

DEPARTMENT OF OVERSEAS TRADE.

**Report on the  
Conditions and Prospects  
of British Trade in  
INDIA**

1926-27.

By **THOMAS M. AINSCOUGH, C.B.E., M.Com., F.R.G.S.**

*His Majesty's Senior Trade Commissioner in India and Ceylon.*



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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 13 Trade Commissioners' offices. These are situated, four in Canada (Montreal, Toronto, Vancouver, Winnipeg); two in South Africa (Johannesburg, Cape Town); two in Australia (Melbourne, Sydney); two in India (Calcutta and Bombay—to cover also Ceylon); and one each in New Zealand (Wellington), British East Africa (Nairobi) and British West Indies (Trinidad).

The Trade Commissioners in the Dominions 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. Ainscough, O.B.E., H.M. Senior Trade Commissioner; Mr. W. D. Montgomery Clarke, H.M. Trade Commissioner, Calcutta; and Major R. W. 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 between thirty and forty posts in all, and the officers of the service 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 three 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.*

The service has been re-organised. Particular attention has been given to the commercial side of consular work.

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.

A handbook giving fuller details of the overseas organization of the Department can be obtained on application at the Department of Overseas Trade, 35, Old Queen Street, S.W.1.

#### 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 the views of the Department.*

## COVERING DESPATCH.

To the Right Honourable Sir Philip Cunliffe-Lister, K.B.E.,  
M.P., President of the Board of Trade.

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

August 1st, 1927.

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 1926-27.

This is the first of the annual reports written since the war in which it has been possible to strike a definitely optimistic note with regard to the import trade of this vast market. At the same time, many of the important and far-reaching changes which are taking place tend to weaken the British position in India and call for special efforts and revised methods and organisation in order to meet them. As in previous reports, it has been my aim not merely to state facts and tendencies, but, wherever possible, to comment on them and to advance practical and carefully considered suggestions.

I desire 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, the Chief Controller and staff of the Indian Stores Department and to the Collectors of Customs for their 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 many 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 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>	1924-25.	1925-26.	1926-27.
Cotton manufactures ...	36	35	33	29	28
Iron and steel ...	7	6	8	8	7
Machinery ...	4	4	6	7	6
Sugar ...	9	10	8	7	8
Railway plant ...	4	5	2	2	1
Hardware ...	2	2	3	2	2
Mineral oil ...	3	3	4	4	4
Silk ...	3	2	2	1	2
Other articles ...	32	33	34	40	42

#### EXPORTS (*in percentages*).

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

	1909-14. <i>Average.</i>	1914-19. <i>Average.</i>	1924-25.	1925-26.	1926-27.
Jute, raw and manufactures ...	19	25	21	26	26
Cotton, raw and manufactures ...	15	16	27	28	23
Food-grains ...	21	17	17	13	13
Seeds ...	11	6	9	8	6
Tea ...	6	8	9	7	9
Hides and skins ...	7	8	4	2	2
Other articles ...	21	20	13	16	21

## 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>	1924-25.	1925-26.	1926-27.
United Kingdom ... ..	63	56	54	51	48
Other parts of the British Empire ... ..	7	9	8	8	7
United States of America ...	3	7	6	7	8
Japan ... ..	2	10	7	8	7
Java ... ..	6	8	6	6	6
Germany ... ..	6	1	6	6	7
Other foreign countries ...	13	9	13	14	17

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>	1924-25.	1925-26.	1926-27.
United Kingdom ... ..	25	31	26	21	21
Other parts of the British Empire ... ..	16	21	13	14	17
United States of America ...	8	12	9	10	11
Japan ... ..	8	11	14	15	13
France ... ..	7	4	5	6	4
Germany ... ..	10	1	7	7	7
Other foreign countries ...	26	20	26	27	27

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.

Area—	Sq. miles.
British India ... ..	1,094,300
Native States ... ..	711,032
<b>Total</b> ... ..	<b>1,805,332</b>
<b>Population Census of 1921—</b>	
British India ... ..	247,003,293
Native States ... ..	71,939,187
<b>Total</b> ... ..	<b>318,942,480</b>

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	} e.g., Rs.1,45,67,200=1 crore, 45 lakhs, 67,200 rupees.
1 crore=100 lakhs.	

Rate of Exchange (pre-war and current average quotations)—

Pre-war ... ..	1s. 4d.
Current. 30.6.27 ... ..	1s. 6d.

Index Numbers—July, 1914=100.

Wholesale prices, Bombay ... ..	April, 1927=144.
Retail prices (food), Bombay ... ..	April, 1927=167.
Cost of living (European), Bombay ... ..	Jan., 1927=156.
“ “ (working class), Bombay ... ..	May, 1917=152.

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 28 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 Governments 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 India)	...	...	...	...	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 dr.

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, 1926, to 31st March, 1927.*

					Rs.
Merchandise	...	...	...	...	2,31,40,66,344
Government Stores	...	...	...	...	9,59,76,127
Treasure	...	...	...	...	41,53,20,573
Total	...	...	...	...	2,82,53,63,044

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

Imports of merchandise from United					Rs.
			Kingdom		1,10,58,12,651
"	"	"	United States of America		18,31,57,720
"	"	"	Germany	...	16,91,55,959
"	"	"	Japan	...	16,48,95,332
"	"	"	Java	...	14,33,08,008

*Total Exports.—(Indian Merchandise) 1st April, 1926, to 31st March, 1927, Rs. 301,44,59,772.*

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

Exports of Indian merchandise to United					Rs.
			Kingdom		63,77,40,714
"	"	"	Japan	...	41,00,87,961
"	"	"	United States of America		33,69,11,084
"	"	"	Germany...		20,23,97,783

*Railway mileage.—31st March, 1926.*

Railways owned by the State	...	...	...	...	27,429
Other railways	...	...	...	...	11,150
Total route mileage opened for traffic	...	...	...	...	38,579

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**REPORT**  
ON THE  
**CONDITIONS AND PROSPECTS OF BRITISH TRADE**  
IN  
**INDIA,**  
*1926—1927.*

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**CHAPTER I.**

GENERAL REVIEW OF THE PERIOD.

The trade of India during the past year has, generally speaking, been fairly good in face of many adverse factors. The heavy fall in the prices of jute and cotton resulted in a considerable contraction in the value of the country's exports of those raw materials. A small wheat crop, coinciding with increased consumption of wheat in the country itself as a result of greater prosperity in the Punjab, had the effect of reducing this valuable export to very small figures. On the other hand, shipments of tea were heavier owing to a larger crop. The monsoon, for the fifth year in succession, was on the whole a good one and the agriculturist enjoyed a prosperous year. Unfortunately, while the aggregate of the import trade shows a slight increase, the steady fall in the price of cotton textiles together with serious communal disturbances in Calcutta and elsewhere, prevented that revival in the piecegoods trade which had been expected as a result of several years of agricultural prosperity. Dealers steadily lost money on their purchases, stocks accumulated owing to the poor clearances resulting from Hindu-Moslem rioting in Calcutta and certain upcountry centres, and it was only the action of the Marwari Chamber of Commerce in Calcutta in restricting forward purchases which saved the situation from becoming most acute. The depression in the Bombay cotton industry was accentuated by the heavy fall in cotton values but the ultimate effect of a larger demand following on cheaper production should be favourable.

The exports of Indian produce and manufactures including re-exports fell by Rs. 76 crores or 20 per cent. to Rs. 309 crores. On the other hand the total imports increased by Rs. 5 crores or 2 per cent. to Rs. 231 crores. The grand total of imports, exports and re-exports amounted to nearly Rs. 541 crores as compared with Rs. 612 crores in the previous year, a decrease of Rs. 71 crores or 12 per cent. The balance of trade in merchandise in favour of India fell from Rs. 161 crores to Rs. 79 crores. This was liquidated to the extent of Rs. 39 crores by imports of the precious metals, leaving a total visible balance of trade of just under Rs. 40 crores. Exchange remained fairly stable throughout the year in the region of 1s. 6d.



In my last report I alluded to the continuous strengthening of the financial position of the Government of India, year by year, as a result of greater prosperity and a far-sighted financial policy. This progress continues. The past financial year closed with a surplus of just over 3 crores and the Finance Member in his Budget for 1927/8 anticipates a further surplus of more than  $3\frac{1}{2}$  crores. Sir Basil Blackett stated in March that since the end of the financial year 1923-24, the last year in which a sterling loan was issued, up to 31st March, 1927, the Government of India spent outside India £26·2 million for purposes of capital outlay and £9·9 million on reduction of sterling debt, a total of £36·1 million. The whole of this outlay was financed without external borrowing. During 1927/8 they expect to spend £8·7 million on capital account outside India and £2·7 million on the reduction of sterling debt, a total of £11·4 million. If, as is confidently hoped, a sterling loan can be avoided in 1927/8, India will have covered about £48 million of capital disbursements outside India without borrowing abroad.

This wonderful improvement in India's financial position has been reflected in the steady rise in the price of Indian Government securities both in the Indian and London markets, and also in the rates at which Government loans are now raised in India. The present loan, which is subject to tax, bears interest at 4 per cent. and is issued at Rs. 94/8/-. It is repayable at par on August 1st, 1937, but the Government of India reserve the right to repay it, or any part of it, at par on or after August 1st, 1934, on giving three months notice. It is mainly a conversion issue, as subscriptions are invited in 6 per cent. Five-year bonds 1927 and  $5\frac{1}{2}$  per cent. War bonds 1928 as well as in cash. Par value *plus* a cash bonus of Rs. 6-4 is granted in the case of the former and par value *plus* a cash bonus of Rs. 12 in the case of the latter security.

Perhaps the most noteworthy event of the year was the stabilisation of the rupee in relation to gold. Following upon the recommendation of the Royal Commission on Indian Currency and Finance, the Indian Currency Bill, after being carried through the Legislative Assembly by a somewhat narrow margin of votes, was passed into law in March, 1927. It established the ratio of 1s. 6*d.* by enacting that Government would purchase gold at a price of Rs. 21-3-10 per tola of fine gold in the form of bars containing not less than 40 tolas and would sell gold or, at the option of Government, sterling for immediate delivery in London at the same price after allowing for the normal cost of transport from Bombay to London. A rate of 1s. 5*½d.* was notified as Government's selling rate for sterling to meet these obligations.

The fixation of the exchange rate at 1s. 6*d.* will give the greatest possible stimulus to the overseas trade of the country, as it will eliminate that element of uncertainty and speculation which

is such a handicap to the transaction of sound business. It is not desirable here to enter into the controversy as to whether a rate of 1s. 4d. or one of 1s. 6d. is the more advantageous to Indian economic interests. Those who are interested in this point would do well to read the Finance Member's able and lucid explanation of the position in the Assembly on March 7th. The outstanding advantage to the trader is stability, and there are clear signs that confidence has already been restored among the mercantile community and that they look forward to that improvement in foreign trade, which appears to be imminent, without any misgivings on the question of exchange.

The internal movements of merchandise during the year were seriously interfered with by the outbreaks of communal disturbances in Calcutta and other places in the Ganges Valley during the spring of 1926. The Hindu-Moslem riots in Calcutta between April and July, which involved the closing of the bazaars, caused such a feeling of insecurity that mofussil dealers kept away from the city, clearances were held up, there was no demand for ready goods and prices consequently fell away. Although the tension between the two communities is still acute, there have so far been no serious outbreaks this year and the great Moslem festivals of the Bakr-id and Mohurram have passed without any untoward events.

Apart from these communal troubles, the general political situation has undoubtedly improved. Although there is still a keen desire on the part of all political parties that the steps towards self-government should be greatly accelerated, there is also a growing realisation that this can only be achieved by constitutional methods and constructive co-operation with the Executive towards the desired end.

**The Outlook in the Import Trade.**—The outlook in the import trade is brighter than it has been at any time during the past five years. The country generally is in a prosperous condition as a result of five successive good monsoons. Imported goods, particularly textiles, have not been purchased on a considerable scale for years, consequently stocks are light throughout the country districts and there is an accumulated reserve of purchasing power, which is likely to be translated into actual buying as soon as it is realised that prices are on a safe level. A study of the index numbers of prices of imported cloth and of India's export products shows that the disparity between the two has been rapidly narrowing. In December-January last a large trade was done for India and this trade would have continued if Lancashire prices had not stiffened. Fortunately, the rise in price in the Manchester markets protected the purchases already made from being subsequently undersold and dealers, for the first time for years, have made good profits on their imports, which in many cases have been cleared from the ship's side

straight into consumption. The months of July and August 1927 should see a large business in piecegoods for November, December and January shipment, provided that the rise in prices as a result of higher rates for raw cotton and the activities of the Cotton Yarn Association do not result in a further curtailment of activity.

