	.5	.6
United States ... ..	.3	.4	.4
Other countries ... ..	.6	.9	.9
Total	2,40	2,01	2,13

It is to be feared that the imports will suffer a very heavy decline in the coming year. The boycott of cigarettes is actively proceeding in Bengal, Bombay and Northern India and cannot fail to be reflected in the next returns.

Rubber Manufactures.—Rubber Tyres.—Pneumatic Motor Covers.—The remarkable expansion in this trade continues at an accelerated rate. The total number of imported covers rose from 418,808 in 1927-28 to 462,737 in 1928-29 and 487,174 in the year under review. The provenance of the imports was as follows :—

Countries of consignment.	1928-29. Rs. (lakhs).	1929-30. Rs. (lakhs).
United Kingdom	45	59
Germany	7	19
France	18	12
Italy	17	21
Canada	57	53
United States	37	59
Other countries	2	2
Total Imports	1,83	2,25

Thanks to the widespread and excellent organisation of the Dunlop Company and the energy with which their sales and service activities are pushed, the imports from the United Kingdom have again just exceeded those from the United States, although it should be borne in mind that the Canadian factories are, with few exceptions, subsidiaries of the American companies. Imports from Germany are steadily mounting, while the past few years have seen a decline in the arrivals from France. Serious attempts are being made to boycott British tyres in the present political campaign, which is bound to affect the returns for 1930-31.

Pneumatic Motor Cycle Covers.—

	1928-29. Rs. (lakhs.)	1929-30. Rs. (lakhs.)
From United Kingdom	0.85	p.78
„ United States	0.02	0.15
„ Other countries	0.78	0.37
Total	1.65	1.30

The slight falling off in the imports of motor cycles during the past few years is followed by a reduction in the imports of the tyres.

Pneumatic Cycle Covers.—

	1928-29. Rs. (lakhs).	1929-30. Rs. (lakhs).
From United Kingdom	8	14
„ Germany... ..	1	2
„ France	5	3
„ Other countries	2	1
Total Imports	16	20

The remarkable boom in the pedal bicycle trade during the past five years has brought about the natural expansion in the demand for cycle tyres. The improvement in the British position is striking.

Solid Rubber Tyres for Motor Vehicles.—

	1928-29. Rs. (lakhs).	1929-30. Rs. (lakhs).
From United Kingdom	5	2
„ Germany... ..	1	2
„ United States	3	3
„ Other countries	1	1
Total	10	8

With the increased number of heavy vehicles now using pneumatic tyres the decline in this trade is not altogether surprising.

Tubes.—

	1928-29. Rs. (lakhs).	1929-30. Rs. (lakhs).
Pneumatic motor tubes	34	35
„ motor cycle tubes	0.5	0.35
„ cycle tubes	13	14

*Other Manufactures of Rubber (except Apparel and Boots and Shoes.—*The total imports aggregated :—

	1927-28.	1928-29.	1929-30.
Rupees	29,98,572	28,38,887	26,71,215

This trade, which includes mechanical rubbers of all kinds, vacuum brake fittings, hose, &c., &c., has shown a progressive decline since the high-water mark of 1926-27. In 1928-29 the United Kingdom secured 46 per cent., the United States 21 per cent., Germany 16 per cent. and Japan 3 per cent. The British groups are perfecting their organisation in India, and it is hoped that their relative position may be improved as a result of this.

Instruments, Apparatus, Appliances and Parts thereof.—
This comprehensive classification is made up as follows :—

Description.	1928-29. Rs. (lakhs).	1929-30. Rs. (lakhs).
Electrical apparatus	3,13	3,61
Musical instruments	25	35
Optical instruments	11	8
Cinematograph films	28	28
Photographic apparatus	30	31
Scientific instruments	22	18
Surgical instruments	21	22
Wireless apparatus	14	7
Other kinds	27	28
Total Imports	4,91	5,38

In 1928-29 the United Kingdom contributed 58 per cent. of the total, the United States 14 per cent., Germany 13 per cent., Holland 3 per cent. and Italy 2 per cent. Analysing the various sub-headings we find that :—

Musical Instruments.—The United Kingdom supplies 46 per cent., Germany 28 per cent., the United States 7 per cent. and Switzerland 6 per cent.

Optical Instruments.—Germany has always had a strong hold on this trade, and in 1928 contributed 59 per cent., the United Kingdom 16 per cent., Japan 9 per cent. and France 7 per cent. Although the British share is increasing slowly, imports from Germany are advancing at a very rapid rate.

Cinematograph Films.—In 1928-29, the last year for which details are available, the imports were as follows :—

Countries of consignment.	Length in feet.	Rs. (lakhs).
United Kingdom	5,103,082	4
United States	10,422,508	15
Germany	7,407,866	4
Total Imports	29,953,634	28

British films are increasing in number and popularity, and definite steps are being taken by one or two British film makers to cater for the Indian market. American houses maintain resident representatives in India, but so far not a single British firm has taken this step, and it is only recently that even a travelling sales representative has visited the country. The market is a valuable one and British films are liked. It only requires enterprise to develop a sound trade.

Photographic Apparatus.—The trade shows steady expansion. The United Kingdom supplied 46 per cent., the United States 30 per cent., Germany 12 per cent. and France 7 per cent. Imports from the United States have advanced over 150 per cent. in four years. The Kodak Company operate their own branches in the country.

Scientific Instruments.—The United Kingdom contributes 69 per cent., Germany 20 per cent. and the United States 6 per cent. Bombay is the principal market.

Surgical Instruments.—The United Kingdom supplies 63 per cent., Germany 26 per cent. and the United States 5 per cent. The

British manufacturers are maintaining their position as a result of hard work and sound organisation on the part of their branches and agencies.

Wireless Apparatus.—The Indian Broadcasting Company, Ltd., who only commenced to transmit from their Bombay office in July, 1927, went into voluntary liquidation, and the whole plant and goodwill was taken over by the Government of India on March 31st, 1930, the consideration being a payment of Rs.3 lakhs. A Central Advising Committee is being appointed, which will comprise representatives of the Legislature, Commerce and Officials. The result of the failing service and dislocation is noticeable in the returns, but it is hoped that Government will be able to resuscitate the undertaking. The imports of wireless apparatus during the past two years were as follows :—

Countries of origin.	1928-29. Rs. (lakhs).	1929-30. Rs. (lakhs).
United Kingdom	9	4
Germany	2	1
Holland	1	2
France	2	—
United States	1	1
Total Imports	15	8

Dutch imports are likely to increase. Messrs. Philips, of Eindhoven, have shown considerable enterprise in broadcasting programmes at time suitable to listeners in the Dutch East Indies and India.

Electrical Apparatus.—This is the most important heading in the whole group. The following statement gives the description and value of the several classes of electrical apparatus imported during the last two years :—

<i>Description of Electrical Apparatus.</i>	1928-29. Rs. (lakhs).	1929-30. Rs. (lakhs).
Electric fans and parts thereof ...	38	40
Electric wires and cables	99	1,15
Telegraph and telephone instruments	5	5
Electric lamps and parts thereof ...	49	65
Batteries	13	14
Carbons, electric	1	3
Accumulators	20	26
Electric lighting accessories and fittings, including switches	17	17
Meters	7	9
Electro-medical apparatus (including X-ray)	4	4
Switchboards (other than telegraph and telephone)	5	3
Unenumerated	55	60
Total Imports of all kinds	3,13	3,61

Analysing the above total we find that the imports of electric fans and parts thereof totalled Rs. 40 lakhs, of which the United Kingdom supplied under Rs.19 lakhs, Italy Rs.12 lakhs, the United States Rs.3½ lakhs and "other countries" Rs.5 lakhs. There has been a falling off in the British share which has been largely secured by Italy. The imports of cables again advanced from Rs.99 to Rs.115¼ lakhs. The British share rose from Rs.87 to Rs.97¼ lakhs, that of Germany from Rs.4¼ to Rs.5¾ lakhs, Holland from Rs.2½ to Rs.3½ lakhs, and "other countries" from Rs.2 to Rs.6¼ lakhs. The American share fell slightly from Rs.3½ to Rs.2¼ lakhs. The heading electric lamps and parts thereof is now divided. Flash lights (including torch lights, pocket lamps, &c.), totalled Rs.11½ lakhs, of which Germany supplied Rs.2½ lakhs, "other countries" Rs.8½ lakhs and the United Kingdom less than one-quarter lakh. Automobile lighting lamps accounted for Rs.1½ lakhs, of which the Netherlands supplied Rs.½ lakh and "other countries" over Rs.½ lakh. The United Kingdom only shipped Rs.9,500 worth. The total of standard lighting lamps imported was Rs.26 lakhs, of which the United Kingdom supplied Rs.8½ lakhs, Holland Rs.9 lakhs, Germany Rs.1½ lakhs and "other countries" Rs.6¾ lakhs. Electric lamps (other sorts) amounted to Rs.1½ lakhs and parts and accessories of electric lamps to Rs.24½ lakhs. The imports of electric batteries totalled Rs.13½ lakhs, of which the United States supplied Rs.7¾ lakhs, the United Kingdom Rs.1¾ lakhs and "other countries" Rs.4 lakhs. Of the imports of telegraph and telephone instruments and apparatus the United Kingdom supplied Rs.4¾ lakhs of a total of Rs.5½ lakhs. The imports of accumulators totalled Rs.26 lakhs, of which Rs.18 lakhs worth were drawn from the United Kingdom, Rs.3½ lakhs from the United States and Rs.4½ lakhs from "other countries." Electric lighting accessories and fittings (including switches) totalled Rs.16½ lakhs, of which Rs.10½ lakhs were drawn from the United Kingdom, Rs.3 lakhs from Germany, Rs.1½ lakhs from the United States and Rs.1½ lakhs from "other countries." Arrivals of meters rose from Rs.7¼ to Rs.9¼ lakhs, and the British share advanced from Rs.6 to Rs.7 lakhs. Germany supplied Rs.1¼ lakhs and "other countries" Rs. 1¼ lakhs worth. Other sorts of electrical instruments amounted to Rs.2½ lakhs, which was divided between the United Kingdom and "other countries." Imports of electro-medical apparatus (including X-ray apparatus) totalled Rs.4¼ lakhs, of which the United Kingdom supplied Rs.1 lakh, the United States Rs.2 lakhs and "other countries" Rs.1 lakh. The United Kingdom supplied practically the whole of the Rs.3 lakhs worth of switchboards imported. Unenumerated electrical goods and apparatus attained a total of Rs.60 lakhs, of which Rs.39 lakhs came from the United Kingdom, Rs.9 lakhs from the United States, Rs.7¼ lakhs from Germany, under Rs.1 lakh from Japan and Rs.3 lakhs from "other countries."