The official forecast for the south-west monsoon of 1927 is a most optimistic one. The Director-General of Observatories on June 8th stated that the monsoon rainfall was likely to be normal or in excess in the Peninsula and north-west India and normal in north-east India. The indications point to abundant and well-distributed rains throughout the country.

The engineering industries are bound to benefit from the large schemes of railway construction, harbour development, irrigation and hydro-electric enterprises and bridge building, which are dealt with in detail in chapter V and elsewhere in this report. The remission by the Government of India of the provincial contributions, which have hitherto been such a heavy tax on local governments and have seriously retarded their development, is almost certain to result in long deferred programmes of public works, such as roads, bridges, buildings, canals, etc., being undertaken in the near future. The movement is already noticeable and will probably gather force when it is realised by the Provincial Governments that at last they have the necessary funds for these important works. The extent to which British engineers will be successful will largely depend upon their readiness to adapt their Indian organisation to the changing methods of purchase, which are outlined in chapter IV. There will be a steadily increasing demand in India for plant and machinery of all kinds, for although foreign competition is keener than ever before, there is no reason why British firms should not continue to secure the preponderating share of this business if only they will give efficient service on the spot.

In the iron and steel trades, competition from the Continent and also from the Tata Iron and Steel Works is likely to increase. British makers still control the sheet trade and contribute largely to the imports of structural steel, bridgework etc. It is anticipated that the lower rates of duties now imposed on British standard steel will result in increased shipments of structural sections rolled to the British standard specification and that engineers in charge of important public works will be only too glad to use the more reliable British steel if the disparity in price is greatly reduced or eliminated.

With few exceptions, Indian industries have passed through a period of severe depression during the past few years. There are signs, however, of some improvement which will stimulate the demand for the countless miscellaneous items of equipment,

plant and stores, which—in the aggregate—amount to a very large sum and constitute a valuable British trade.

To summarise, all the criteria usually taken in compiling this annual forecast are this year distinctly favourable. India stands to-day on a firmer economic basis than she has ever done. Her credit, both internal and external, has never been so good. Recurring surpluses, once the provincial contributions are finally remitted by 1929, will probably be applied to the reduction of taxation, when it is hoped that favourable consideration will be given to the reduction of certain of the import duties which bear heavily on trade expansion. Exchange has been stabilised at 1s. 6d., a rate which is, comparatively speaking, favourable to the import trade. The agriculturist is prosperous and has probably a greater reserve to-day than he has ever had. The prospects for this year's crops are excellent. The stocks of imported goods, notably of textiles, are light, and large purchases of them are overdue. All these factors point to a revival in the import trade during the next twelve months. The only doubtful factor is the risk of internal disorder, due to Hindu-Moslem antagonism. There are signs, however, that communal feeling is slightly more restrained, thanks to the vigilance of the police and the efforts of the leaders of both parties to control their co-religionists.

**General Position of British Trade in India.** — The following table, compiled by the Director of 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 1926/7 as compared with the previous year and the last complete pre-war year :—

	Imports.			Exports, including re-exports.			Total Trade.		
	Pre-war average.	1925-26	1926-27.	Pre-war average.	1925-26.	1926-27.	Pre-war average.	1925-26.	1926-27.
	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	51	48	25	21	21	40	32	33
British Possessions ... ..	7	8	7	16	14	17	12	12	13
<b>TOTAL BRITISH EMPIRE ... ..</b>	<b>70</b>	<b>59</b>	<b>55</b>	<b>41</b>	<b>35</b>	<b>38</b>	<b>52</b>	<b>44</b>	<b>46</b>
<b>TOTAL FOREIGN COUNTRIES</b> <i>Principal Countries.</i>	<b>30</b>	<b>41</b>	<b>45</b>	<b>59</b>	<b>65</b>	<b>62</b>	<b>48</b>	<b>56</b>	<b>54</b>
<b>BRITISH EMPIRE—</b>									
United Kingdom ... ..	62.8	51.4	47.8	25.1	21.0	21.5	40.0	32.1	32.8
Ceylon ... ..	.5	.7	.6	3.7	3.9	4.8	2.4	2.8	3.0
Straits Settlements ... ..	2.1	2.5	2.5	3.4	2.6	3.1	2.9	2.6	2.8
Australia ... ..	.7	.6	.7	1.4	2.0	2.5	1.1	1.5	1.8
Hongkong... ..	.7	.4	.4	4.1	.8	1.0	2.7	.6	.7
Other British Possessions ... ..	2.9	3.5	2.9	3.4	4.9	5.6	3.2	4.4	4.4
<b>TOTAL BRITISH EMPIRE ... ..</b>	<b>69.7</b>	<b>59.1</b>	<b>54.9</b>	<b>41.1</b>	<b>35.2</b>	<b>38.5</b>	<b>52.3</b>	<b>44.0</b>	<b>45.5</b>
<i>Foreign Countries.</i>									
Germany ... ..	6.4	5.9	7.3	9.8	7.0	6.6	8.5	6.6	6.9
United States ... ..	3.1	6.7	7.9	7.5	10.4	11.1	5.8	9.0	9.7
Japan ... ..	2.5	8.0	7.1	7.5	15.0	13.3	5.5	12.4	10.7
Java ... ..	6.4	6.2	6.2	1.3	1.2	1.0	3.3	3.1	3.2
France ... ..	1.5	1.4	1.5	6.6	5.5	4.5	4.6	4.0	3.2
China (exclusive of Hongkong and Macao) ... ..	1.1	1.2	1.4	3.9	4.0	3.7	2.8	3.0	2.7
Belgium ... ..	1.9	2.7	2.9	5.3	3.2	2.9	3.9	3.0	2.9
Italy ... ..	1.0	1.9	2.7	3.2	5.0	3.7	2.3	3.8	3.3
Other Foreign Countries ... ..	6.4	6.9	8.1	13.8	13.5	14.7	11.0	11.1	11.9
<b>TOTAL FOREIGN COUNTRIES ... ..</b>	<b>30.3</b>	<b>40.9</b>	<b>45.1</b>	<b>58.9</b>	<b>64.8</b>	<b>61.5</b>	<b>47.7</b>	<b>56.0</b>	<b>54.5</b>
<b>TOTAL ... ..</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

The steady reduction in the United Kingdom's share of the import trade is a matter for serious concern. During the last five pre-war years, imports from the United Kingdom averaged 63 per cent. of the total imports into India. In the short-lived boom of 1920 the British proportion again reached 61 per cent., but since then there has been a steady fall year by year. In 1923/4 the figure was 58 per cent., in 1924/5 54 per cent., 1925/6 51 per cent. and 1926/7 48 per cent. *In the short space of three years the United Kingdom's share has fallen by no less than 10 per cent.*

The percentage figure of 48 quoted above represents the British share of the total imports of all kinds, including raw materials and comestibles such as mineral oils, ores, raw cotton and wool, sugar, spices, etc., in which the United Kingdom has no direct interest. Taking the imports of articles wholly or mainly manufactured, we find that the British share in 1913/14 was just under 76 per cent. while in 1926/7 it had fallen to 65 per cent. It should be noted, however, that even the imports of manufactured goods include items such as Chinese and Japanese silk pongees, matches, very low grade earthenware, glassware, toys, etc., in which British manufacturers do not compete. After eliminating these articles, I estimate that Great Britain still supplies nearly 70 per cent. of the imports into India of competitive manufactured goods.

The year 1926 was an abnormal one for British industry as it included the General Strike and the prolonged coal stoppage, which seriously affected most of the export trades. In the circumstances, it is remarkable that the British exports to India were so well maintained and that our proportion of the whole was not even lower.

It is a great potential source of weakness that the United Kingdom should only take from India less than one half the value of the goods which she exports to India. During the war, owing to the large supplies of foodstuffs and produce required for the armies in the field, and to the elimination of purchases by the Central Powers, she was able to increase her share of India's exports from 24 per cent. in 1913/14 to 30 per cent. in 1919/20, but during the past two years the figure has remained constant at 21 per cent., which is 4 per cent. below the pre-war average. Apart from economic laws, there is a growing tendency all over the world for a country to purchase its imports from those countries which are the most important customers for its own products. India's most important markets apart from the United Kingdom are Germany, the United States, Japan, Italy and France and there is every likelihood that she will tend to buy more and more from those countries. Hitherto the account has been settled by triangular trade, e.g., the United States makes a large portion of her payments to India by using her credits in

London. The tendency, however, is for these accounts to be settled by shipments of goods. Consequently, in the interests of the British export trade, every effort should be made to stimulate imports of Indian produce and manufactures into the United Kingdom and to retain our valuable entrepôt trade which has—in the past—been of incalculable benefit in stimulating British exports.

The decline of the British share in the total import trade of India is due in the first place to the increased imports of certain foodstuffs and raw materials, such as sugar, spices, certain oriental provisions, raw cotton, wool, and silk, mineral oils, gums, and timber, which are not produced in the United Kingdom.

Secondly, it is attributable to the temporarily reduced demand for British specialities such as cotton piecegoods, textile machinery, railway plant, boilers, and certain other types of machinery, which normally form such a large proportion of the total British shipments that any material decrease in the offtake affects the British proportion of the total trade. It is reasonable to suppose that if there is a revival in Indian industry and particularly in the demand for imported textiles, the British percentage of the whole trade will be increased by several points.

Thirdly, the Indian market since the war has been very slowly adjusting itself to the higher post-war level of prices of imported goods. Speaking generally, the great majority of Indian consumers have only a very small margin of means to spend on imported cloth and other commodities. British manufactured goods are usually articles of good quality and fine workmanship, the price of which has advanced in greater proportion than that of most goods, owing to the heavy overhead charges and increased labour costs in the United Kingdom. The Indian consumer has, therefore, been forced either to substitute cheaper qualities of foreign or local manufacture or else to practise economy and reduce his requirements, a habit to which he became accustomed during the war and which is likely to continue for some time. It may be said that the volume of India's requirements is in inverse ratio to their price. This is particularly noticeable in the case of cotton goods. If the Lancashire grey cloth index number remains round about 140 to 150 (i.e. 40 to 50 per cent. above pre-war rates), a large volume of trade will probably result, as it is believed that India can afford to pay these prices without unduly restricting the scale of quantities. Any attempts to maintain rates artificially above what India can afford to pay can only result, in the future as in the past, in stifling demand, in bringing about the substitution of cheaper Indian mill cloths of lower quality, and in playing into the hands of Japan and Italy.

Lastly, foreign competition is becoming an increasingly serious menace. The reduction of 15 per cent. in the British

share since the outbreak of war in 1914 is exactly accounted for by a corresponding increase in the combined share of our principal competitors Germany, the United States, Japan, Belgium and Italy. The outstanding features of the year 1926/7 have been intensified German competition in machinery, metals, hardware, cutlery and the countless cheap products for the bazaar trade; increased shipments—although there was a slight reduction in the values—of cotton piecegoods from Japan; heavier imports of Belgian iron and steel; larger purchases of Italian coloured piecegoods and artificial silks; and increased arrivals from the United States of raw cotton, motor vehicles, provisions and railway plant.

Foreign competition now enters into practically every trade. German, Belgian and other Continental exporters are opening up numerous branches in India and there are more foreign travellers visiting the country than there are British. Agents for United States firms are widely advertising American products at the expense of their principals. On all hands one sees determined efforts to secure a footing in trades which have hitherto been almost exclusively British. The subject is so important that I have devoted chapter II to a study of the measures required to meet the situation with special reference to the question of improved marketing organisations in India.

**Some Weakening Factors.** — (1) One of the most serious disabilities suffered by British firms is the fact that in the bazaars throughout the East low price and showy appearance are greater desiderata than quality, durability or value for money. Even before the war, Continental prices were lower than British quotations for most cheap bazaar lines, but dealers were willing to pay a slight premium for British quality, which was recognised, and we held a large share of the trade. Owing to the great increase in the cost of production in the United Kingdom since the war, British prices of these low-grade articles have risen to such an extent that they are beyond the purchasing power of the masses. In many articles of hardware and sundry goods, Continental makers can now underquote to the extent of 15 to 30 per cent. The goods sold are probably of greatly inferior quality, but they serve their purpose and, moreover, the Indian importers, dealers and other lesser middlemen are usually able to make greater profits in these goods, as they are dealing with consumers who cannot always judge intrinsic value and so long as the article is lower in price than their previous purchase, they will accept it. One hears of numerous claims for inferior quality, finish, etc., but dealers admit that these only occur in a very small proportion of their transactions and are more than offset by the increased margins they make on the goods.