The provenance of the total imports was as follows :—

Principal countries of consignment.	1928-29. Rs. (lakhs).	1929-30. Rs. (lakhs).
United Kingdom	1,99	2,15
Germany	30	43
Netherlands	15	16
Italy	12	14
Japan	6	10
United States	39	47
Other countries... ..	12	16
Total	3,13	3,61

Earthenware and Porcelain.—This classification includes :—

Articles.	1928-29. Rs. (lakhs).	1929-30. Rs. (lakhs).
<i>Earthenware.</i> —		
Pipes of earthenware	1	—
Sanitary ware	8	8
Other kinds	32	32
<i>Porcelain.</i> —		
Electrical	1	2
Other kinds	31	30
Total Imports	73	72

of which from.—

	1928-29. Rs. (lakhs).	1929-30. Rs. (lakhs).
United Kingdom	28	26
Germany	5	5
Japan	26	31
Other countries	14	10

The small imports of earthenware pipes are drawn from the United Kingdom (57 per cent.) and Belgium (40 per cent.). The trade is now confined to specialities, as ordinary pipes are made in the country. The United Kingdom supplies 93 per cent. of the sanitary earthenware, only trifling quantities being imported from Germany, Belgium and the United States. Other kinds of earthenware were, in 1928-29, divided between the United Kingdom (52 per cent.), Japan (12 per cent.), Holland (7 per cent.), Germany (7 per cent.) and Belgium (5 per cent.).

The imports of electrical porcelain were drawn from the United Kingdom (38 per cent.), Germany (39 per cent.) and Japan (21 per cent.). Other kinds of porcelain, including tableware, common crockery, &c., &c., were imported from the United Kingdom (9 per cent.), Japan (68 per cent.), Germany (7 per cent.) and Czechoslovakia (5 per cent.). The imports of cheap crockery from Japan have largely killed the trade in cheap goods, which a few Staffordshire makers formerly held. It is practically impossible to meet Japanese prices.

Glass and Glassware.—The following table shows the types of glass and glassware imported :—

Description.	1928-29.	1929-30.
	Rs. (lakhs).	Rs. (lakhs).
Bangles	77	85
Beads and false pearls	30	31
Bottles and phials	36	40
Funnels, globes and glass parts of lamps	20	21
Scientific glassware	1	1
Sheet and plate glass	30	31
Tableware	11	13
Other glassware	32	30
Total Imports	2,37	2,52

The provenance of the imports was as follows :—

Countries of consignment.	1928-29.	1929-30.
	Rs. (lakhs).	Rs. (lakhs).
United Kingdom	21	22
Germany	41	34
Belgium	25	24
Austria	5	5
Czecho-Slovakia	57	72
Italy	5	6
Japan	69	74
Other countries... ..	14	15
Total	2,37	2,52

The enormous trade in glass bangles and beads, aggregating nearly £1,000,000 in value, is a speciality of Czechoslovakia and Japan. Germany is a competitor in bangles and Italy and Austria compete in beads, but the United Kingdom has no place in this trade. The imports of soda water bottles (totalling Rs.13½ lakhs in 1928-29) were drawn from the United Kingdom (40 per cent.) and Germany (53 per cent.). The British trade has for some years tended to decrease in view of the heavy imports of cheap bottles from Germany. Other kinds of bottles are drawn from the United Kingdom (11 per cent.), Germany (23 per cent.), Japan (51 per cent.) and Sweden (4 per cent.). Even the German glass manufacturers are not able to bring their prices down to the level of the Japanese productions. The United Kingdom makes no contribution to the trade in funnels, globes and glass parts of lamps. This business is divided between Germany, an easy first, Japan and Austria. The imports of scientific glassware are small and are shared by Germany (57 per cent.), Japan (10 per cent.) and the United Kingdom (28 per cent.). It is only when one comes to plate and sheet glass that we find the United Kingdom with a fair share of the trade (19 per cent.) representing the finer qualities, while Belgium (66 per cent.) ships large quantities of cheap window glass. Tableware is obtained from Japan (62 per cent.),

Belgium (16 per cent.), Germany (9 per cent.) and the United Kingdom (7 per cent.). Miscellaneous glassware is drawn from Japan, Germany, the United Kingdom and Belgium in the order stated.

Building and Engineering Materials (other than Iron, Steel and Wood).—The trade experienced a slight setback in 1928-29 but recovered in 1929-30, and is valued at Rs.134 lakhs (approximately £1,000,000). The principal items in the classification are the following:—

Description.	1928-29.	1929-30.
	Rs. (lakhs).	Rs. (lakhs).
Asphalt	20	28
Bricks (other than firebricks)	1	—
Firebricks	3	5
Portland cement	65	60
Cement (other kinds)	2	4
Tiles	21	24
Other kinds	10	13
Total Imports	1,22	1,34

* 35,866 rupees

Detailed figures are not yet available for 1929-30, but in the previous year the imports of asphalt were drawn from the United Kingdom (16 per cent.), Egypt (36 per cent.), the United States (38 per cent.) and Holland (7 per cent.). Egypt appeared for the first time in the 1927-28 returns. The imports from Trinidad have now entirely ceased and their place has been taken by American asphalt. The trifling imports of bricks are specialities from Italy. Firebricks are almost entirely drawn from the United Kingdom. Tiles are sent by Italy (31 per cent.), the United Kingdom (26 per cent.), Belgium (21 per cent.) and France (9 per cent.)

Cement.—The imports of cement were obtained as follows:—

Countries of consignment.†	1928-29.		1929-30.	
	Tons.	Rs. (lakhs).	Tons.	Rs. (lakhs).
United Kingdom	90,982	51	81,630	47
Germany	4,865	2	5,088	2
Japan	14,351	6	18,721	7
Other countries	17,144	8	15,868	8
Total	127,342	67	121,307	64

The principal markets are Burma and Madras, which are sufficiently remote from the Indian cement works to be free from their competition. The trade is not likely to expand and the future lies with the local works, which can produce cement fully equal to the British standard specification at a reasonable price.

Hardware (excluding Cutlery and Electro-plated Ware).—The total trade under this somewhat unwieldy heading declined by Rs.16 lakhs to Rs.507½ lakhs, which, however, is well above the pre-war annual average of Rs.317 lakhs. The figures are as follows :—

Article.	1928-29. Rs. (lakhs).	1929-30. Rs. (lakhs).
Agricultural implements	14	14
Buckets of tinned or galvanised iron	2	2
Builders' Hardware	35	40
Domestic hardware other than enamelled ironware	13	13
Enamelled ironware	42	33
Gas mantles	7	8
Implements and tools (other than agricultural implements and ma- chine tools)	77	71
Lamps, metal	82	78
" glass	—	—
Parts of lamps, other than glass	9	10
Safes and strong boxes of metal	2	2
Stoves	9	10
Other sorts	2,31	2,26
Total Imports	5,23	5,07

The provenance of the imports during the last two years was as follows :—

Principal countries of consignment.	1928-29. Rs. (lakhs).	1929-30. Rs. (lakhs).
United Kingdom	1,89	1,80
Sweden	15	17
Germany	1,69	1,65
Austria	16	12
Japan	29	26
United States	61	59
Other countries... ..	44	48
Total	5,23	5,07

The above tables should be studied in conjunction with the next statements, which give the position of the leading suppliers over a period of years :—

	1913-14. (pre-war year). Per cent.	1926-27. Per cent.	1927-28. Per cent.	1928-29. Per cent.	1929-30. Per cent.
United Kingdom	57	36	39	36	35
Germany... ..	18	31	31	32	33
United States	10	14	12	12	12
Japan	1	6	5	5	5
Other countries	14	13	13	15	15
Total	100	100	100	100	100

The heavy reduction in the British share of the hardware trade is a matter for serious concern. The imports from the United Kingdom in 1929-30 were actually less in value than the average of the last five pre-war years—Rs.180 lakhs contrasted with Rs.189 lakhs. On the other hand, the imports from Germany were nearly three times the pre-war figures—Rs.165 lakhs compared with Rs.57 lakhs. The imports from the United States have more than doubled, those from Japan have increased sevenfold, those from Sweden nearly ten times. It is only in the case of Austria and Belgium that we find any similar reduction from pre-war figures. Germany is ousting us from the bazaar trade, while the United States is keenly competing in higher grade tools which were hitherto almost entirely supplied by Sheffield and Birmingham. The following notes give the statistical position in each section of the trade :—

Agricultural Implements.—This trade, which consists largely of hoes (mammathies and kodalies), forks, powrahs, &c., for use in the tea gardens of Bengal, Assam and Southern India, has been slowly declining during the past five years. This may partly be accounted for by the fact that the tea industry has passed through a difficult period and also the competition of the Agricultural Implements Co. of Jamshedpur (a branch of the Tata Iron & Steel Co., Ltd.), has become increasingly felt. These works have been reorganised during the past few years and are turning out picks, powrahs, kodalies, hammer heads and various special implements of very fair quality, which meet the requirements of a section of the market. In 1928-29 the United Kingdom supplied 85 per cent. and the United States 10 per cent.

Galvanised Buckets.—So far as India proper is concerned this trade has almost ceased to exist, as the buckets are now made locally from imported sheets and galvanised in local plants. There is still a fair trade with Burma, which is worth about £10,000 per annum and is almost entirely in British hands.

Builders' Hardware, such as Locks, Hinges, Door Bolts, &c., &c.—The imports were drawn from the United Kingdom (24 per cent.), Germany (55 per cent.), Sweden (12 per cent.) and the United States (4 per cent.). While the imports from the United Kingdom remain stationary, those from Germany have advanced from Rs.12 lakhs in 1924-25 to Rs.20 lakhs in 1928-29. For the bazaar trade British makers find it, in practice, almost impossible to compete with the low prices charged for German goods, which, although in some cases they are lower in quality, meet the requirements of dealers who cannot afford to pay a premium for quality goods.

Domestic Hardware.—A similar state of affairs obtains in this trade. Arrivals from the United Kingdom remain constant at about 28 per cent., those from Germany are increasing steadily and now amount to 44 per cent. The United States contribute 7 per cent., Austria 6 per cent. and Sweden 5 per cent.

Enamelled Ironware.—Notwithstanding increasing competition from locally manufactured aluminium hollow-ware, this trade is almost double the pre-war figures and is divided between Japan (51 per cent.), Czechoslovakia (15 per cent.), Germany (16 per cent.), Austria (8 per cent.) and the United Kingdom (5 per cent.). Japan is rapidly displacing the Continent in this trade.

Gas Mantles.—In 1928-29 Germany shipped 66 per cent., the United States (15 per cent.) and the United Kingdom (14 per cent.). The principal markets were Calcutta, Bombay and Madras.

Implements and Tools.—This is an immense trade which is shared by the United Kingdom (54 per cent.), the United States (20 per cent.) and Germany (18 per cent.). Here also the British share remains steady, that of the United States advances slowly, while German imports advance rapidly, year by year. There is keen direct rivalry between the United Kingdom and the United States in products of the same high quality.

Metal Lamps.—In pre-war days certain Birmingham exporters enjoyed a valuable trade in house and hurricane lamps (the imports of which are enormous). They were first beaten by the competition of the United States in lanterns of the "Dietz" type. Now the American imports are being challenged by rapidly expanding shipments from Germany. The relative shares of the three countries are the United Kingdom (2 per cent.), Germany (70 per cent.) and the United States (17 per cent.). Austrian imports are lower at 7 per cent.

Safes and Strong Boxes of Metal.—Imports are falling off owing to the increasing competition of such firms as the Godrej & Boyce Manufacturing Co. in Bombay, who turn out quite good safes for the Indian demand. Strong boxes of all kinds are made at Multan in the Punjab. Bankers' strong rooms and the highest grades of safes are still supplied by the British makers. In 1928-29 the United Kingdom supplied 35 per cent., Austria 24 per cent. and Germany 19 per cent.

Stoves.—Sweden provided 72 per cent. and the United Kingdom 13 per cent. Germany, Austria and the United States sent small quantities. The average price of the stoves imported from Sweden was just over Rs.4. The principal markets are Bombay and Calcutta.

Other Sorts.—The imports under this omnibus heading, which amounts to nearly half the total values, were divided between the United Kingdom (48 per cent.), Germany (23 per cent.), the United States (17 per cent.), Czechoslovakia (3 per cent.) and Japan (2 per cent.).

Cutlery.—The classification distinguishes between pruning knives—a British trade—and ordinary cutlery—which is highly competitive—as follows:—

	1927-28. Rs. (lakhs).	1928-29. Rs. (lakhs).	1929-30. Rs. (lakhs).
Pruning knives	2	2	2
Other kinds	36	34	39
Total Imports	38	36	41
<i>of which from.—</i>			
United Kingdom	10	11	11
Germany	26	22	27
Other countries	2	3	3
Total Imports	38	36	41

The position is virtually unchanged. The United Kingdom supplies the whole of the pruning knives for the tea gardens, which is a stationary trade. So far as general cutlery is concerned we now mainly supply the higher grade qualities and Germany, on price alone, is supplying the bazaars. Two-thirds of the shipments from "other countries" are drawn from the United States.

Polishes—This valuable trade shows great buoyancy and advanced by a further Rs.1 lakh last year. The United Kingdom still supplies 91 per cent., the only competition experienced being from the United States in leather, metal and miscellaneous polishes.

Article.	1927-28. Rs. (lakhs).	1928-29. Rs. (lakhs).	1929-30. Rs. (lakhs).
Leather polish	15	17	17
Metal polish... ..	5	5	5
Wood polish	1	1	1
Other sorts	2	2	3
Total	23	25	26

Arms, Ammunition and Military Stores.—This comprehensive heading is made up as follows:—

	1928-29. Rs. (lakhs).	1929-30. Rs. (lakhs).
Shot gun cartridge cases (filled)	10	11
Rifle and other cartridges (filled)	8	4
Cartridge cases (empty)	0½	0½
Explosives	27	28
Firearms and parts thereof	22	19
Gunpowder	1	1
Other sorts	8	2
Total Imports	76½	65½

Filled cartridge cases were obtained from the United Kingdom (71 per cent.), the United States (14 per cent.) and Germany (8 per cent.). The trifling imports of empty cartridge cases were mainly drawn from the United Kingdom.

The United Kingdom continued to supply 93 per cent. of the explosives, France, Germany and Belgium sending small quantities of blasting fuses. Of the firearms and parts the United Kingdom sent 57 per cent., Italy 11 per cent., Germany 9 per cent., Belgium 7 per cent., France 6 per cent. and the United States 6 per cent. On the whole the United Kingdom is maintaining its position fairly well. The total trade, however, shows a tendency to decline. The small imports of gunpowder are obtained from the United Kingdom.

In addition to the imports on private account enumerated above, the following values of arms, ammunition and military stores were imported by the Government of India, all from the United Kingdom :—

Rupees (lakhs)	1927-28.	1928-29.	1929-30.
...	36	66	48

Brushes and Brooms.—These include :—

	1928-29.	1929-30.
	Rs. (lakhs).	Rs. (lakhs).
Paint and varnish brushes ...	3	3
Toilet brushes ...	6	6
Other brushes ...	6	5
Brooms ...	0.5	0.5
Total Imports ...	15.5	14.5

Paint and varnish brushes, in 1928-29, were drawn from the United Kingdom (71 per cent.), Germany (17 per cent.) and Austria (6 per cent.). In toilet brushes, however, the position is reversed and the United Kingdom only sent a trifling quantity, under 8 per cent., while the United States supplied 54 per cent., Germany 25 per cent. and Japan 10 per cent. American enterprise in advertising and active salesmanship is rewarded by a steadily expanding trade. Other brushes for industrial and general use are supplied by the United Kingdom (47 per cent.), Germany (21 per cent.), the United States (12 per cent.) and Japan (10 per cent.). The small trade in brooms is shared by the United Kingdom and the Straits Settlements.

Toys and Requisites for Games and Sports.—This trade shows uninterrupted progress :—

Rupees	1927-28.	1928-29.	1929-30.
...	63,81,947	66,69,078	64,84,153

In 1928-29 toys accounted for Rs.43 lakhs and were obtained from the United Kingdom (17 per cent.), Germany (35 per cent.), Japan

(37 per cent.) and the United States (7 per cent.). There has been some improvement in the British position of recent years.

Playing cards, of a total value of Rs.12 lakhs, were imported from the United States (56 per cent.), Belgium (28 per cent.) and the United Kingdom (7 per cent.). Belgian competition is increasing.

Requisites for games and sports were imported in 1928-29 to the value of nearly Rs.11 lakhs, and were drawn from the United Kingdom (73 per cent.), Norway (10 per cent.), Germany (7 per cent.) and the United States (3 per cent.). The manufacture of sports goods at Sialkot and other towns in the Punjab increases and India exported last year over Rs.4 lakhs worth.

Tea Chests (*entire or in sections*).—After a slight setback in 1928-29 the total trade advanced last year to over Rs.80 lakhs in value :—

Countries of consignment.	1927-28. Rs. (lakhs).	1928-29. Rs. (lakhs).	1929-30. Rs. (lakhs).
United Kingdom	61	56	64
Russia	1	1	2
Finland	1	1	3
Esthonia	7	6	7
Other countries	2	3	4
Total	72	67	80

Just over a lakh's worth of metal chests were imported in 1928-29 into Madras. These were almost entirely drawn from the United Kingdom. Imports from Finland have fallen away during the last five years in favour of chests from Esthonia. "Other countries" include mainly Germany and Japan.

Umbrella and Umbrella Fittings.—The imports of *complete umbrellas*, including parasols and sunshades, were as follows :—

Countries of consignment.	1928-29.		1929-30.	
	No.	Rs. (lakhs).	No.	Rs. (lakhs).
United Kingdom	211,031	6	92,305	2
Other countries	54,170	2	72,039	2
Total	265,201	8	164,344	4

The trade has been stationary for some time, but the fall last year was abnormal. "Other countries" comprise France, Italy and Japan. The tendency is for umbrellas to be assembled in the country from imported cloth and fittings.

Umbrella fittings were imported as follows :—

Countries of consignment.	1927-28. Rs. (lakhs).	1928-29. Rs. (lakhs).	1929-30. Rs. (lakhs).
United Kingdom	11	10	9
Germany	27	27	20
Japan	16	11	10
Other countries	1	2	1
Total Imports	55	50	40

Until the past year Germany was rapidly outstripping both her rivals—the United Kingdom and Japan.

Jewellery and Plate of Gold and Silver.—(excluding *Imitation Jewellery, Precious Stones and Pearls unset*).—

Article.	1927-28. Rs. (lakhs).	1928-29. Rs. (lakhs).	1929-30. Rs. (lakhs).
Jewellery	10	9	20
Plate of gold and silver	7	6	6
Total	17	15	26

The trade has shown a steady decline owing to the effect of the heavy import duty of 30 per cent. The average imports during the last five pre-war years were nearly Rs.24 lakhs. The sudden advance in the imports of jewellery last year was probably due to purchases on account of one of the Indian States. In 1928-29 the United Kingdom sent 73 per cent., France 5 per cent, Germany 4 per cent., Ceylon 3 per cent. and the United States 4 per cent. Of the gold and silver plate the United Kingdom sent 68 per cent., Germany, Czecho-Slovakia and the United States contributed small values.

Electro-plated Ware.—The imports were :—

	1927-28.	1928-29.	1929-30.
Rupees	7,14,034	8,41,957	6,81,174

This is almost entirely in British hands (90 per cent.). Supplies from Germany tend to increase and in 1928-29 were valued at Rs.56,000.