The only remedy would appear to lie in the establishment of separate plants for the manufacture by mass production of the



cheapest types of articles suited to the trade. These goods should be marketed under entirely new names and trade marks, as it would be fatal to compromise the reputation for quality which our well-known marks have acquired after a century of trading. The extent of the demand for such articles is enormous, as it includes not only India but also practically all markets in the Near and Far East and a great part of South America. The only doubtful factor would seem to be whether, even with every labour-saving device, it would be possible to produce with British labour as economically as the Continental manufacturer can with his lower-paid workers.

(2) There is little doubt that our marketing methods in India in many cases require very drastic overhauling in order to bring them into line with rapidly changing conditions. The pivot of the system in the past has been the British export merchant in London, Glasgow and elsewhere who worked through his own house in India, employed agents, or merely purchased on commission for correspondents throughout the country. This system worked extraordinarily well for many decades, but it had the great defect that the actual manufacturer of the goods knew nothing of the conditions in overseas markets. Moreover, the exporter in London and other cities usually placed his orders with the maker who submitted the lowest quotation, with resultant gradual lowering of quality. Finding that Continental prices were frequently cheaper still the British shipper introduced Continental goods into his markets and placed his organisation in the East at the disposal of foreign manufacturers, provided that they were lower in price. A very large proportion of the Continental trade with India is still being conducted by British export merchants in London, but even they are now being ousted by the Continental merchant or manufacturer who, when he can, deals direct. British trade owes a great deal to the home export merchant, particularly in those cases where he had his own branch offices in India. He has borne the brunt of slumps and financial crises and has taken the credit risk from the shoulders of the manufacturer. The time appears to have come, however, when, in order adequately to work the Indian market, the home shipper will be obliged to open offices in India and establish a sales organisation on the spot.

The number of efficient, modern selling organisations adequately covering the Indian market is extraordinarily few. In the case of heavy machinery and plant of all kinds the manufacturers have in most cases established their own branches staffed with both commercial men and engineers. In the great majority of cases, however, British manufacturers have been content to leave the matter in the hands of their mercantile agents in India, who in most instances have too many irons in the fire to give close personal attention to any one agency.

The only solution is for the manufacturer to take a personal interest in the market and to realise that, without the expenditure of capital, he cannot hope to have his goods adequately distributed. In a certain number of instances, where business is conducted on a large scale, a branch in India is indicated. In other cases, and particularly where a complicated appliance or piece of machinery is being sold, the maker should attach his own expert to the staff of the agent so that technical advice may be available on the spot. Where the manufacturer employs agents for the sale of a non-technical article, he should realise that it is too much to expect any local firm to undertake heavy expenditure on travelling, advertising and propaganda work for a mere 5 per cent. commission on sales. In the case where a traveller is employed who is either resident in India or visits the country each cold weather, it must be borne in mind that a subsidy is required to cover advertising and other propaganda expenditure including travelling, and the manufacturer should make it his business to make sure that this subsidy is spent in the right way.

In conclusion, the manufacturer should realise that he has an interest in his goods until they reach the consumer. Unless he is prepared to put in a sales organisation himself or to insist that his agents should maintain an efficient organisation, he will run the risk of losing the trade. In my report for 1919 I dealt with this question of representation at some length. In chapter II I also touch on certain aspects of it. Further detailed information and advice, including the names of, and particulars concerning, prospective agents can be obtained from the Indian Section of the Department of Overseas Trade, 35, Old Queen Street, London, S.W.1. Finally, I would strongly advise British manufacturers, who have interests in this market, to make a cold weather visit and see for themselves the far-reaching changes which are taking place. They will then appreciate the greater efforts required to maintain our economic position in India. Although British merchants were the first in the field and have hitherto enjoyed the bulk of the trade they are, perhaps for that reason, less inclined to revise their methods to meet changing conditions than a newly-established foreign house, starting from zero, which must either secure business or fail. In India the attacker can always attract a certain amount of trade away from a vested interest by underquoting, giving slightly better terms, and playing on the political and racial feelings of the dealers.

(3) The promulgation of some form of rupee tender system for the purchase of Indian Government stores would stimulate the tendency to transfer a very substantial part of the enormous annual stores purchases of the Government of India from London to India. In his report for 1925-26, the Director-General of the India Store Department, London, states that his actual expenditure on stores and freight during that year was £6,533,307 (in 1920-21 the figure

was over £13,000,000). Excluding stores obtained through other Government departments, the total value of the purchases made in London from British manufacturers during 1925/6 amounted to £4,278,333. These figures give an idea of the scale of the business.

So long as Government stores were purchased by the Director-General of Stores, London, British makers enjoyed a considerable advantage by reason of the fact that they were on the spot completely understood the procedure, and a manufacturer in any part of the Kingdom could be called to London for an interview in less than 24 hours. They had thus a considerable initial advantage over their foreign competitors. Now that purchases are being made in India, a local organisation will require to be built up in this country which is competent to prepare tenders, advise the purchasing departments on technical points and supervise the erection and running of plant. The same standard of service will be called for in India as was formerly given in London. There is little doubt but that British manufacturers will respond to the need and will in due course take steps to perfect their Indian organisation. Most machinery firms have already taken action to meet the requirements of the Indian Stores Department during the past few years and are giving excellent service. Many suppliers of railway requirements, however, do not yet possess any branches or technical agencies in India and would do well to study chapter IV which deals with the position in detail. *The point which I wish to emphasise is that British and foreign firms are now on an equality in tendering for these Government stores.* The foreign firm which has an established organisation in India, can quote competitive rates, and give equal service, stands an even chance of securing the business.

This transfer of purchasing power from London to India is not confined to the central purchasing departments of the Government of India and provinces other than Governors' provinces. It is expected that Governors' provinces will be only too glad to avail themselves of a central purchasing authority in India. The company-operated railways are already buying more through their local Stores Controllers and less through their London Offices and consulting engineers. This is equally true of the harbour authorities, municipalities and other public bodies. Even the private merchant firms, who—particularly in Calcutta—formerly placed nearly all their requirements of imported stores by indent on their London Offices, are now exploring sources of supply in India. Many of them are interested in local industries. Others consider that, in some instances, they are able to buy to better advantage, while some probably prefer the greater independence and latitude. The transfer in many cases of the head offices from London to India may to some extent have encouraged this tendency.

Provided that British suppliers and exporters recognise these changed conditions and expand their Indian organisations to meet them, all will be well. The fact remains, however, that there is an undoubted weakening of the London connections, which cannot, in the long run, be to the advantage of United Kingdom firms.

(4) Conditions in India in certain directions approximate more closely to those prevailing in the United States than they do to a small, densely populated region such as the United Kingdom. Distances are vast, the railways have very long leads, great rivers require to be bridged, and irrigation schemes are on a grand scale. It is natural, therefore, that American engineering practice, which has dealt with similar problems in the States, should derive some advantage in India. One of the principal reasons for the local success of the American motor vehicle has been that it has been designed to meet at home more or less similar conditions to those ruling in India. American engineers have had great experience in their own country in dealing with, for instance, excavating machinery, logging and sawmilling plant, and steel trestle bridges. The Indian railways are considering the adoption of automatic centre buffer couplers for their rolling stock, which are not used in England but are universal in the States. The headlights so far fitted to Indian locomotives are all of American origin, largely because there had hitherto been no large demand for loco headlights in Great Britain and British manufacturers were not able to take the matter up in time. British makers are competing successfully in most of the above items as a result of careful study of local conditions, but the scales were weighted against them in the earlier stages.

(5) Lastly, there is the political factor. During the period of transition in the development of self-governing institutions in India, it is only natural that considerable political feeling should be engendered from time to time against the governing power. Such an outburst occurred from 1919 to 1922, but has since gradually subsided. That British trade was not more adversely affected was due firstly to the fact that the agitation coincided with the depths of the slump, when there was a glut of imports in the country, and secondly to the Indian's lack of sentiment in private business. In those public bodies where Indian members predominated, e.g. in most of the municipalities, a determined effort was made to prevent the acceptance of British tenders. The outstanding example was the Bombay Corporation. The effort was not so successful as might be supposed, inasmuch as the existing plant in most cases was of British design, based on standard home practice, and it was not considered wise or economical to depart from these standards in the case of renewals. British manufacturers should realise, however, that in Indian commercial circles, there is very little sentiment of any kind shown in the transaction

of business. Price is the controlling factor. It is exceedingly doubtful whether our foreign competitors have scored to any material extent from political feeling. That feeling has probably been of assistance to them in strengthening their connections in the market, particularly in the case of Germany since the war, but the business secured has, in most instances, been obtained owing to lower quotations or other solid advantages to the buyer.

**The Balance of Trade.**—The Officiating Controller of the Currency in his lucid report for 1926/7, on which I have freely drawn for the ensuing comments, gives the following statement which compares India's visible balance of accounts during the year with that of the two preceding years and with the average of the three preceding quinquennial periods. 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; and lead up to a *plus* or *minus* total for the transactions as a whole.

	Average of 5 pre-war years ending 1913-14.	Average of 5 war years ending 1918-19.	Average of 5 years ending 1923-24.	1924-25.	1925-26.	1926-27.
			In lakhs of Rupees.			
Exports of Indian merchandise (private) ... ..	+ 2,19,50	+ 2,15,98	+ 2,85,68	+ 3,84,66	+ 3,74,84	+ 3,01,45
Re-exports of Foreign merchandise (private) ... ..	+ 4,62	+ 8,16	+ 15,62	+ 13,51	+ 10,49	+ 8,01
Imports of Foreign merchandise (private) (b) ... ..	- 1,45,85	- 1,47,80	- 2,48,81	- 2,43,16(b)	- 2,24,20 (b)	- 2,30,17 (b)
<b>Balance of Trade in Merchandise (private)</b> ... ..	<b>+ 78,27</b>	<b>+ 76,34</b>	<b>+ 52,49</b>	<b>+ 1,55,01</b>	<b>+ 1,61,13</b>	<b>+ 79,29</b>
Gold (private) (a) ... ..	- 28,86	- 7,81	- 13,93	- 73,93	- 34,85	- 19,40
Silver (private) (a) ... ..	- 7,21	- 2,99	- 11,79	- 20,06	- 17,15	- 19,79
Currency notes (private) (a) ... ..	-	-	- 40	- 28	+ 12	- 14
<b>Balance of Transactions in Treasure (private) (a)</b> ... ..	<b>- 36,07</b>	<b>- 10,80</b>	<b>- 26,12</b>	<b>- 94,27</b>	<b>- 51,88</b>	<b>- 39,33</b>
<b>Total visible Balance of Trade</b> ... ..	<b>+ 42,20</b>	<b>+ 65,54</b>	<b>+ 26,37</b>	<b>+ 60,74</b>	<b>× 1,09,25</b>	<b>+ 39,96</b>
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 ... ..	- 41,35	- 34,96	- 15,45	- 56,35	- 61,24	- 2,82
Sterling transfers on London sold in India ... ..	+ 5	+ 5,50	+ 9,42	-	-	+ 1,93
Transfers of Government securities ... ..	- 87	- 38	- 5	- 38	- 1,27	+ 3
Interest drafts on India in respect of Government of India securities ... ..	- 45	- 30	- 31	- 41	- 36	- 34
<b>Balance of Remittances of Funds</b> ... ..	<b>- 42,62</b>	<b>- 30,14</b>	<b>- 6,39</b>	<b>- 57,14</b>	<b>- 62,87</b>	<b>- 1,20</b>
<b>Total visible Balance of Accounts</b> ... ..	<b>- 42</b>	<b>+ 35,40</b>	<b>+ 19,98</b>	<b>+ 3,60</b>	<b>+ 46,38</b>	<b>+ 38,76</b>

(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.

When one takes into account the sum of Rs. 2,74 lakhs, being the net payment in India of money and postal orders, and Rs. 1,85 lakhs, representing telegraphic transfers on India from Iraq, the visible balance in favour of India is reduced to Rs.34,17 lakhs as against a favourable balance of Rs. 41,52 lakhs in the previous year.