Carriage and Carts and parts thereof.—The total imports were :—

	1927-28.	1928-29.	1929-30.
Rupees	16,64,301	16,91,595	14,29,043

The United Kingdom supplied 47 per cent., Japan 28 per cent. (largely jinrickshas), Germany 12 per cent. and Belgium 7 per cent.

Oil Cloth and Floor Cloth.—The imports show a slight increase :—

		1927-28.	1928-29.	1929-30.
Rupees	...	9,24,549	10,43,509	12,27,461

In 1928-29 the United Kingdom supplied 50 per cent., the United States 30 per cent., Germany, France and Belgium sending small quantities. The principal market was in Bombay.

Furniture and Cabinetware—The total imports show encouraging expansion :—

		1927-28.	1928-29.	1929-30.
Rupees	...	30,61,860	36,97,638	37,66,476

In 1928-29 the United Kingdom contributed 35 per cent., the United States 16 per cent., Germany 22 per cent., Japan 9 per cent. and Italy 5 per cent. German and Italian competition is mainly in mouldings, while the United States supply large quantities of camp cots and furniture of a light and patented type.

Matches.—Owing to the number of well-equipped factories maintained by the Swedish Combine in India and the heavy protective tariff on imported matches the imports have fallen from an average of Rs.176 lakhs in the early post-war years to under Rs.11 lakhs in 1929-30. The provenance of the imports was as follows :—

Principal countries of consignment.	1927-28. Rs. (lakhs).	1928-29. Rs. (lakhs).	1929-30. Rs. (lakhs).
Sweden	33	15	10
Czecho-Slovakia	1	—	—
Japan	3	1	—
Other countries	2	1	1
Total	39	17	11

British match manufacturers do not supply the Indian market but the London market is heavily interested in the Indian developments of the Swedish Company.

Packing (Engine and Boiler) of all kinds excluding Asbestos.—

		1927-28.	1928-29.	1929-30.
Rupees	...	4,64,459	4,10,488	3,73,246

The market is supplied by British makers, the only competition in 1928-29 being met with from the United States (Rs.43,000).

Toilet Requisites.—This important heading includes all articles for toilet use not separately classified elsewhere. The most recent figures are :—

	1927-28.	1928-29.	1929-30.
Rupees	62,34,809	64,60,622	72,68,019

In 1928-29 the United Kingdom contributed 40 per cent., the United States 26 per cent., France 9 per cent., Germany 8 per cent., Japan 6 per cent. and Italy 3 per cent. Although the British share is advancing that of the United States and France increases at a more rapid rate. American competition in high grade, branded goods, which are largely sold on the advertised name, is most acute.

Articles Imported by Post (*not included elsewhere*).—The inward postal traffic is very heavy and increases steadily :—

	1927-28.	1928-29.	1929-30.
Rupees	4,02,04,171	4,04,03,300	4,08,01,187

In 1928-29 the United Kingdom supplied 65 per cent. of this traffic, Italy 11 per cent. and Switzerland 7 per cent. Germany, France, Japan and China also contributed on a fair scale. The cash-on-delivery parcels system with the United Kingdom is a great convenience to residents in India and is being increasingly used. The following are the returns of the C.O.D. parcels received from Great Britain and Northern Ireland in 1927-28 and 1928-29 :—

Year.	Number.	Value.
1927-28.	101,773	£305,791
1928-29	97,546	£324,000

RAW MATERIALS AND SEMI-MANUFACTURED ARTICLES.

Coal.—The import trade partly recovered from the serious reduction of 1928-29, which was largely caused by reduced takings in Bombay owing to labour troubles. The most recent figures are :—

Countries of consignment.	1928-29.		1929-30.	
	Tons.	Rs. (lakhs)	Tons.	Rs. (lakhs).
United Kingdom	38,902	9	18,812	4
Union of South Africa	105,238	20	197,404	36
Portuguese East Africa	20,681	4	15	—
Australia	1,393	—	1,840	—
Other countries	4,313	—	6,020	1
Total	170,557	33	224,226	41

The following table gives the average prices per ton of Bengal, Cardiff and Natal coal in the Bombay market in 1927, 1928 and the first six months of 1929 :—

	Bengal. Per ton.			Cardiff. Per ton.			Natal. Per ton.		
	Rs.	As.	Ps.	Rs.	As.	Ps.	Rs.	As.	Ps.
1927	(a) 20	3	0 (d)	(b) 22	10	1 (e)	(b) 18	15	9
1928	(a) 18	3	0 (d)	(b) 21	11	2 (e)	(b) 16	8	4
1929 (6 months)	(a) 18	7	4 (d)	(b) 21	9	1 (e)	(b) 17	7	2

(a) Ex scales.

(b) Sterling quotations converted into rupee prices at the current rates of exchange.

(d) Desherghur.

(e) Best Welsh, 2/3 large, 1/3 small c.i.f.

Mineral Oils.—The following are the latest statistics of this valuable trade :—

Kerosene Oil.—

Countries of consignment.	1928-29.	1929-30.
	Rs. (lakhs).	Rs. (lakhs).
Russia	83	78
Georgia	1,50	71
Persia	1,62	1,53
Straits Settlements	6	58
Sumatra	12	—
Borneo	55	21
United States	95	1,48
Other countries	12	55
Total	5,75	5,84

Fuel Oils.—The imports were :—

Countries of consignment.	1928-29.	1929-30.
	Rs. (lakhs).	Rs. (lakhs).
Persia	1,54	1,51
Straits Settlements	18	21
Borneo	34	37
Other countries... ..	—	—
Total	2,06	2,09

The Anglo-Persian Oil Co., Ltd., supply the bulk of the fuel oils, which are mainly imported into Bombay.

Lubricating Oils.—Batching oils for use in the jute mills of Bengal were imported to the value of nearly Rs.88 lakhs, almost entirely from Dutch Borneo and the United States. Other lubricating oils were derived as follows :—

Country of origin.	1927-28. Rs. (lakhs).	1928-29. Rs. (lakhs).	1929-30. Rs. (lakhs).
United Kingdom	14	13	24
United States	1,11	1,12	1,03
Other countries	16	10	3
Total	1,41	1,35	1,30

The increase in the British share is encouraging and is probably to some extent due to increased imports of lubricants of the highest grade for aircraft use.

Salt.—Foreign salt finds a market in Bengal and Burma, but it should be noted that an inquiry is being conducted by the Tariff Board as to the desirability of taking steps to encourage the production of salt in India suitable for consumption in those markets which are now largely supplied from abroad.* The last statistics were as follows :—

Principal countries of consignment.	1928-29.		1929-30.	
	Tons.	Rs. (lakhs).	Tons.	(lakhs).
United Kingdom	69,002	19	83,094	19
Germany	64,069	17	62,904	14
Spain	58,914	14	69,368	14
Aden and Dependencies	204,330	47	231,710	44
Egypt	114,137	27	104,879	21
Italian East Africa	51,980	12	68,465	13
Other countries	52,275	11	23,430	5
Total	614,707	1,47	643,850	1,30

Sugar.—The enormous imports of sugar still constitute the fourth most valuable item of import into India, and are exceeded only by cotton manufactures, machinery, and iron and steel. The subjoined table gives the imports of 16 Dutch Standard and above (excluding beet) :—

Principal countries of consignment.	1928-29. Rs. (lakhs).	1929-30. Rs. (lakhs).
United Kingdom	3	25
Belgium	1	2
Ceylon	9	8
Straits Settlements	2	2
Java	15,47	12,69
China	5	6
Canada	—	—
Other countries... ..	2	12
Total	15,69	13,24

* cf. pp. 83-84.

The predominance of Java is maintained. The spasmodic increase in the imports from the United Kingdom is remarkable.

Beet Sugar.—The imports of beet sugar fluctuate in an extraordinary way, depending entirely upon the relative price of cane sugar. The figures are:—

Principal countries of consignment.	1928-29. Rs. (lakhs).	1929-30. Rs. (lakhs).
United Kingdom	7	78
Poland	—	3
Germany	—	24
Belgium	—	2
Austria	—	2
Hungary	4	59
Czecho-Slovakia	1	18
Other countries	4	39
Total	<u>16</u>	<u>2,25</u>

The following table gives the other types of sugar imported:—

	1928-29. Rs. (lakhs).	1929-30. Rs. (lakhs).
Sugar, 15 Dutch Standard and below	1	3
Molasses	23	26

The imports of molasses are all drawn from Java.

APPENDIX A—(CHAPTER III).

NOTE BY THE HON. THE COMMERCE MEMBER REGARDING THE PROPOSED DUTIES ON COTTON PIECEGOODS.

This note contains a statement of the economic grounds on which the Government of India hold that no protective duty, in addition to the revenue duty of 15 per cent. *ad valorem* should be imposed on goods made in the United Kingdom.

2. The great bulk of the goods imported from the United Kingdom are not directly competitive with Indian made goods, for they are of a kind or quality not made in India. The following table gives the closest estimate I have been able to make of the quantities of British goods which are in direct competition with Indian goods.

	Competitive. Millions of yards.	Non- competitive. Millions of yards.
Plain grey-Long cloth and shirtings ...	45	3
Jaconets, etc.	—	81
Bordered grey-dhutis	88	365
White (bleached)	—	525
Printed, dyed or coloured	50	286
	<u>183</u>	<u>1,260</u>

It will be seen that the proportion of directly competitive goods is approximately 12½ per cent. of the total. The figures given are for the year 1928-29. The figures for plain grey and bordered grey goods are, I believe, accurate. For coloured goods I have made the best estimate I could. The fact that Mr. Hardy independently arrived at the same figure is satisfactory confirmation.

3. The imports from countries other than the United Kingdom may be classed as follows:—

	Imports from Japan.		Imports from other countries.	
	Com- petitive.	Non-com- petitive.	Com- petitive.	Non-com- petitive.
	Millions of yards.	Millions of yards.	Millions of yards.	Millions of yards.
Plain grey-Long cloth and shirtings	207	—	15	—
Jaconets, etc.	—	—	—	—
Bordered grey-dhutis	30	5	—	—
White (bleached)	—	5	—	23
Printed, dyed or coloured	86	24	25	37
	<u>323</u>	<u>34</u>	<u>40</u>	<u>60</u>

It will be seen that more than nine-tenths of the imports from Japan and about two-fifths of the imports from other countries compete directly with Indian goods. This estimate is Mr. Hardy's.