The Controller states that there are innumerable items entering into the balance of accounts—remittances for foreign investment, insurance, domestic expenditure of the non-domiciled community and the education of Indian students abroad on the one side of the account, and for investment in India and tourist expenditure on the other, to mention only the more important. These obviously cannot be calculated with any approach to accuracy, but it is sufficient for purposes of this report to confine the statement to those factors, such as Government remittance and trade and treasure transactions, which are capable of more or less accurate appraisal, and to leave the balance to show the net effect of the other items. These annual balances are subject to violent fluctuation, as the following figures show :—

1923-24.	1924-25.	1925-26.	1926-27.
Rs. (lakhs) +53,24	Rs. (lakhs) -9.7	Rs. (lakhs) +41,52	Rs. (lakhs) +34,17

One reason for this is that a large part of the transactions which are shown in the account are not paid for in the same year. The forward market in Indian exchange is highly organised, and an exceptional import of bullion may take more than a year to percolate to the ultimate holder. For this reason, the average of the three preceding years, showing a favourable balance of 31,32 lakhs, affords a better basis for comparison.

**The Royal Commission on Indian Currency and Finance.** — The recommendations of the Royal Commission have had such an important influence on the course of events that, before dealing with the movements of exchange during the period, it will be as well briefly to review the action taken on the Commission's report. The Controller succinctly summarises the position in the following terms :—

“ The main features of the Report were :—

(1) The stabilisation of the rupee in relation to gold. The ratio recommended was 1s. 6d. or a rate of 8.47512 grains of fine gold per rupee.

(2) The removal of the control of Indian currency from Government to a new central banking institution to be called the Reserve Bank of India, which would be entrusted with the control not only of exchange and currency policy, but also of internal credit in India.

In accordance with the recommendations of the Commission, the Government of India proposed to introduce temporary legislation in the summer session of the Legislature to give effect to the recommendations for the maintenance of exchange and the stabilisation of the rupee in relation to gold pending the creation of the Reserve Bank.\* As, however, it was considered that the Legislature had not been given sufficient time to consider

\* The measure for the Reserve Bank is being held over.

the question it was decided to defer a decision until the spring session. In the meantime Government undertook to take such steps as were necessary to keep exchange between  $1s. 6\frac{3}{16}d.$  and  $1s. 5\frac{3}{4}d.$  The Indian Currency Bill of 1927 was presented to the Legislature in the spring session and passed into law in March, 1927. It established the ratio of  $1s. 6d.$  by enacting that Government would purchase gold at a price of Rs.21-3-10 per tola of fine gold in the form of bars containing not less than 40 tolas and would sell gold or, at the option of Government, sterling for immediate delivery in London at the same price after allowing for the normal cost of transport from Bombay to London. A rate of  $1s. 5\frac{1}{4}d.$  was notified as Government's selling rate for sterling to meet these obligations.

In the interval between the publication of the report and the passing of the Currency Act, public interest was largely concentrated on the question of the ratio to the comparative neglect of the recommendations regarding banking. At the same time, bills were drafted in substantial conformity with these recommendations for the creation of a Reserve Bank of India and for the remodelling of the Imperial Bank of India Act. At the end of the year under review they were under reference to a Joint Committee of both Houses of the Legislature."

**The Course of Exchange.** — Telegraphic transfers on London fluctuated between  $1s. 5\frac{3}{4}d.$  in November and December, 1926, and  $1s. 6\frac{1}{32}d.$  in December, 1926, and January, 1927. The financial year ended on March 31st with a rate of  $1s. 5\frac{29}{32}d.$  The Controller states that at the end of March, 1926, exchange was gradually weakening owing to demands for sterling on bullion account, and slackness in the export rate, and closed at  $1s. 5\frac{15}{16}d.$  The beginning of the year showed a further drop owing to a speculative demand on bullion account, based on rumours as to the rate to be fixed by the Royal Commission on Indian Currency and Finance and the anticipation that the report would be issued at an early date. The high price of gilt edged securities in India also led to a considerable flow of remittance for the purpose of investment in sterling securities, a tendency which was increased by the speculative chance of capital appreciation in the event of a fall in exchange. To prevent these speculative movements causing a break in exchange, the Government of India informed the market on the 8th April that it was prepared to sell sterling at  $1s. 5\frac{3}{4}d.$  The effect was immediate. The rate rose at once to  $1s. 5\frac{29}{32}d.$  without Government having to come out as an actual seller at all. This removed the speculative element and exchange continued fairly steady until the end of June, when easy money and the fall in exports brought rates down again to a minimum of  $1s. 5\frac{27}{32}d.$  in July. The rate moved up again sentimentally on the report of the Currency Commission and was strengthened by the announcement of Government that it was prepared to maintain exchange between the upper and the lower gold points of  $1s. 6\frac{3}{16}d.$  and  $1s. 5\frac{3}{4}d.$  until a decision was reached by the Legislature on the ratio recommended by the Commission. The lateness of the monsoon and a heavy drop in the world prices of the main agricultural staples of India prevented any revival in activity and exchange moved gradually to a point at which Government had to sell sterling in support of exchange. £1,425,000



was sold in this way between the 1st and 9th December. In January conditions changed with the arrival of the busy season in cotton, and rates moved up until Government was in a position to buy. Rates, however, again fell away with a slight revival in March due to the passing of the Currency Act and to money stringency. This enabled Government to purchase a certain amount, but rates again fell away as stringency relaxed towards the end of the month.

**Government Remittances.**—As was the case during the previous year, the method of remittance was entirely by purchases of sterling in India and no Council Bills were offered for sale.

**Money Market Conditions in India during the year.**—The Controller states that the year opened with every indication of even easier money than in the previous year, which itself had been easier than any year since the war. The bank rate stood at 6 per cent., and though the Government of India contracted 8 crores of rupees the contractions had no noticeable effect on the situation. Government securities rose rapidly,  $3\frac{1}{2}$  per cent. paper rising from Rs. 74-6 at the beginning of April to Rs. 78-8 at the end of May, at which level it remained with minor fluctuations for the rest of the year. The Imperial Bank of India rate might have been lowered earlier but for the general strike in England, which helped to postpone the reduction to 5 per cent. till the 20th of May. By this time call money was down to  $3\frac{1}{2}$  per cent. The Government of India announced their loan on the 25th May, considerably earlier than is usually found possible. The loan, which was opened for subscription on the 7th June, was an unprecedented success. Its effect was to postpone a further easing in the money market until the middle of June. After that, the bank rate went to 4 per cent. and call money fell to 2 per cent., and remained at almost nominal rates until practically the close of the calendar year. In the absence of any outside activity, the cash portion of the new loan found its way into the cash balance of the Bank, and this, combined with a return of 15 crores of rupee coin between April and August, with its consequent inflation of the gross circulation of notes, raised the Imperial Bank's figure for cash to the unprecedented amount of 59 crores. After that the redemption of the outstanding 1926 Bonds on the 15th September and contractions of the currency against the cancellation of sterling and rupee securities led to a gradual fall in cash. The jute crop, though large, was low in price and its financing offered no problems. The cotton crop was late, so that it was not until the end of the calendar year that its effects became noticeable. After that, the bank rate rose rapidly from 5 per cent. on the 3rd January to 6 per cent. on the 13th and 7 per cent. on the 9th February. At this rate the Bank borrowed two crores of emergency currency under the emergency currency provision of the Paper Currency Act. The rate for this loan was fixed by Government at 7 per cent. instead of at the minimum rate of 6 per

cent. permissible under the Act. The 7 per cent. rate remained in force and effective to the close of the year under review, with the emergency loan still outstanding.

The Clearing House statistics for the year showed a total of 1,609 crores as compared with 1,688 crores in 1925/6 and 1,806 crores in 1924/5. The fall in the case of the older money centres such as Calcutta, Bombay and Madras was due to the easiness of money and the reduced prices of export staples. There has been a steady increase in the clearings at Cawnpore and Lahore, which shows that the use of cheques in the mofussil is steadily extending.

**The Public Debt.** — The following table, abstracted from the Currency Report, shows the total debt of the Government of India, including Indian Treasury Bills issued to the Paper Currency Reserve, at the end of each of the last three years. The figures for 1926/7 are approximate as the accounts for that year have not yet been closed :—

	31st March, 1925.	31st March, 1926.	31st March, 1927.
	Rs. (lakhs).	Rs. (lakhs).	Rs. (lakhs).
<i>In India.</i>			
<i>Funded Debt.</i>			
Rupee Loans ... ..	3,70,38	3,68,29	3,74,50
Treasury Bills in the Paper Cur- rency Reserve ... ..	49,65	49,65	41,47
Total ... ..	4,20,03	4,17,94	4,15,97
<i>Unfunded Debt.</i>			
Post Office Savings Bank ... ..	25,64	27,23	29,49
Post Office Cash Certificates ... ..	13,12	20,97	26,68
Balances of Provident and allied funds ... ..	42,41	46,39	50,94
Total ... ..	81,17	94,59	1,07,11
Total India ... ..	5,01,20	5,12,53	5,23,08
<i>In England at 1s. 6d. to the Rupee.</i>			
<i>Funded Debt.</i>			
Sterling Loans ... ..	3,51,20	3,55,13	3,53,44
Unpaid balance of India's war con- tribution ... ..	25,07	24,43	23,75
Capital value of liabilities under- going redemption by way of terminable annuities ... ..	78,45	76,71	74,91
Total ... ..	4,54,72	4,56,27	4,52,10
<i>Unfunded Debt.</i>			
Balances of provident and allied funds ... ..	22	28	34
Total England ... ..	4,54,94	4,56,55	4,52,44
<b>TOTAL DEBT ... ..</b>	<b>9,56,14</b>	<b>9,96,08</b>	<b>9,75,52</b>

If the table is compared with that shown in my last report for 1924/5, page 32, it will be noticed that several alterations have been made. When the table was first introduced in the Currency Controller's Report for 1923/4, India's sterling debt was quoted in rupees at the rate of fifteen to the pound, though the statutory rate was ten, as it was considered that in view of the market rate of exchange at the time, the former afforded a more practical basis of comparison. For the sake of uniformity the same rate was followed in subsequent reports. Now that the statutory rate is 1s. 6d. to the rupee, and as this was the market rate throughout the period, the Controller has altered the table to it even though it was not adopted in the accounts during the year under review. The capital value of the railway liabilities undergoing redemption by way of terminable annuities and the portion of the unfunded debt held in England have also been separately shown.

The following table shows the distribution of the debt :—

	31st March, 1925.	31st March, 1926.	31st March, 1927.
	Rs. (lakhs).	Rs. (lakhs).	Rs. (lakhs).
<b>Productive Debt—</b>			
Railways ... ..	5,78,05	6,06,46	6,35,89
Posts and Telegraphs ... ..	17,82	12,87	13,25
Irrigation ... ..	3,44	3,44	3,43
Vizagapatam Harbour ... ..	—	65	95
<i>Total Productive Debt</i> ... ..	5,99,31	6,23,42	6,53,52
<b>UNPRODUCTIVE DEBT OF CENTRAL GOVERNMENT ... ..</b>	2,50,40	2,31,06	2,02,59
<b>INCURRED ON ACCOUNT OF THE PROVINCIAL LOANS FUND ... ..</b>	1,06,43	1,14,60	1,19,41
<b>TOTAL</b> ... ..	9,56,14	9,69,08	9,75,52

In the railways and irrigation projects, India possesses two very fine investments which should show increasing returns and a growing contribution to the relief of taxation. It will be noted that the total productive debt of the Government of India increased during the past year by 30·1 crores, due almost entirely to capital expenditure on railway development, while the unproductive debt was reduced by 28·47 crores. The internal debt, excluding the Provincial Governments' debts to the Government of India, increased from 397·93 crores on the 31st March, 1926, to 4,03·67 crores on the 31st March, 1927. There was an increase of about 12½ crores in the unfunded debt, due mainly to large sales of Post Office Cash Certificates and an increase in the balances of provident and allied funds, while there was a decrease of about two crores in the funded debt in India, due to the cancellation of Treasury Bills in the Paper Currency Reserve

(8·8 crores), counterbalanced by an increase in the Public Debt (6·21 crores). The external debt decreased from 4,56·55 crores on the 31st March, 1926, to 4,52·44 crores on the 31st March, 1927. There was thus a reduction in the external debt during the year amounting to £3 millions or 4·11 crores.

**The Year's Loan.**—Only one loan was floated during the year. This took the form of a 4 per cent. tax-bearing rupee loan issued at Rs. 88 per cent and repayable at par on September 15th, 1970, or, at the option of Government, on or after September 15th, 1960, at three months' notice. Subscriptions to the loan were payable in cash, in 6 per cent. Bonds 1926, 6 per cent. Bonds 1927, or 5½ per cent. War Bonds 1928. These Bonds were accepted at Rs. 101, Rs. 102·4, and Rs. 106·8 respectively per Rs. 100 nominal as the equivalent of cash in subscription to the loan. The issue met with wonderful success and the loan was closed to subscriptions in cash and in the form of 1926 Bonds within about 2½ hours of the time of opening. In all, Rs. 29½ crores, nominal value, were received, of which no less than Rs. 16½ crores were in cash.

**Rise in the Price of Indian Government Securities.**—The last few years have been noteworthy for a remarkable rise in the price of Indian Government securities both in India and in London. The following figures, quoted by the Hon. Finance Member in his last budget speech, illustrate the position :—

	Market price on									
	1st February, 1923.		1st February, 1924.		1st February, 1925.		1st February, 1926.		1st February, 1927.	
	Rs.	As.	Rs.	As.	Rs.	As.	Rs.	As.	Rs.	As.
5 per cent. Tax-free Loan, 1945-55 ... ..	88	4	96	10	97	15	100	12	107	5
3½ per cent. Indian Government rupee loan ... ..	57	0	66	0	66	9	70	8	77	7

The next table compares the prices of India Stock and other stock in London on various dates and clearly shows that the credit of the Government of India stands considerably higher in the London market in relation to the British Government and other gilt-edged borrowers than it did in 1914, 1923 or even in 1926. While the prices of British Government and other securities actually receded during 1926, those of India stock show an appreciable improvement.

	30th April, 1914.	30th April, 1923.	1st February, 1926.	31st December, 1926.
India 3 per cent. loan ...	75½	60½	58	59½
India 3½ " " " ...	88½	70½	68	71½
Local loans 3 per cent. stock	87	69½	64½	63½
London County Council—				
3½ stock ... ..	97	79½	73	72½
3 per cent. stock ... ..	81	68½	63	62

As Sir Basil Blackett stated in his budget address :—

“ The fact which these figures bring out, that India 3½ per cent. rupee stock has been quoted for the last year at a figure appreciably higher than that at which India 3½ per cent. sterling stock has been obtainable in London, has led to very considerable transfers of money from India to London in order to take advantage of the higher yield of the sterling stock. In other words, in addition to the reduction of India's sterling-debt due to direct Government action, individual Indian investors have been reducing India's external liabilities by themselves buying back the titles to some part of her sterling loans and transferring them into Indian hands. This process may legitimately be regarded as the first step towards India's becoming a creditor nation in the ordinary sense of that phrase. She is, of course, already a creditor nation in the sense that she regularly exports more commodities than she imports, but hitherto she has been content to take payment mainly in the precious metals. The process to which I have referred is one which offers great hopes for the future. It has not, however, been without some temporary inconveniences, and a major cause of comparative weakness of exchange during the year 1926-27 has undoubtedly been the movement of capital from India to London due to the higher rates for both long-term and short-term money which have prevailed in London for the greater part of the financial year. A fall in the rates for money in London is, I hope, within sight and will be of material assistance to India in helping to consolidate the improved market prices for Indian Government stocks in India.”

**The Budget—1927-28.**— In previous reports will be found a history of the difficult period in India's finances between 1918/19 and 1922/23, during which deficits amounting to more than 98 crores of rupees had to be provided for. As a result of stringent economies, increased taxation and prudent finance, the tide turned in the year 1923/24 when a small surplus was realised. Since that year, thanks to a succession of good monsoons and the adoption of a cautious yet far-sighted financial policy, small surpluses have been the rule, and in 1926/27 the revised budget showed a balance on the right side of 3·10 crores. The budget for 1927/28 makes provision for an estimated surplus of Rs. 3·64 crores. These sums will be dealt with as follows :—

The last year's surplus of 3·10 crores will be reduced to 2·82 crores by the special remission of 28 lakhs of the Bombay Government's contribution for 1926/27. This sum of 2·82 crores will then be transferred in its entirety to a special reserve so that the revised estimate for the current year will not exhibit either a revenue surplus or a deficit. The 1927/28 surplus of 3·64 crores

will be supplemented by such a sum, at present estimated at 1.81 crores, as may be required to be transferred from the special reserve in order that the outturn of the year 1927/28 may also show neither a deficit nor a surplus. The credit balance in the special reserve at the close of 1927/28, estimated at 1.01 crores, will be kept in hand for use in connection with the inauguration of the new gold bullion standard and Reserve Bank.

From the point of view of the British exporter, perhaps one of the most interesting features of the annual budget is the alterations, if any, which are made in the Customs Tariff. In chapter III will be found a note on the new duties on steel. The only other change which affects the importer is the reduction of the import duty on motor cars from 30 to 20 per cent. *ad valorem* and the import duty on tyres from 30 to 15 per cent. This reduction was long overdue and will, it is hoped, give a helpful stimulus to the development of motor transport in India. As the Finance Member stated—"Neither the Government, nor, I think, the House would feel perturbed if the Provincial Governments seized the opportunity of this reduction of the import duty to impose Provincial taxation on the users of motor cars for the improvement and development of their systems of road communication."

The import duty on unmanufactured tobacco was increased from Rs. 1 to Rs. 1/8/- per lb. an increase which, it is hoped, will give some additional protection to Indian grown tobacco while not materially affecting the cigarette industry. The export duty on tea was abolished, the loss of revenue being made good by the assessment of the tea companies to income tax at 50 per cent. of their total net income subject to the proviso that where there is a market for green tea and the non-agricultural profits can be exactly ascertained, income tax should be assessed on the total of such non-agricultural profits. With a view to the development of the banking habit in India, the stamp duty on cheques and other bills of exchange payable on demand has been abolished from July 1st, 1927.

**Railway Budget.**—The Hon. Member for Railways in introducing the railway budget for 1927/28 stated in the Legislative Assembly that the revised estimates for the past year year were disappointing :—

"We budgeted on commercial lines for gross receipts amounting to 102.58 crores and gross expenditure, including interest charges, of 92.13 crores. That is, we counted on a gain from commercial lines of 10.45 crores, and deducting an anticipated loss on strategic lines of 174 lakhs, on a net surplus of Rs.871 lakhs. On the basis of these figures, we expected not merely to be able to pay our net contribution of 601 lakhs to general revenues but also to transfer 270 lakhs to our own reserves. But we now know that our budget figures are not likely to be realised. We now estimate that our gross receipts will be 98.31 crores or 4½ crores less than our budget estimate, and that our total charges will be 90.56 crores or 157 lakhs less than our estimate and that the gain from commercial lines will be 7.75 crores instead of 10.45 crores. The loss on strategic lines is now put at 181 lakhs instead of 174 lakhs, and

the final result is that we now expect a net surplus of 594 lakhs instead of 871 lakhs. The net contribution payable under the Convention to general revenues is, as I have said, 601 lakhs. We expect, therefore, to have to draw on our reserves to the extent of 7 lakhs to enable us to pay our dues to general revenues. As Clause 4 of the Convention shows, that is the primary purpose for which these reserves exist."

For the year 1927/28 a more cautious estimate is being made. Gross receipts from commercial lines are estimated at 100.40 crores and the total expenditure at 91.47 crores. If these expectations are realised, the gain from commercial lines will amount to 8.93 crores and the net gain, after deducting the loss on strategic lines, will be 7.10 crores. Out of this sum, 5.48 is due to general revenues, that being the net contribution payable on the results of 1925/26, and it is hoped to strengthen the reserves by 162 lakhs.

**New Railway Construction.**—The activities of the railway authorities in India, in so far as they are concerned with the purchases of plant, machinery and stores, are dealt with in detail in chapter IV, but in this general review mention should be made of the very large programme of new construction on which the Railway Board are at present embarked, and details of which may be obtained from the Department of Overseas Trade. The provision for new construction in the 1927/28 budget was 7.41 crores. This includes 48 lines covering 1,813 miles which are already in progress and 51 new lines extending to 2,827 miles. Thus, the immediate programme covers 4,640 miles. Only 320 miles of new line were opened in 1926/27, but in the current year nearly 900 miles of new line are expected to be opened to traffic. Each railway administration is charged with the duty of exploring every avenue that affords scope for the construction of remunerative lines of a standard suitable to the traffic that may be expected. In order to facilitate the achievement of this object, it is not proposed to adhere to one rigid standard of construction. The Railway Board have laid down varying standards of construction in order that branch lines and extensions may be built to whatever standard seems most suitable to the area to be served.

The Chief Commissioner of Railways states that at the end of March, 1926, there were altogether 38,579 miles of railway in India. Of this total the State owned 27,430 miles, companies and district boards owned 6,187 miles and Indian States 4,962 miles. The capital at charge of the State-owned railways on the same date was 652 crores out of a total capital at charge of 753 crores. As regards management, the four large State managed railway administrations, namely, the North Western Railway, East Indian Railway, Great Indian Peninsula Railway and Eastern Bengal Railway, make up 15,543 miles, while eight other large administrations, owned mainly by the State but managed by companies under contract with the Secretary of State, account for 17,295 miles.

**Opportunities for Contractors.**—The Hon. Member for Railways in his budget speech in February, 1927, said :—

“ We must, I think, congratulate the Railway Board on the success of its efforts to expediate the execution of sanctioned works. One of the methods adopted deserves a passing mention, for it represents a new and important departure. We are now beginning to make use of private contractors for important railway works. A number of important railway bridges are now being built for us by firms of contractors, the latest example being the rebuilding of the bridge over the Nerbudda on the Great Indian Peninsula Railway main line which was washed away last summer. Another important work which has been entrusted to contractors is the elimination of the Bhere Ghat reversing station on the Great Indian Peninsula Railway, and we hope that we may shortly be able to devise a system which will allow us to hand over to contracting firms the entire construction of some new lines.”

In view of the large amount of bridge work which is under consideration at the moment including the Howrah Bridge over the Hooghly, the Kala Bagh Bridge over the Indus and the Sagaing Bridge over the Irrawaddy, British bridge builders would do well to watch the situation carefully and instruct their representatives in India to keep in close touch with the authorities concerned. Further particulars may be obtained from the Indian Section of the Department of Overseas Trade.

**Security Printing in India.**—In the report for 1925 an account was given of the plant and equipment of the new Government of India Security Printing Press at Nasik Road, some 120 miles from Bombay, which is in charge of Lt. Col. G. H. Willis, C.I.E., formerly master of the Bombay Mint. A full report on the construction, equipment and setting to work of the Press was published with the Gazette of India of January 22nd, 1927, which can be seen by interested parties at the Department of Overseas Trade, London.

As soon as the minimum of the requisite machinery had been installed, the Press was set to work on the more urgent items on November 11th, 1925. In spite of the great difficulties experienced in carrying-on during building operations the first despatch of the products of the press, a consignment of registration envelopes, was made on December 10th, 1925, only fifteen months from the time the ground was first opened for the building and nearly seven months before the date at which despatches were expected to be required. By January, 1926, regular despatches were being made at an increasing rate, and in April, 1926, the press was in full swing.

Col. Willis, in a recent note, states that his expenditure out of India on consumable stores for the year 1926/27 was approximately Rs. 6 lakhs, the greater portion being for paper of British manufacture. The contracts which have been placed for the present year are almost wholly on account of British manufactured paper, etc., except for some 500 tons of postcard board of Austrian or Jugo-Slavian origin. During his recent visit to the United Kingdom orders have been placed for the main machinery for



the currency note printing press. With the exception of six automatic feeders from the United States of America and six full automatic guillotine paper cutting machines from Germany, the whole of the plant is of British origin. The contract with the Bank of England for the supply of currency notes expires in 1929 and it is expected that the Press will be fully equipped for taking over the work well before that date.