4. Since the excise duty was abolished and the Indian industry has received the full benefit of the 11 per cent. revenue duty, it has not been argued in any representation put forward by the Millowners that British goods were being sold at prices which made it difficult for the Indian mills to compete. From first to last the whole emphasis has been laid on the competition from Japan. In view of this fact, it seems impossible to argue that any protection in excess of the 15 per cent. revenue duty is needed, so far as imports from the United Kingdom are concerned, for if it were needed, the Millowners would certainly have asked for it. Chapter XI of the Report of the Tariff Board, in which they review the various suggestions made for assisting the industry throws some light on this aspect of the case. The competition of British goods is never even mentioned as a reason for granting protection.

5. During the last 20 years the Indian mill industry has made extraordinary progress, and its expansion has taken place almost entirely at the expense of the British industry. During that period the protection given by the operation of the Customs and Excise duties was as follows:—

1909-1917	Nil.
1917-1921	4 per cent.
1921-1925	7½ "
1925-1930	11 "

It is true that the development of the Indian industry is largely the result of the war, but since the war the United Kingdom has never been able to regain its old position, and it is Indian goods rather than Japanese goods which have replaced the imports from the United Kingdom. The development of the Indian industry may be illustrated by figures for the imports and production of dhutis, plain grey longcloth and shirtings, and coloured goods.

6. *Dhutis.*—

	Imports from the U.K.		Indian production.
	Millions of yards.		Millions of yards.
1909-10	604	250	
1910-11	523	252	
1911-12	575	268	
1912-13	724	291	
1913-14	806	285	
Average	646	269	

	Imports from the U.K.	Imports from Japan.	Indian production.
	Millions of yards.	Millions of yards.	Millions of yards.
1924-25	488	1	458
1925-26	414	14	516
1926-27	441	28	586
1927-28	493	34	616
1928-29	454	35	564
Average	458	22	548
1929 (April to September) ...	205	24	342

Japan did not enter this trade to any appreciable extent until 1925-26 and even in 1928-29 sent only 35 million yards to India, and it is therefore clear that Indian dhutis have displaced a substantial quantity of dhutis made from the coarser counts and formerly imported from the United Kingdom. The figures for the first nine months of 1929-30 are very significant.

7. *Longcloth and Shirtings.*—

	Imports from the U.K.	Imports from Japan.	Indian production.
	Millions of yards.	Millions of yards.	Millions of yards.
1909-10	482	—	245
1910-11	462	—	288
1911-12	497	—	313
1912-13	619	3	303
1913-14	540	5	292
Average	520	2	288
1924-25	146	60	526
1925-26	87	84	521
1926-27	71	97	580
1927-28	77	154	620
1928-29	48	191	564
Average	86	117	562
1929 (April to September) ...	12	149*	314

(* Includes imports from China also).

These figures speak for themselves. For the last five years the Indian production has stood at a level almost twice as high as before the war, the British imports are less than one-sixth of what they were before the war; and though the Japanese imports have been increasing rapidly, the British and Japanese imports together are less than two-fifths of the pre-war imports from the United Kingdom alone. The displacement of British goods has been effected to a far larger extent by Indian goods than by Japanese goods. In the face of these figures it seems impossible to believe that against the handicap of a 15 per cent. revenue duty, the United Kingdom can ever recover any substantial share of the Indian market for plain grey shirtings. Here again the figures of the first six months of 1929-30 are significant.

8. Coloured Goods.—(Including printed, dyed and woven coloured).

				Imports from the U.K.	Imports from Japan.	Imports from other countries.	Indian produc- tion.
				Millions of yards.	Millions of yards.	Millions of yards.	Millions of yards.
1909-10	...	...	...	433	—	29	192
1910-11	...	...	...	557	—	31	214
1911-12	...	...	...	554	—	35	253
1912-13	...	...	...	638	1	43	306
1913-14	...	...	...	770	2	59	292
Average				590	1	39	251
1924-25	...	...	...	338	41	28	588
1925-26	...	...	...	267	70	29	540
1926-27	...	...	...	318	86	43	681
1927-28	...	...	...	352	103	50	681
1928-29	...	...	...	335	110	62	487
Average				342	82	42	595
1929 (April to September)				148	78	24	257

Here again the figures show that the United Kingdom has lost 5-12ths of her trade, partly to Japan but mainly to India.

9. What has been said above is not the whole story about coloured goods, for the export of coloured goods must also be taken into account. The following table gives the pre-war and post-war figures:—

Export of piecegoods, coloured, printed and dyed.

				Exports from Madras.	Exports from Bombay.	Total exports.
				Millions of yards.	Millions of yards.	Millions of yards.
1909-10	...	...	...	22	19	41
1910-11	...	...	...	23	20	43
1911-12	...	...	...	22	18	40
1912-13	...	...	...	25	17	42
1913-14	...	...	...	26	19	45
Average				24	19	42
1924-25	...	...	...	37	98	136
1925-26	...	...	...	43	83	126
1926-27	...	...	...	46	130	176
1927-28	...	...	...	42	107	149
1928-29	...	...	...	41	90	131
Average				42	102	144

The exports from Madras and Bombay have been shown separately because the former are largely handloom goods. The point brought out in the table is that since Bombay has been able to export in the last five years five times the quantity of coloured goods which she exported before the war, since these exports go to markets where Indian goods have no customs duty to assist them, and finally since the exports from Bombay amount to one-sixth of the Indian production of coloured goods and to more than one-fourth of the production of coloured goods in Bombay Island, the competition from British goods cannot be so intense as to justify the imposition of a protective duty, in addition to the revenue duty of 15 per cent. The truth is that coloured goods do not constitute a single class of goods like dhutis or shirtings, for the term covers a wide variety of different classes of goods. In some classes India not only holds the internal markets, but also exports substantial quantities. In other classes the competition of Japanese goods is very severe. But I cannot recall any class of coloured goods in respect of which we have been told that the Indian product is being undercut by British goods.*

10. No similar analysis is possible for plain bleached goods, for the imports from the United Kingdom are woven almost entirely from counts above 50's, and no similar class of goods is made in India. The Indian output of plain bleached goods is indeed negligible. On the other hand, there is a substantial output in India of bleached goods with woven coloured stripes, but these are classed in the returns as coloured goods and do not compete with imports of plain bleached goods from the United Kingdom. They do compete with imported coloured goods, and have recently suffered from the competition of printed goods from Japan.

11. The final inference to be drawn from all the figures I have given seems to be this. Only about one-eighth of the imports from the United Kingdom compete directly with Indian goods, because in any class of goods which can be made from Indian cotton, the United Kingdom mills have been unable to face the competition of the Indian mills, and have been gradually driven out of the market. They hold their own only in those classes of goods which cannot be made out of Indian cotton. British goods have been displaced by Indian goods during a period in which the shelter afforded by the revenue duty was 11 per cent. or less. In these circumstances, it seems impossible, after the duty has been raised to 15 per cent., that Lancashire should recapture the market for those classes of goods which can be made from Indian cotton.

12. It may be urged that a 20 per cent. duty on all imported piecegoods would lead to a rapid development of the industry, and in particular would bring about a substantial increase in the spinning and weaving of the finer counts made from imported cotton. The answer to this plea is to be found in the Honourable Finance Member's budget speech. What Government have proposed is protection for a strictly limited period with a strictly limited objective. The object in view at the moment is not the development of the industry, but its preservation. The continued existence of a large number of the mills in Bombay Island is threatened, and it is only because the danger is so acute that Government have felt justified in proposing a measure which involves a departure from their ordinary fiscal policy. To keep the industry alive during the next three years what is required is not encouragement to launch out into new forms of manufacture, which involve new equipment and more highly trained labour, but measures which will preserve to the mills the markets in those classes of goods which they are already equipped to produce and for the manufacture of which their labour is trained. Any substantial increase in the production of the finer goods means the expenditure of capital, the purchase of new equipment and improvements in the efficiency of labour, and the three years would be over before much progress could be made. In the opinion of Government, the proper time to consider what assistance the mill industry may require in order to extend its range and undertake the manufacture of the finer goods, of which the present production is extremely small, will be

when the Tariff Board enquiry is held in 1932-33. There is no evidence at present that more than 15 per cent. on British goods is required in order to permit of considerable progress in that direction. But since the pressure of foreign competition increases with the price of the goods, it is indispensable, if progress is to be healthy, that the efficiency of the labour in the Indian mills should be improved. The inability of many of the Indian mills to face Japanese competition is due to the much higher standard of efficiency in the Japanese mills. If the Indian industry is ever to be established on a sound basis, great improvements are necessary, and if the duties are put too high, the stimulus to efficiency will be removed.

13. It is not argued by Government that the Indian mills would derive no benefit at all from a 20 per cent. duty on all goods irrespective of the country of origin. But Government feel most strongly that the benefit the Indian mills could derive from such a duty during the next three years would be small, and wholly incommensurate with the burden imposed on the consumer. Taking the values of 1928-29, an additional 5 per cent. on British goods would mean a burden on the consumer of Rs. 2 crores a year. Seven-eighths of this sum would give no appreciable benefit to the Millowners because their output of the finer goods during the period must be very small. The remaining Rs. 25 lakhs might benefit the industry to the extent to which Indian goods replaced British goods. But there is a limit to the extent of the replacement which can occur in the next three years, and it is doubtful whether it would proceed more rapidly with a 20 per cent. duty on British goods than with a 15 per cent. duty. The Indian manufacturer would probably not gain much in the matter of price from the higher duty on British goods, for in those classes which can be made from Indian cotton, the price of British goods is not the governing factor.