#### Indian Joint Stock Companies in 1926-27. *Flotations.*

—Although the number of registrations has increased, the aggregate authorised capital shows a considerable reduction on the figure for the previous year. Indian investors have not yet recovered confidence in local industrial enterprises since the devastating slump of 1921/22. The following statement shows the trend of registration in recent 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).	
			Rs. 000's omitted. Rs.		Rs. 000's omitted. Rs.
1913-14 (pre-war)	356	100	66,91,53	100	18,79
1919-20 ... ..	948	266	2,81,76,12	421	29,72
1920-21 ... ..	1,039	292	1,48,03,70	221	14,24
1921-22 ... ..	717	201	80,83,75	121	11,27
1922-23 ... ..	496	139	34,41,77	51	6,94
1923-24 ... ..	430	124	26,49,78	40	6,18
1924-25 ... ..	416	115	21,23,25	31	5,09
1925-26 ... ..	473	133	30,00,04	45	6,34
1926-27 ... ..	537	151	19,13,90	29	3,56

The amount of authorised capital is a very poor guide to the actual state of affairs, as in the great majority of Indian concerns the paid-up capital is only a small fraction of the authorised capital and companies in India go to allotment on very small subscriptions. During the past year increases in the authorised capital were noticeable under the heads of banking, loan, investment and trust, and paper mills (owing to the flotation of the Punjab Pulp and Paper Mills Company Limited with an authorised capital of Rs. 50 lakhs). There were, on the other hand, decreases under planting companies, mining and quarrying and estate, land and building.

*Liquidations.*—276 companies, with an authorised capital of 23,82 lakhs, having ceased work, went into liquidation or were finally dissolved during the year 1926/27.

**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 between 53 and 57 per cent. above the rates ruling at July, 1914. It stood at 55 per cent. on March 31st, 1927, and at 52 per cent. on May 31st, 1927. 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 over the past five years are shown in the following table :—

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

	1920.	1921.	1922.	1923.	1924.	1925.	1926.	1927.
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
January ...	83	69	73	56	59	57	55	56.
February ...	81	62	65	55	56	57	54	55
March ...	77	60	65	54	54	59	55	55
April ...	72	60	62	56	50	58	53	53
May ...	73	67	63	53	50	56	53	52
June ...	81	73	63	52	53	54	55	54
July ...	90	77	65	53	57	57	57	—
August ...	91	80	64	54	61	52	55	—
September ...	92	85	65	54	61	51	55	—
October ...	93	83	62	52	61	53	55	—
November ...	86	82	60	53	61	53	54	—
December ...	81	79	61	57	60	55	56	—
Yearly average ...	83	73	64	54	57	55	55	—

**Patents and Designs.**—In his report for the calendar year 1926, the Controller of Patents and Designs states that in all 894 applications for patents were filed in 1926, as compared with 1,000 applications in 1925. Of these 894 applications, 709 came from abroad and 185 originated in India, 87 of them bearing Indian names. The inventions were distributed over a wide range of subjects. Those relating to picture transmission, remote control of electrical systems and articulated locomotives deserve special mention. Indian inventions were mainly concerned with tube wells, ginning machines, reinforced concrete pipes and railway sleepers and chairs.

Applications numbering 5,828 for the registration of designs were filed in 1926, as compared with 3,450 in 1925. The remarkable increase in the number of design applications since 1922 is mainly in classes 13 to 15, i.e. piecegoods, and is attributable to the increasing competition from Japan in the trade in dyed, printed and coloured woven goods.

Printed copies of accepted specifications are distributed to 26 centres throughout India and to 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 thirteen thousand specifications can be obtained at a uniform price Rs. 1/- each on application to the Indian Patent Office, 1, Council House Street, Calcutta. Specifications and other publications of the British Patent Office are also available for inspection in Calcutta, at the Record Office, Bombay, and at the Office of the Director of Industries, Madras.

**Civil Aviation.**—I am indebted to Lt. Col. F. C. Shelmerdine, O.B.E., Director of Civil Aviation in India, for the following summary of the principal developments of the year :—

“ The year 1926/27 has been remarkable for a great increase in the interest taken in the development of civil aviation. Up to 1925, apart from a few spasmodic attempts to start air transport in India, and the construction by Government of one or two aerodromes, very little had been done. In 1925, the decision of the British Government to inaugurate an airship service from England to India and an aeroplane service from Egypt to India was announced and it therefore at once became necessary for India to determine her attitude towards the general question of air navigation. In May, 1926, a memorandum by the Indian Air Board on the Past History and Future Development of Civil Aviation in India was prepared and submitted to the Government of India. Of the recommendations for future development, the following were the most important :—

(a) That all landing grounds in India and their necessary equipment should be the property of the Government of India, who should be responsible for the provision of wireless and meteorological facilities;

(b) That the Government of India should claim, in future, to be consulted at all stages on the terms of any contract for an external air service touching India, and participate, as a principal, in any such contract;

(c) That as far as internal air services are concerned, the Government of India should accept the principle of subsidising such services in the earlier years;

(d) The creation of a whole time appointment of Director of Civil Aviation. In pursuance of items (a), (c) and (d) of these recommendations, the following action has been or is being taken :—

(a)

#### I. IMPERIAL AIRSHIP SCHEME.

(i) A site for an airship base at Karachi has been purchased;

(ii) a site for a mooring mast at Bombay has been acquired;

(iii) a site for a subsidiary airship base at Calcutta has been acquired;

(iv) wireless and meteorological facilities at Karachi (common to both airships and aeroplanes) have been provided.

(In addition, the Government of India have provided a grant-in-aid of Rs.4 lakhs, represented by customs duties on imported material. The airship base has been leased to the British Government free of rent and an airship hangar is now in course of erection at the base.)

#### II. CAIRO-KARACHI CIVIL AIR SERVICE.

(i) An aerodrome at Karachi has been provided, and cleared;

(ii) An emergency landing ground near Pasni has been provided and marked;

(iii) A hangar has been purchased for Karachi aerodrome, and is in course of erection.

(c) It is realised that until such time as the Government of India have provided an efficient ground organisation (aerodromes, hangars, workshops, wireless and meteorological facilities, etc.), it cannot be expected that any firm will be prepared to form a company with the capital necessary to operate internal air services. It has therefore been decided, as a first step, to establish a civil air route across India, and the sum of Rs.1½ lakhs has been voted for this purpose in the current financial year. A further sum of Rs.25,000 has been voted for the survey of the primary air routes in India. These projects are now in hand.

(d) A Director of Civil Aviation (Lieut.-Colonel F. C. Shelmerdine, O.B.E.) has been appointed, and assumed his duties on the 5th of April, 1927.

#### *FUTURE DEVELOPMENTS.*

The Cairo-Basrah Civil Air Service was started in January, 1927. Owing to certain difficulties with the Persian Government, it has not yet been possible to extend the service to India. If this extension eventually becomes possible, it is considered that further extensions from Karachi to Delhi and Karachi to Bombay might be undertaken. A service between Calcutta and Rangoon, to be operated by 3-engined flying boats, also appears to give good prospects of success. Preliminary investigations into the ground organisation necessary for these routes are being taken in hand.

It seems likely that, in the near future, there will be an increased demand for air survey in India. A considerable amount of air survey work has already been carried out by the Air Survey Company, and a new company is now in course of formation, with a view to undertaking work of a similar nature.

#### *NOTABLE FLIGHTS.*

The following table gives details of flights to and across India, which have been undertaken during the period under review."

SCHEDULE.

Nationality.	Route.	Machines.	Engine(s).	Pilots.	Passengers.
Danish ...	Copenhagen to Tokio and return	Military (2) ...	Lorraine Dietrich 450 h.p.	Lieuts. Botred and Herschend	
Spanish ...	Madrid to Manila	Breguet 19 (Military) (3)	Do. do.	Messrs. Gallarza, Loriga and Esteres	
British ...	England to Australia and return	D.H. 50 J. (Seaplane)	Armstrong Siddeley "Jaguar IV" 385 h.p.	Sir Alan Cobham, K.B.E.	Mechanic and photographer
British ...	England to India and return to Egypt	D.H. 66 "Hercules"	Bristol Jupiter 425 h.p. (3)	Messrs. Barnard and Welley Dod.	Sir Samuel and Lady Maude Hoare, Sir Geoffrey Salmond, Sir Sefton Brancker, etc.
British ...	England to India	D.H. "Moth" (2)	A.D.C. Cirrus II. 30-80 h.p.	Messrs. Stack and Leete	
Serbian ...	Serbia to India and return	Potez XXV. (Military) (2)	Lorraine Dietrich 450 h.p.	Capt. Sondermayer and Lt. Beydak	
British ...	England - India (Non-Stop)	Kawker "Horsley" (Military)	Rolls Royce "Condor III" 650 h.p.	Flight Lieuts. Carr and Gillman R.A.F.	(Forced to descend in Sea near Bunder Abbas owing to engine failure. Distance flown 3,588 miles, a world's record at the time).
British ...	England to Australia	D.H. "Moth" ...	A.D.C. Cirrus II. 30-80 h.p.	Mr. Rooke ...	(Delayed at Karachi for repairs to machine).
Dutch ...	Holland to Bavaria and return	Fokker FVII (Monoplane)	Bristol "Jupiter VI" 425 h.p.	Messrs. Geysendorffer and Scholte	Mr. Van Learblack (American)

**Wireless Telegraphy.**—I am indebted to the general manager of the Indian Radio Telegraph Company Ltd. for the following note, dated April 20th, 1927, with regard to the position of wireless communication in India and developments during the past year :—

*“ Wireless Beam Service between Great Britain and India. ”*

The wireless beam stations which are being erected at Kirkee and Dhond by the Indian Radio Telegraph Co. Ltd., for the purpose of telegraphic communication with Great Britain are now approaching completion and should be in commercial operation in the course of a few weeks. (The service was opened by H.E. The Viceroy on July 23rd, 1927.)

The delay in the inauguration of this service is due to a radical alteration of the wave lengths, which was decided on as a result of the experience gained with the Canadian beam and which involved extensive alterations in the original design.

The extension of this system for communication with other countries is contemplated, but nothing will be done in this regard until the original service is first satisfactorily established.

In view of the success attained by the use of short waves for telephonic purposes, the Indian Radio Telegraph Co. Ltd., also contemplate using the wireless beam for a service of this nature in addition to the ordinary telegraphic traffic. The matter is now under discussion with the Indian Government.

*Point to Point Wireless Services.*

During the past year there has been a steady if somewhat slow advance in the use of wireless for communication between various stations or places in India. The most notable installations of this character have been for the Burma Military Police and the Rangoon Port Commissioners. In the case of the Burma Military Police a series of posts on the Siamese border have been equipped in this manner with very satisfactory results. In spite of the unskilled personnel available no serious difficulty in training operators has been experienced. The value of this form of communication between police outposts leads one to expect considerable developments in this direction.

The installation supplied to the Rangoon Port Commissioners is for the purpose of communicating with the pilot vessel and has already proved of great value as a means of avoiding delays and providing pilots as and when they are required.

*Public Address Equipments.*

The Indian Radio Telegraph Co. Ltd. are now developing the Public Address System of conveying the spoken word to large audiences, and recently gave a very successful demonstration at the Royal Air Force Display at Delhi. On this occasion the orders given to the aeroplanes from the ground, as also the orders passing between the aeroplanes in flight, were conveyed perfectly to a large audience on the race course and added much to the success of the display.

*Future Developments.*

Apart from intercontinental telegraphic services there appears to be a considerable field for the development of wireless in India. It is admirably suited for police outposts such as those mentioned above, for coastal communication with lighthouses and light ships, for intercommunication over wild tracts of country such as exist in many native states and for operation in conjunction with the commercial flying services now under consideration. It is anticipated there will be considerable developments on these lines in the future.”

**Broadcasting.**— The Indian Broadcasting Company Ltd. was floated in Bombay during the year with a strong directorate

of Europeans, Parsis and Indians for the purpose of developing a modern broadcast service throughout India. Two stations are being built at present, one at Calcutta and one at Bombay, each of 3 k.w. capacity, similar to the 2LO station in London. Both stations are expected to be ready by the end of August, 1927, and will then transmit regular programmes, starting with a minimum of three hours daily.\* The general manager and station directors are officials with experience under the British Broadcasting Company and are actively engaged in preparing programmes with the advice of influential advisory committees which have been formed at each centre.

At the end of April, 1927, 95 dealers had become members of the Indian Broadcasting Company Ltd. in order to import apparatus. On their imports the company receives a 10 per cent. tribute. A list of these firms and individuals may be consulted at the Indian Section, Department of Overseas Trade, London. The imports of wireless apparatus into India have hitherto been on a very small scale (£37,000 in 1926/27) but it is confidently expected that as soon as the new stations commence to broadcast, there will be a considerable demand for receiving sets and wireless supplies of all kinds.

**Trade Prospects in Afghanistan.** — In previous reports I have consistently expressed the opinion that in view of the fact that Afghanistan is a relatively poor country with few and primitive means of communication, and in view of the commercial insecurity, progress would be slow and United Kingdom firms would be well-advised to proceed with circumspection and consult the Department of Overseas Trade before committing themselves to any definite forward move.

Events during the past two years have borne out this view and the prospects for an early expansion of foreign trade are scarcely more promising than they were in 1925. I am informed that in spite of the strenuous efforts which are being made by the King for the remodelling of Afghanistan on modern lines, the condition of the trade of the country with the outer world remains substantially unchanged, though there is a noticeable influx of cheap German and Japanese goods through India. In the regions north of the Hindu Kush line, trade naturally flows towards Russian Central Asia, and in the north-east corner there is some commercial intercourse with China, chiefly in smuggled opium. South of the Hindu Kush trade flows, as it has done for centuries, by the main routes to India from Kandahar *via* Chaman and the Bolan Pass; from Ghazni *via* the Gomal, Tochi, and Kurram Valleys; and from Kabul *via* the Khyber Pass. Little can be done to stimulate this natural flow until the main arteries of communication between Afghanistan and India, i.e., from Kandahar to Chaman, and from

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\*The Bombay Station was opened by H.E. The Viceroy, on July 23rd, 1927.

Kabul to Torkham, are improved by good motor roads and later by well-considered railway extensions. There is little encouragement in present conditions to the foreign trader to take up residence in Afghanistan. The condition of the criminal law, the non-existence of commercial or contract law as understood in modern countries, the uncertainty with regard to local taxation, particularly income tax, which is said to be under the consideration of the Afghan Government, the total absence of banking or exchange facilities, and the almost entire lack of suitable house accommodation and the ordinary amenities of life—all these combine to make a business career in Afghanistan an unattractive gamble to the foreigner.

There are indications, however, that the Afghan Government are genuine in their desire to improve this state of affairs. If they would re-organise their Finance, Commerce, and Public Works Departments and supervise the construction of important roads, there is no doubt that a great impetus would be given to Indo-Afghan commerce. For the present, there would appear to be a very restricted field for British commercial enterprise in Afghanistan.

In the light of the above remarks it is obvious that the greatest caution should be exercised by British manufacturers and merchants before entering into trade relations with Afghan markets. Payment for any goods supplied or services rendered should be obtained if possible in advance. The Afghan consuls in some of the principal Indian ports such as Bombay and Karachi might be a useful medium for business transactions but it should always be remembered that it is extremely difficult to enforce payment of debts through the Afghan courts of law. In those cases where British traders contemplate a visit to Kabul or any other Afghan city, the advice of H.M. Senior Trade Commissioner in India, Post Box 683, Calcutta, should first be sought and close touch should be maintained with the Foreign and Political Department of the Government of India.

**The "Better Roads" Movement in India.** — Early in 1926, an Indian Industries and Road Development Fund was promoted in Bombay by the leading motor, tyre and petrol interests with the object of carrying on a widespread propaganda throughout India in order to expedite the reduction of the import duty on motor cars and to stimulate interest in road development. Subscriptions to the fund were obtained from local interests and grants were also promised by the Trade Associations of Motor Manufacturers in the United Kingdom and elsewhere. The Indian Roads and Transport Development Association was formed early in 1927 with a strong directorate and with branch committees in Calcutta, Madras, Delhi, Lahore and elsewhere in order to educate public opinion on the subject and to enlist the sympathy of members of the Legislative Assembly and of Provincial Legislative



Councils before approaching the Central Government with definite proposals.

The Government of India reduced the import duty on motor vehicles from 30 to 20 per cent. and that on tyres from 30 to 15 per cent. in March, 1927, so that the Organisation is now concentrating its energies on schemes for the improvement of existing roads and the construction of new roads which, while stimulating motor transport, will act as feeders to the railways and will not run in competition with them.

**Proposed Central Road Board.**—On February 9th, 1927, the Council of State adopted a resolution which had the support of the Government of India—“that this Council recommends the Governor-General in Council to appoint a Committee, including Members of both Houses of the Central Legislature, to examine the desirability of developing the road system of India, the means by which such development could be most suitably financed, and to consider the formation of a Central Road Board for the purpose of advising in regard to, and co-ordinating the policy in respect of, road development in India.”

In his speech on the motion, the hon. the Commerce Member pointed out the desirability of moving slowly in the matter in view of the difficulties to be overcome. In the first place, there is the financial difficulty, as the liquidation of provincial contributions takes precedence of all other claims for the disposal of central funds. Secondly, roads in India are not controlled by the Government of India, but are a provincial and also a transferred subject. Consequently the central government consider that they must carry the local governments with them and take no action which might alarm them or lead them to suppose that the central government propose to encroach on a subject which the constitution deliberately reserves to them. Thirdly, there is the need for a clarity of ideas about the whole conception of a Road Board and a Central Road Fund. Sir Charles Innes wound up his speech by stating—“I think, speaking without prejudice, that the Committee which is proposed in this amendment might perform a very useful function—at any rate it will give this rather difficult and very important subject that thorough exploration which we, the Government, think it requires. If my honourable friends opposite will only understand that we must safeguard our position vis-à-vis local governments and that we must consider carefully whether they will require to be consulted before we appoint this Committee, then, Sir, subject to that reservation, the Government will be happy to accept the amendment.”

No official action has yet (July 4th, 1927) been taken but it is likely that the Committee\* will be appointed before the end of the August Session of the Legislature, that it will consist of members of both Houses with the addition of one or two officials and possibly of one or two experts from outside, and that it will tour

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\* Has now been appointed.

India during the cold weather and consult with local governments and other interested bodies, paying special attention to the financial and taxation aspects of the situation. It is anticipated that the Committee will then report to Government in time for its findings to be considered during the session of the Legislature in January/February, 1928, when it is hoped that a Central Road Board may be agreed to and constituted.

**The Kathiawar Ports and Customs Duty.**—The coastline of Kathiawar is one of the few points on the seaboard where the Indian States touch the coast. Baroda, Nawanagar, and Cutch all have harbours of their own and, by arrangement with the Government of India, have been allowed to develop their ports and collect customs duty according to the tariff schedule in force in British India. The Princes concerned have spent considerable sums on one or two of their ports such as Okha and Bedi Bunder. During the past eighteen months, there has been a very considerable diversion of traffic from Bombay to these ports and this diversion has been mainly of goods subject to high import duties such as silk goods and sugar. Merchants in Delhi and other inland points, which could be reached by the metre gauge railway from Kathiawar, cabled their shippers to route their goods *via* Kathiawar, intimating that the duties and charges were lower. The Hansa Line and also at least one British line of steamers put vessels on the berth for Port Okha and the trade rapidly expanded, to the detriment of the importers using Bombay and other ports. At the annual meeting of the Bombay Chamber of Commerce in March, 1927, the President stated :—

“ Cases have been given us which go to show that, by importing goods through ports in these Native States, dealers can market their goods at prices lower than they could be landed at in Bombay, and figures of certain commodities prove that more than an ordinary natural expansion of imports has taken place in certain directions. In Porebunder in 1924/25 silk to the value of Rs.2,700 was imported while in 1925/26 this had increased to Rs.65,695. Nawanagar in the year 1922/23 imported 69,865 cwts. of sugar, value Rs.12,63,598, while in 1925/26 465,553 cwts. was recorded, with a value of Rs.49,29,741. Likewise in regard to Junagadh, where in 1924/25 sugar to the extent of Rs.14,56,152 was imported, and this value was increased to Rs.22,45,783 in 1925/26. Now if there is a serious diversion of customs duty taking place in some form or other, the Government of India must be keenly alive to the loss of revenue that is taking place and I understand that the matter has been taken up by them with the States concerned and it is expected that steps will be taken to mitigate the difficulty at an early date.”

Not only Bombay importers but even Calcutta merchants complain of the fact that sugar imported through these ports can undersell sugar entering the country *via* Calcutta in markets as far east as Cawnpore.

*Action by the Government of India.*—Negotiations between the Government of India and the States concerned have been proceeding for some months and a conference was arranged at Mount Abu on June 27th. Three days later an official communiqué

was issued to the effect that the negotiations had failed to secure a solution which would obviate the re-imposition of a land customs line between British India and the States, and it had been decided to re-impose a land customs line forthwith. It is understood that Government offered to take over the customs administration of certain ports and to pay to the States concerned an amount exceeding by 10 per cent. the total of (1) the highest amount collected by each State in any year up to and including 1925-26, and (2) an allowance for the development expenses since 1917. The representatives of the States, however, refused to accept these terms.

In a Commerce Department Notification of 4th July, the Government of India state that in exercise of the powers conferred by Section 5 of the Indian Tariff Act, 1894, they declare the territory of Indian States in Kathiawar to be foreign territory for the purpose of the said section and direct that a duty of customs at the rate prescribed by or under the said Act in respect of any article when imported into a port in British India shall be leviable on any such article when imported by land from the said territory. Such duty however shall not be leviable on—

(a) any article which is proved to the satisfaction of the officer of land customs to have been imported by sea into the port of Bhavnagar and to have been cleared there on payment of duty at the same rate as is prescribed by or under the said act for a similar article imported into any port to which the said act applies; or

(b) any article which is proved to the satisfaction of such officer to have been produced in the said territory.

The Viramgam Customs cordon has been re-introduced and special arrangements are being made to reduce to a minimum the hindrance to local trade and inconvenience to passengers. Particulars with regard to these arrangements can be seen at the Department of Overseas Trade.

**Need for a Pure Food and Drugs Act in India.**— Public attention in India is at last being directed to the need for legislation on the lines of the American Food and Drugs Act and the British Therapeutic Act in order to standardise the preparation and sale of drugs. For many years the local representatives of British drug manufacturers have pointed out the need for such an act in order, not only to protect the consumer of drugs in India from the effects of consuming useless and in many cases deleterious products, but also to protect the legitimate manufacturers of preparations which are up to the standard of the British Pharmacopoeia from the unfair competition of their foreign and Indian competitors, who place on the market, at absurdly low prices, drugs the constitution of which is unknown and which bear no standard.

On March 9th, 1927, the Council of State adopted a resolution recommending the Governor-General in Council to urge all Provincial Governments to take such steps as may be possible to control the indiscriminate use of medicinal drugs and to legislate for the standardisation of the preparation and sale of such drugs. In the debate on the resolution, the Director-General of the Indian Medical Service promised that the Central Government would consult Provincial Governments and endeavour to arrive at some method whereby such legislation could be effected. Officers of the School of Tropical Medicine in Calcutta have also very forcibly commented on the need for such legislation.

I am informed by the Department of Education, Health and Lands of the Government of India that the Council of State resolution has been referred to local governments for suggestions as to the action which might be taken.

**Royal Commission on Agriculture in India.**—In his speech at the opening of the session of the Indian Legislature on January 20th, 1926, the Viceroy stated that at the instance of the Government of India, who had consulted local governments on the subject, His Majesty, on the advice of the Secretary of State, had approved the appointment of a Royal Commission with the following terms of reference:—

“ Generally—

to examine and report on the present conditions of agriculture and rural economy in British India and to make recommendations for the improvement of agriculture and the promotion of the welfare and prosperity of the rural population, and in particular to investigate:—

(a) the measures now being taken by the promotion of agriculture and veterinary research, experiment, demonstration and education, for the compilation of agricultural statistics, for the introduction of new or better crops and for improvement in agricultural practice, dairying, farming and the breeding of stock;

(b) the existing methods of transport and marketing of agricultural produce and stock;

(c) the method by which agricultural operations are financed and credit afforded to agriculturists;

(d) the main factors affecting rural prosperity and the welfare of the agricultural population, and to make recommendations.”

On March 31st, 1926, the personnel of the Commission was announced and the Marquess of Linlithgow was appointed chairman. The Commission visited India during the cold weather of 1926/27 and took evidence in most provinces. They returned to London in April, 1927, and have been engaged in the examination of witnesses there during July. They will return to India in the autumn, complete their tour, and will probably present their report before leaving India in the spring of 1928. Two volumes of evidence have already been published and further volumes will be issued as they are ready. This evidence is of very great interest to British firms interested in the supply of agricultural machinery

and implements, fertilisers, etc., to the Indian market, and can be consulted at the Department of Overseas Trade, London.