14. In order to complete this note it seems desirable to explain briefly the reason for singling out the class of plain grey goods for exceptional treatment. Non-British goods of other classes will be subject only to the protective duty of 20 per cent. *ad valorem*. Plain grey goods will be subject also to the minimum specific duty of $3\frac{1}{2}$ annas a pound. The first reason is the magnitude of the Indian production of plain grey goods. The following table gives the percentage of plain grey goods to the total production for the whole of India and for Bombay Island during the last seven years:—

	Bombay Island.	Rest of India (including the States).	All-India (including the States).
1922-23	51	46	49
1923-24	50	44	47
1924-25	50	44	47
1925-26	52	41	46
1926-27	50	38	44
1927-28	50	39	45
1928-29	50	42	44

It will be seen that plain grey goods represent half the total production of Bombay Island and about two-fifths of the production of the rest of India.

The second reason is that Japanese competition is more intense in this class of goods than in any other. The Japanese imports under this head amount to four-sevenths of their total imports, and the growth has been extraordinarily rapid. The third reason is that in this class of goods India is very near the point where she can supply the whole of her own requirements, apart from jaconets, mulls, etc., which are spun from the

finer counts. The annual consumption of this class of goods in India for the last five years has been about 1,160 million yards. The production in India in 1927-28 amounted to 1,159 million yards, while in the following year, when the mills in Bombay Island were on strike, the production of the mills in other parts of India rose from 484 to 577 million yards. We are, therefore, very near the time when internal competition will suffice to prevent an excessive rise in prices. The case is totally different in respect of coloured, bleached, and bordered grey goods, where India is not in a position to dispense with imports from abroad.

15. The Government of India's final conclusion was that, except in the case of plain grey goods, there were not sufficient grounds for imposing a higher duty than 20 per cent. against the goods of any country. But apart from that, there are certain administrative difficulties which would in any case make it impossible to adopt the expedient of a minimum specific duty, except in the case of plain grey goods. The reason is this. Plain grey goods are imported in bales, each containing goods of one standard quality, and an average consignment will have a dozen or more bales containing identical goods. When the importer is in a position to declare the weights it will be possible for the customs authorities to administer the specific duty by means of check weighment of a small percentage only. It will not ordinarily be necessary to open bales, and in weighment due allowance can be made for the weight of the packing. Bordered grey goods, i.e., dhutis, also came in bales, but the goods are not all of one standard quality, and it is rare for more than two or three bales to contain similar goods. Moreover, each bale may contain an assortment of dhutis of different qualities and different values, and it will be quite possible to pack a bale in such a way that, while the average value brought the whole of the contents within the scope of the specific duty, a considerable proportion of the contents might be of higher value and properly subject to the *ad valorem* duty. To check any tendency of this sort, it will be necessary to open a considerable proportion of the bales, and this is practically impossible without causing extreme delay and inconvenience to trade and depreciation of values. Bleached goods and coloured goods again are commonly imported in cases, each case containing an assortment of different classes of goods. The weight of the cases varies within wide limits, and the value per pound of the contents could not be checked by the mere check weighment of the case with its contents. Before the Appraiser could determine whether the goods should be assessed under the specific duty or under the *ad valorem* duty, it would be necessary to open each case and weigh separately each class of goods which it contained.

16. Four statements are annexed to this note. The first of them shows the imports of different kinds of goods from different countries in the year 1928-29, and the other three give the production for the last seven years of the Indian mills in Bombay Island, in the rest of India and in the whole of India including the States.

7/3/30.

G. RAINY.

STATEMENT I.
Imports of cotton piecegoods, 1928-29.

	Quantity—Millions of yards.				Value—Rs. lakhs.			
	From the U.K.	From Japan.	From other countries.	TOTAL.	From the U.K.	From Japan.	From other countries.	TOTAL.
<i>Plain Grey—</i>								
Longcloth and shirtings	48.36	191.49	12.17	252.02	121.33	478.66	29.75	629.74
Jaconets	78.50	0.27	0.02	78.79	183.25	0.51	0.03	183.79
Other	1.93	15.34	3.09	20.36	5.01	42.54	9.49	57.04
Total plain grey	128.79	207.10	15.28	351.17	309.59	521.71	39.27	870.57
<i>Coloured—</i>								
Printed	175.10	36.03	33.27	244.40	544.25	89.21	107.62	741.08
Dyed	116.33	23.30	15.95	155.58	424.89	61.00	76.25	562.14
Woven coloured	44.17	50.47	12.31	106.95	230.17	121.07	80.36	431.60
Total coloured	335.60	109.80	61.53	506.93	1199.31	271.28	264.23	1734.82
<i>Bordered grey</i>	452.83	34.64	—	487.47	1068.50	80.28	—	1148.78
<i>White (bleached)</i>	525.36	5.46	23.26	554.08	1423.36	15.36	94.79	1533.51
GRAND TOTAL	1442.58	357.00	100.07	1899.65	4000.76	888.63	398.29	5287.68

STATEMENT II A.

Statement showing the mill production of piecegoods (in millions of yards) for the seven years ending 1928-29.

Bombay Island.

	1922-3. Yds. mil- lions.	1923-4. Yds. mil- lions.	1924-5. Yds. mil- lions.	1925-6. Yds. mil- lions.	1926-7. Yds. mil- lions.	1927-8. Yds. mil- lions.	1928-9. Yds. mil- lions.
Dhutis ...	102	98	111	115	150	169	86
Longcloth and shirtings ...	289	279	326	307	374	378	168
Other Grey and bleached goods	156	146	168	144	194	197	101
Coloured goods ...	323	333	381	306	417	387	183
	870	856	986	872	1,135	1,131	538

STATEMENT II B.

Statement showing the mill production of cotton piecegoods (in millions of yards) for the seven years ending 1928-29.

Rest of India (including Indian States).

	1922-3. Yds. mil- lions.	1923-4. Yds. mil- lions.	1924-5. Yds. mil- lions.	1925-6. Yds. mil- lions.	1926-7. Yds. mil- lions.	1927-8. Yds. mil- lions.	1928-9. Yds. mil- lions.
Dhutis ...	329	301	347	401	436	447	478
Longcloth and shirtings ...	182	165	200	214	207	242	306
Other Grey and bleached goods	214	209	230	233	216	242	271
Coloured goods ...	130	171	207	234	264	295	301
	855	846	984	1,082	1,123	1,226	1,356

STATEMENT II C.

Statement showing mill production of cotton piecegoods (in millions of yards) for the seven years ending 1928-29.

All-India (including Indian States).

	1922-3. Yds. mil- lions.	1923-4. Yds. mil- lions.	1924-5. Yds. mil- lions.	1925-6. Yds. mil- lions.	1926-7. Yds. mil- lions.	1927-8. Yds. mil- lions.	1928-9. Yds. mil- lions.
Dhutis ...	431	399	458	516	586	616	564
Longcloth and shirtings ...	471	444	526	521	581	620	474
Other Grey and bleached goods	370	355	398	377	410	439	372
Coloured goods ...	453	504	588	540	681	682	484
	1,725	1,702	1,970	1,954	2,258	2,357	1,894

APPENDIX B—(CHAPTER III).

ACT NO. XVII OF 1930.

AN ACT FURTHER TO AMEND THE INDIAN TARIFF ACT, 1894.

VIII
of
1894. Whereas it is expedient further to amend the Indian Tariff Act, 1894, in order to protect the cotton textile industry in British India in respect of the manufacture of cotton piece-goods, and in order to continue for a further period the protection already given to that industry against competition in cotton yarn produced under industrial conditions which enable such yarn to be produced at a cost below that at which it can be produced in British India; it is hereby enacted as follows:—

1. This Act may be called the Cotton Textile Industry (Protection) Act, 1930.

VIII
of
1894. 2. (1) After Item No. 156 of the Second Schedule to the Indian Tariff Act, 1894, the following heading and Item shall be inserted, namely:—

YARNS AND TEXTILE FABRICS.

156A.	COTTON PIECEGOODS (other than fents of not more than nine yards in length)— (a) plain grey, that is, not bleached or dyed in the piece, if imported in pieces which either are without woven headings or contain any length of more than nine yards which is not divided by transverse woven headings—		
	(i) of British manufacture.	<i>Ad Valorem</i>	15 per cent. or 3½ annas per pound, whichever is higher.
	(2) not of British manufacture.	Do.	20 per cent. or 3½ annas per pound, whichever is higher.
	(b) others—		
	(i) of British manufacture.	<i>Ad Valorem</i>	15 per cent.
	(ii) not of British manufacture.	Do.	20 per cent.

(2) The amendment made by sub-section (1) shall have effect only up to the 31st day of March, 1933.

(3) The words "or 3½ annas per pound, whichever is higher" appearing in the fourth column of Item No. 156A of the said Second Schedule, as inserted by sub-section (1), shall not have effect until such date as the Governor-General in Council may, by notification in the Gazette of India, appoint.

VIII
of
1894. 3. (1) In item No. 44 of the Second Schedule to the Indian Tariff Act, 1894, after the figure and words "5 per cent." the figure and words "or 1½ annas per pound whichever is higher" shall be added.

(2) The amendment made by this section shall have effect only up to the 31st day of March, 1933.

APPENDIX C—(CHAPTER V).

VALUE OF IMPORTS WITH PRINCIPAL COUNTRIES, DISTINGUISHING PRINCIPAL ARTICLES.

TABLE A.

UNITED KINGDOM.

Articles.	Pre-war average.	1927-28.	1928-29.	1929-30.
		(Rs. 000's	omitted).	
<i>Imports therefrom—</i>				
Animals, living	5,02	13,67	8,92	8,76
Apparel	59,29	68,36	69,86	59,54
Arms, ammunition, etc.	30,60	55,39	51,54	53,33
Artificial silk yarn... ..	—	46,84	30,52	19,52
✓Asbestos	—	28,89	24,84	21,68
Belting for machinery	36,26	68,45	65,52	67,67
Bobbins	—	34,30	32,22	45,48
Books and printed matter	41,05	53,01	55,88	60,97
Boots and shoes	51,33	29,35	36,90	22,28
✓Building materials	59,89	74,72	69,82	65,36
Carriages and carts	19,11	9,05	7,98	7,43
✓Chemicals	69,55	1,46,72	1,47,29	1,59,33
China clay	—	18,07	9,65	15,10
Coal and coke	41,33	16,45	10,24	5,16
✓Cordage and rope	4,39	4,37	4,21	5,10
Cotton—				
Raw	58,67	7,58	11,77	4,64
✓Twist and yarn	3,35,18	3,09,49	3,56,10	2,95,91
✓Piecegoods				
Grey	20,73,55	15,54,39	13,78,09	11,75,99
White	10,87,38	14,19,94	14,23,36	12,02,58
Coloured	11,29,72	12,59,06	11,99,30	9,50,44
Other manufactures	1,40,25	1,55,08	1,51,88	1,55,03
✓Cutlery	10,53	9,86	10,90	11,12
Cycles and parts	29,40	1,00,61	1,07,28	96,62
✓Drugs and medicines	54,03	84,23	88,98	95,29
Dyeing and tanning sub- stances	6,90	15,96	16,87	22,08
✓Earthenware and porcelain	30,50	30,30	28,27	25,68
Flax manufactures	28,83	35,66	34,29	32,35
✓Furniture	10,84	13,14	13,11	14,00
Glass and glassware	22,26	23,16	20,73	22,15
Haberdashery and mil- linery	61,21	30,10	27,32	26,26
✓Hardware	1,88,61	2,06,25	1,88,73	1,80,42
✓Instruments, apparatus, etc.	1,04,88	2,73,35	2,88,32	3,03,30
Ivory	11,33	9,13	8,79	5,93
Jewellery, etc.	14,51	11,03	11,15	21,60
Jute manufactures	10,09	4,84	6,04	6,73
✓Leather, including hides, tanned, etc.	38,59	44,57	39,94	42,00
Liquors—				
✓Ale, beer and porter	45,64	63,40	61,30	68,65
Spirit	69,47	1,36,07	1,36,04	1,41,27
Wines	13,62	11,84	10,72	10,43
Machinery and millwork	4,97,69	12,53,38	14,09,41	13,68,28
Manures	1,68	4,40	23,63	31,45

TABLE A—continued.

Articles.	Pre-war average.	1927-28.	1928-29.	1929-30.
		(Rs. 000's	omitted).	
Metals—				
Aluminium	5.38	47.57	35.71	39.79
Brass	6.13	89.22	84.09	56.03
Copper	1,67.45	45.34	49.25	29.96
Iron	28.88	10.48	7.06	7.93
Iron and steel	6,96.13	13,63.96	11,90.05	9,28.78
Lead	13.99	7.32	3.88	4.20
Steel	42.02	77.89	1,07.94	81.59
Zinc	14.85	19.95	15.22	11.81
Others	27.43	23.30	22.65	26.69
Motor cars and motor cycles, etc.	74.50	1,69.94	1,62.99	1,59.02
Oils, mineral	22.31	25.69	19.99	32.13
„ vegetable, animal, etc.	17.76	16.92	14.76	14.44
Packing, engine and boiler	4.98	3.86	3.61	3.01
Paints and painters' materials... ..	56.00	1,12.19	1,04.02	99.98
Paper and pasteboard	73.44	1,09.59	1,23.24	1,21.87
Piecegoods of cotton and artificial silk	—	99.07	84.12	41.55
Pitch and tar	8.72	2.77	2.23	2.42
Polishes	9.48	21.42	22.62	24.22
Precious stones	14	13.84	9.84	10.17
Printing materials... ..	14.70	24.47	26.90	25.71
Provisions	1,34.15	2,34.08	2,25.46	2,35.11
Railway plant, etc.	5,54.48	3,71.44	—	—
Rubber manufactures, including tyres, etc.	16.45	95.59	89.79	1,11.45
Salt	23.44	26.93	19.53	19.49
Ships, parts of	18.00	15.84	19.00	10.04
Silk manufactures, including yarn	19.07	8.37	11.08	8.17
Soap	56.52	1,47.30	1,38.85	1,45.81
Stationery	41.44	52.62	55.10	55.53
Sugar	25.37	1.54	10.10	1,03.20
Tallow and stearine	10.43	5.32	4.41	6.33
Tea-chests	41.32	60.81	55.93	63.96
Tobacco	51.83	2,55.23	2,13.75	2,26.40
Toilet requisites	10.35	24.32	25.89	27.90
Toys and requisites for games	16.75	15.34	16.50	15.30
Umbrellas	24.71	16.25	15.62	11.23
Woollen manufactures, including yarn	1,85.24	2,10.56	1,65.22	1,28.12
Other articles	1,50.99	3,59.21	5,00.32	5,04.04
Total	91,58.01	1,19,21.01	1,13,24.43	1,03,10.29

TABLE B.

ITALY.

Articles.	Pre-war average.	1927-28.	1928-29.	1929-30.
		(Rs. 000's	omitted).	
<i>Imports therefrom—</i>				
Apparel	6,98	13,00	13,11	11,86
Art, works of	45	1,01	1,51	77
Building materials... ..	2,57	13,49	10,14	13,67
Buttons	—	5,44	9,54	6,03
Chemicals	4,72	17,67	14,50	21,24
Dyeing and tanning sub- stances	1,49	12,81	15,80	7,24
Fruits and vegetables	8,48	30,50	27,11	38,26
Glassware	4,26	5,95	5,28	6,12
Instruments	1,70	9,09	13,83	15,14
Liquors	78	3,40	3,45	3,02
Machinery	1,44	12,79	16,64	15,39
Metals—				
Aluminium	9	5,95	57	1,52
Brass	1,09	20	26	35
German silver	—	1,16	5,60	4,28
Quicksilver	—	4,49	5,42	4,40
Others	67	4,13	4,40	7,03
Motor cars, etc.	66	39,34	27,51	28,23
Paper and pasteboard	79	6,70	5,82	5,24
Rubber manufactures	13	10,53	20,41	23,62
Stone and marble	2,48	3,62	2,81	3,64
Sugar	23	34	—	4
Textiles—				
Artificial silk yarn	—	66,24	61,04	45,81
Cotton—raw	11	—	10	16,61
" twist and yarn	4,98	5,65	10,25	16,57
" manufactures... ..	45,22	96,11	1,31,49	95,65
Haberdashery and mil- linery	4,32	8,28	12,04	9,42
Silk manufactures	19,83	23,46	43,29	30,54
Piecegoods of cotton and artificial silk	—	91,31	92,64	51,18
Wool manufactures	4,07	87,61	90,86	83,01
Other articles	27,30	96,04	1,17,88	1,07,69
Total	1,44,84	6,76,31	7,35,80	6,73,37

TABLE C.
BELGIUM.

Articles	Pre-war average.	1927-28.	1928-29.	1929-30.
		(Rs. 000's	omitted).	
<i>Imports therefrom—</i>				
Artificial silk	—	8,08	10,67	5,48
Arms, etc.	26	2,15	2,42	2,55
Building materials	4,04	4,41	5,81	7,46
Cotton manufactures	42,12	25,31	23,54	14,04
Dyeing and tanning substances	10,82	3,60	2,13	1,12
Earthenware and porcelain	3,45	2,09	2,19	2,24
Glass and glassware	16,92	24,42	24,82	23,68
Hardware	5,58	4,36	5,22	4,00
Liquors	1,50	1,61	1,64	1,65
Machinery and millwork	1,76	29,17	16,91	17,68
Manures	75	7,22	9,11	8,68
Metals—				
Brass	37	1,90	1,09	78
Copper	3,54	17,39	10,33	4,96
Iron	15,95	1,99	2,89	2,49
Iron or steel	45,46	2,51,18	2,98,21	2,87,65
Steel	63,54	1,31,43	1,05,95	1,14,02
Motor cars, etc.	4,15	1,85	1,78	2,27
Paints and painters' materials... ..	2,08	5,88	4,51	5,70
Paper and pasteboard	5,00	9,66	8,28	7,26
Precious stones	1	62,43	72,49	65,90
Provisions	1,41	25,64	21,21	7,62
Railway plant, etc.	4,28	59,30	—	—
Sugar	29	1,14	97	3,57
Woollen manufactures	2,11	9,43	8,30	6,68
Other articles	40,61	56,00	79,50	81,20
Total	2,76,00	7,47,64	7,19,97	6,78,68

TABLE D.

GERMANY.

Articles.	Pre-war average.	1927-28.	1928-29.	1929-30.
		(Rs. 000's	omitted).	
<i>Imports therefrom—</i>				
Apparel	14,87	24,75	22,01	17,12
Bobbins	—	1,56	39	50
Building materials...	6,72	3,66	3,58	4,09
Buttons	—	7,28	7,16	5,72
Carriages	2,81	1,21	2,07	2,23
Chemicals	10,62	56,87	41,49	43,77
Clocks and watches	1,36	5,08	7,09	6,63
Cutlery	7,95	26,40	22,24	26,80
Cycles	1,75	14,54	16,91	13,72
Drugs and medicines	6,19	45,71	36,45	40,61
Dyeing substances...	87,40	1,39,57	1,55,85	1,28,52
Glassware	23,69	49,10	40,73	34,18
Hardware	57,24	1,61,15	1,68,62	1,65,31
Instruments	13,57	57,31	65,54	77,15
Liquors	19,41	39,96	35,76	37,24
Machinery	30,27	1,04,83	1,13,98	1,73,79
Manure	2,20	11,58	10,13	17,91
<i>Metals—</i>				
Aluminium	12,16	5,15	5,07	13,86
Brass	1,56	95,93	1,19,67	1,25,44
Copper	93,41	37,05	48,58	30,71
Iron	2,86	55	92	16
Iron and steel	86,97	81,01	80,76	79,16
Steel	65,19	33,25	25,74	19,39
Zinc	3,24	4,47	5,05	16,16
Motor cars, etc.	5,64	5,47	6,23	8,27
Oils	19,57	33,77	41,90	27,48
Paints and painters' materials...	5,58	10,90	10,05	12,87
Paper and pasteboard	21,82	35,13	43,70	44,51
Paper-making materials	1,61	1,61	1,95	2,84
Printing materials...	1,02	7,82	9,10	10,33
Provisions	5,50	5,23	4,48	7,24
Railway plant	12,19	17,85	—	—
Rubber manufactures	3,82	13,10	16,48	33,90
Salt	9,46	16,87	16,73	14,30
Stationery	5,04	22,95	26,89	26,78
Sugar	3,84	3,59	54	27,56
<i>Textiles—</i>				
Artificial silk	—	56,88	39,10	16,84
Cotton manufactures	83,71	36,37	29,48	22,71
Haberdashery	22,10	30,51	39,85	23,22
Silk manufactures	16,81	7,53	17,34	13,72
Wool	90,62	81,96	85,11	62,41
Toys	11,10	15,05	16,72	15,28
Umbrellas	7,66	27,38	26,80	19,77
Other articles	57,03	96,41	1,16,33	1,09,01
Total	9,35,56	15,34,35	15,84,36	15,79,21

TABLE E.

JAPAN.

Articles.	Pre-war average.	1927-28.	1928-29.	1929-30.
		(Rs. 000's	omitted).	
<i>Imports therefrom—</i>				
Ale, beer and porter ...	3	3.38	3.84	4.58
Apparel	9.17	14.35	20.02	18.73
Artificial silk	—	13.46	33.86	1,45.47
Bobbins	—	1.53	2.24	2.96
Boots and shoes	16	1.61	3.05	29.42
Brass, bronze, etc....	7	30.56	35.50	32.87
Brushes and brooms ...	48	1.30	1.17	1.27
Buttons of all sorts ...	—	8.97	9.09	8.29
Camphor	11.48	17.17	18.35	19.16
Carriages	11	3.85	4.78	3.11
Cement	1	4.21	5.65	6.86
Chemicals	93	3.30	3.58	5.22
Coal and coke	7.02	1.66	13	20
Copper	27.99	5	3	4.11
Cotton, raw	9	4.12	1	60
" hosiery	65.23	1,13.54	1,25.19	1,23.35
" piecegoods	6.10	8,24.75	8,89.29	12,69.56
" yarn	6.16	2,23.60	1,23.72	1,63.78
" other manufactures	2.12	19.00	16.94	17.48
Drugs and medicines (other than camphor)	1.72	5.33	5.91	7.77
Earthenware and porcelain	4.23	32.59	25.35	31.47
Furniture and cabinetware	71	2.26	3.34	3.98
Glass and glassware—				
Bangles	5	25.64	22.48	24.95
Beads and false pearls ...	7.61	7.77	10.26	9.33
Bottles and phials	1.00	10.89	11.83	13.73
Funnels, globes, etc. ...	58	2.42	2.76	2.36
Table ware	1.41	5.30	6.81	9.04
Others	3.35	16.74	15.44	14.77
Haberdashery and millinery	10.88	21.97	19.66	20.24
Hardware	3.59	27.40	28.60	26.05
Instruments	85	5.32	7.40	12.07
Iron or steel	—	2.50	1.92	3.73
Machinery and millwork ...	63	2.39	4.52	6.30
Matches	28.40	3.47	81	50
Paints and painters' materials... ..	—	3.40	2.90	3.35
Paper and pasteboard	55	7.37	7.50	10.41
Provisions and oilman's stores	1.57	4.64	2.50	3.37
Rubber manufactures	—	86	1.12	81
Silk, raw	1.15	3.24	7.13	1.60
Silk manufactures... ..	1,31.45	1,57.61	1,67.24	1,60.24
Spices, ginger	3.40	45	1.87	1.45
Stationery (excluding paper)	2.17	5.88	6.71	6.66
Tea-chests	87	27	68	64

TABLE E.—(contd.)

Articles.	Pre-war average.	1927-28.	1928-29.	1929-30.
Toilet requisites	1,31	4,02	4,41	5,94
Toys and requisites for games	3,16	13,55	16,48	18,84
Umbrella fittings	4,91	16,27	11,15	10,37
Wood—timber	32	11,42	8,08	20,74
“ manufactures	71	3,75	7,54	9,67
Woollen manufactures	8	12,01	2,88	5,14
Other articles	10,54	83,05	54,14	56,01
Total	3,64,35	17,90,19	17,66,05	23,58,55

TABLE F.

UNITED STATES.

Articles.	Pre-war average.	1927-28.	1928-29.	1929-30.
		(Rs. 000's	omitted).	
<i>Imports therefrom—</i>				
Aluminium... ..	4,26	37,82	50,90	52,99
Apparel	33	6,95	13,13	15,79
Arms	80	5,32	3,15	3,48
Belting for machinery	1,11	11,86	9,29	12,12
Boots and shoes	54	15,84	15,65	10,41
Building materials... ..	88	16,71	10,14	17,30
Carriages	72	1,44	52	31
Chemicals	22	8,77	11,68	11,79
Clocks and watches	3,82	7,08	5,43	4,19
Copper	—	7,69	11,28	4,11
Cotton, raw	27,72	4,37,32	1,37,96	19,59
„ piecegoods	26,44	71,45	79,25	87,78
Drugs and medicines	4,18	20,23	18,97	23,46
Dyeing substances	—	14,82	13,88	16,13
Furniture	1,44	3,93	6,01	5,82
Glassware	1,17	5,33	4,61	5,44
Hardware	24,72	62,22	61,16	59,23
Instruments	5,86	63,66	73,00	79,35
Iron and steel	48,56	57,02	61,42	52,48
Leather	—	12,47	14,85	17,64
Machinery	24,56	1,57,31	2,06,79	1,75,22
Manures	—	3,54	7,66	14,50
Motor cars, etc.	8,49	2,54,83	3,62,64	2,98,08
Oils, mineral	2,19,66	4,61,10	2,62,39	3,12,07
Paper and pasteboard	1,21	13,36	8,33	8,02
Provisions	3,80	47,87	43,97	48,05
Railway plant	54	10,36	—	—
Rubber	16	65,08	49,38	72,71
Spirit	5,34	15,64	16,99	18,71
Stationery	2,05	4,47	5,44	5,03
Sugar	18	1,08	64	62
Tobacco	5,90	28,81	57,27	39,11
Toilet requisites	2,22	17,82	17,27	19,75
Wood and timber	6,56	8,03	6,80	9,33
Other articles	15,59	88,68	98,20	96,38
Total	4,49,03	20,43,18	17,36,05	16,16,99

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B.—During the year 1930.

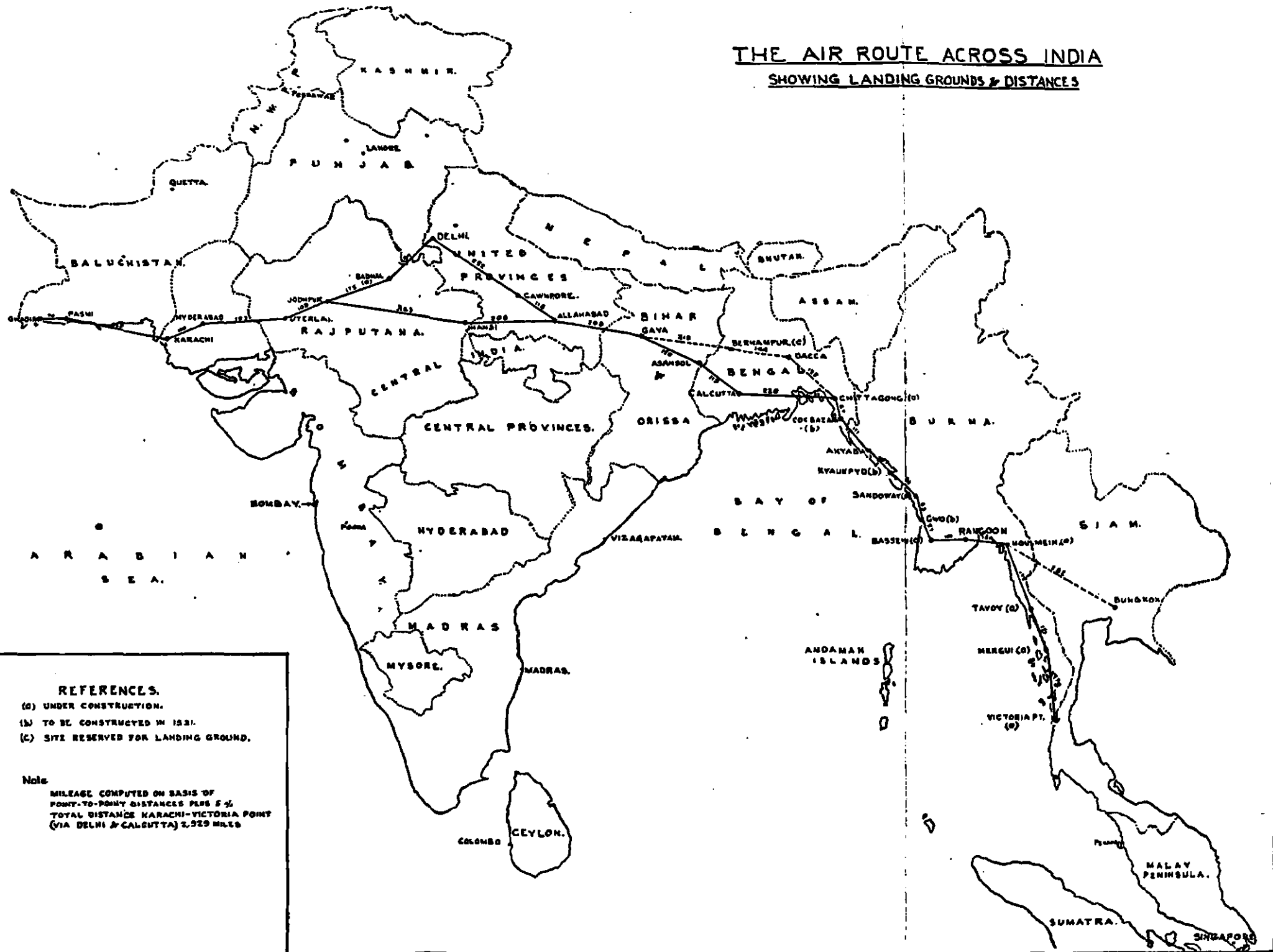
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THE AIR ROUTE ACROSS INDIA

SHOWING LANDING GROUNDS & DISTANCES



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- (B) TO BE CONSTRUCTED IN 1931.
- (C) SITE RESERVED FOR LANDING GROUND.

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