The activities of the Royal Commission and the well-known agricultural interests of His Excellency Lord Irwin, the present Viceroy, have brought about a great revival of interest in India's premier industry. British manufacturers are vitally concerned with any steps which may result in the improvement of the standard of living and the increased prosperity of over 70 per cent. of India's population. Moreover, they will do well to study the openings for agricultural implements and stores, which will be brought to light by the investigations of the Commission. India, for a variety of reasons, has hitherto been a disappointing market for agricultural machinery and it is probable that the introduction of improved implements will redound more to the advantage of the local manufacturer than to that of the British maker. The Department of Overseas Trade are in possession of full and detailed information on the subject and will be glad to advise British firms who may be interested in the question.

**External Capital Committee.**— In my last report, I referred to the appointment of the External Capital Committee which was appointed "to consider the question of the flow of capital into India from external sources." The Committee reported in September, 1925, and summarise their conclusions as follows:—

I. It is more advantageous to India that its requirements for new capital should be supplied from internal rather than from external sources, so far as internal capital is forthcoming. The real solution of the problem of external capital lies in the development of India's own capital resources.

II. Subject to the limitations given below the inflow of external capital is not only unobjectionable in itself but is a valuable factor in assisting the economic development of India.

III. Though in certain circumstances the control of external capital may be necessary in the interests of India, general measures discriminating against it or penalising it either by way of taxation or by way of control would, so far from assisting the development of these resources or fostering the interests of the Indian investor, be definitely injurious to both, as they would impede the growth of new industries and restrict the transferability and consequently the market value of the holdings of the Indian investor.

IV. India possesses a vast store of dormant capital awaiting development, and in order to make this available for investment banking facilities must be increased and extended. The examination of the various technical measures suggested in the replies with this object is outside the scope of the Committee, but we would emphasise the importance of a co-ordinated survey being undertaken at the earliest opportunity of the whole field of banking in India. This should be followed by a detailed examination by an expert committee or committees of the lines along which progress should be effected.

V. As regards the control of external capital, where the external capitalist is merely entitled to a stipulated rate of interest, and only acquires rights of control when there is default, as in the case of State and municipal loans, bonds and debentures of companies, and bank loans, we do not consider any measures of control necessary, but in the case of Government and quasi-Government loans, the rate of interest should not be the sole consideration in placing such loans and, other things being equal, preference should be granted to the Indian investor.

\* VI. Where investment carries with it the control of an undertaking, we consider it reasonable that, when Government grants particular concessions to the industry of which that undertaking forms part, it should exercise such control over the undertaking as will ensure that the benefits of the concession accrue primarily to the country.

(a) Where the concession is general, as in the case of a protective tariff (and this would include practically every industry in India, as a revenue tariff without a corresponding excise has a protective effect) it is impracticable to effect any discrimination. No feasible suggestions for such discrimination have been made to us, nor have any occurred to us during our discussions.

(b) Where definite pecuniary assistance, such as a bounty, is granted to any particular undertaking, we consider that discrimination is feasible, and we agree with the Fiscal Commission and the Legislature that no such assistance should be granted to any company, firm or person not already engaged in that industry in India unless:—

(1) reasonable facilities are granted for the training of Indians, and

(2) in the case of a public company unless

(i) it has formed and registered under the Indian Companies Act, 1913;

(ii) it has a share capital the amount of which is expressed in the memorandum of association in rupees;

(iii) such proportion of the directors as Government may prescribe consists of Indians.

(c) Where a concession is granted to exploit a wasting asset, such as a mineral concession, no definite rules can be prescribed. It must be a question in each case whether it is better from the point of view of the national interest that a concession should be developed by external capital or left until indigenous capital may be prepared to develop it. Such concessions should only be granted to external capitalists when it is clearly in the national interest that they should be developed.

VII. We do not consider it necessary to examine in detail the measures to be taken to give effect to these recommendations as we do not suppose that any general legislation will be necessary. If Government accept them, the necessary legislative and executive steps can be taken to give effect to them on each occasion when a bounty or similar concession is granted.

British financial concerns will note with interest the distinction made by the Committee between the various types of investment of external capital in India. On January 31st, 1927, in answer to a question in the Legislative Assembly, the Honourable the Finance Member called the attention of members to the copies of correspondence with local governments, which had been placed on the table. This correspondence, which may be seen at the Department of Overseas Trade, shows that the Government of India are anxious to supplement their information on the various subjects connected with the development of banking in India, so as to provide material for a survey of the whole field as suggested by the Committee. The Government of India state that they will welcome any information or suggestions which the local governments are in a position to offer with regard to the preparation of this survey. Their views are further invited on the question of the best method of subsequent procedure, whether by the appointment of a committee, or committees to deal with special problems, or

otherwise, in order to carry out, so far as possible, the recommendations of the External Capital Committee.

**Indian Taxation Enquiry Committee.**—It will be remembered that this Committee was appointed in May, 1924, with the following terms of reference :—

(1) To examine the manner in which the burden of taxation is distributed at present between the different classes of the population ;

(2) to consider whether the whole scheme of taxation—central, provincial and local—is equitable and in accordance with economic principles, and, if not, in what respects it is defective ;

(3) to report on the suitability of alternative sources of taxation.

The Committee's monumental report was published in February 1926, and will constitute for many years to come an invaluable work of reference, besides being a guide to the Government of India in the framing of their future taxation policy. As Sir Basil Blackett stated in the Assembly :—

“ The greatest service done for us by the Committee and one for which we can all unite in expressing our gratitude irrespective of our views on details, is that they have brought together within the compass of an easily handled volume the facts in regard to the whole of the taxes now levied in India, as well as in regard to land revenue, on which there is and always will be some dispute whether it is properly described as a tax or not. Central taxation, provincial taxation and municipal taxation are all included in this survey, and so far as I am aware, this is the first time in the history of British India that such a complete survey has been made under Government auspices.”

The report is far too extensive to deal with in detail here, but in the Appendix (page 217) will be found a summary of the more important conclusions. The complete report may be consulted at the Department of Overseas Trade. From the point of view of the British exporter, the section dealing with customs import duties is perhaps the most important. This is summarised by the Committee as follows :—

(1) Recent revisions of the tariff have had far-reaching effects.

(2) Some of the duties that are not protective in intention are protective in operation.

(3) Other duties are exercising a restrictive effect on trade.

(4) So far as conclusions can be drawn from the figures of incidence, they tend to indicate a certain amount of shifting of the burden from the richer classes to the general population.

(5) A higher rate of duty can safely be imposed on wine, beer and spirits.

(6) A reduction of the duty on the conventional necessities of life, such as sugar, and on the raw materials of industry and means of production is desirable.

(7) The Committee endorse the opinion of Dr. Gregory that the customs tariff should be the object of periodical survey, and recommend that an expert enquiry be undertaken forthwith.

(8) When the Sea Customs Act comes up for revision, section 30 should be amended so as to make the charge on invoice price *plus* cost of freight the normal procedure and the charge on a price which includes the wholesaler's profit the exceptional one.

(9) Conditions in India offer many facilities for smuggling operations. The Committee recommend that a skilled preventive officer should be deputed to compare and co-ordinate the arrangements in the different provinces, not only at the main ports, but also at minor ports, along the coast and on the land frontiers.

(10) An ideal arrangement would be the institution of a customs zollverein, but this is not practical politics at present.

The Government of India are still considering the whole question of placing the tariff on a more scientific basis and will probably appoint a special officer to go into the question in order to enable them to arrive at a decision regarding the manner in which they should approach the subject.



## CHAPTER II.

## STUDY OF FOREIGN COMPETITION IN CERTAIN SELECTED TRADES WITH SPECIAL REFERENCE TO THE MEASURES REQUIRED TO MEET THE SITUATION.

This chapter embodies information received from a number of carefully selected Import Houses and Representatives in India in response to a special enquiry which was made during April and May, 1927, into the reasons for the steady advance of foreign competition. Stress was laid on the following queries, which were submitted to the firms in the form of a brief questionnaire :—

- (1) What are the types in which foreign competition is keenest?
- (2) Is this competition due to price only, to the greater suitability of foreign goods (cite instances) or to any other factors?
- (3) Do our foreign competitors score in any of the following ways :—
  - (a) by giving better credit and general financial facilities (quote instances if possible);
  - (b) by granting more generous terms to agents or representatives;
  - (c) by paying greater attention to details such as packing, invoicing, quoting any special currencies required, meeting the particular requirements as regards make-up, etc., etc.;
  - (d) by better methods of salesmanship such as resident representatives, travellers, cataloguing, etc., etc.
- (4) What suggestions are offered to British manufacturers and merchants to enable them to meet this competition?

Adequate treatment of the subject in connection with the great staple import trades of textiles, metals and machinery would be impossible in the limited space available here. I have therefore confined myself to a consideration of certain aspects of the position in these trades and would refer readers to the Department of Overseas Trade for any more detailed information which they may wish to obtain.

**Cotton Piecegoods.**—The position in the cotton piecegoods trade has been dealt with in detail in Chapter VI and has also been touched upon in the general survey in Chapter I. Although Lancashire interests are usually very well-informed on the Indian situation, there are one or two matters which would appear to deserve far more consideration than has so far been given to them.

In the first place, the old tendency to increase margins and raise quotations as soon as a good business for India is in progress and appears to be expanding has, of recent years, had the effect of completely stifling that business and of playing into the hands of competitors. The important enquiries which were in hand for this market in February last and which would have resulted in definite placements were lost to Lancashire manufacturers by the steep advance in their quotations. This completely checked the buying movement, and it has not since been resumed on any considerable scale. Moreover, confidence in India was seriously disturbed by subsequent Manchester cables asking for a repetition of the offers at the prices which had been refused a few weeks previously.

Thus, not only was this business lost to Lancashire, but dealers in India became nervous of the purchases already made. Similarly, in May last, there was a most promising volume of Indian enquiry at rates which would probably have proved workable when the Yarn Association announced their increased prices and the opportunity was lost. Unfortunately, however, our foreign competitors were not slow to take advantage of the position. Immediately the new quotations based on the Yarn Association's increased rates were known, the Japanese sold in the Calcutta market 2,000 packages of grey dhooties for July-August shipment and this was followed by the sale of several thousands of bales of 40's grey yarn. Importers in India quite appreciate the need for increases in price on account of advances in the raw material or other ascertainable reason. They greatly resent, however, the recent tendency in Lancashire to force up prices whenever enquiry appears to be expanding. In pre-war days when the general level of prices was well within the reach of the Indian consumer and foreign competition was negligible, no serious harm was done to our trade, but in 1927, when British quotations are only just within the reach of buyers, such a policy would appear to show a lack of appreciation of the present position.

Secondly, it is not sufficiently realised that owing to the high level of post-war prices, which, for several years, placed large sections of the trade in dyed, printed and woven coloured goods quite beyond the reach of the consumer, many lines of British fancy goods which formerly had a large sale are now almost forgotten, their use has been discontinued for certain purposes, and the consumer has learnt to economise and do without them. Fashions have changed as a result of this need for economy, and it is almost impossible to re-introduce the goods. Thus, dyed goods were formerly largely used in the form of presents at weddings and other family festivals. This fashion has been largely discarded and the trade has suffered in consequence. Certain other fabrics were purchased to be made-up into hangings and draperies for household decoration but very little cloth is now sold for this purpose. On the other hand, as a result of several years of prosperity, there is a growing proportion of the population which can afford to purchase good quality cloths of tasteful design and colour, and who are inclined to spend a large proportion of their means on clothing made from higher-grade dyed and printed fabrics. I am informed, however, by an authority that—

“ the trade is not yet organised to encourage and cater for this demand. Supplies of goods are not available where they are wanted and do not change hands freely enough. The first essential to encourage demand of this nature is a well-stocked retail shop, freely displaying attractive articles of new fashion in order to encourage the consumer to spend a continually increasing amount on better quality clothing. The stocks in the average Indian retail shops are very small and unattractive. One reason for this is the fear of communal rioting and looting which makes the cautious shopkeeper only expose a minimum of goods for sale. Also, the constant decline in prices during the past

two years has not encouraged the dealer to keep large stocks. The hand to mouth policy has paid and is becoming a habit in the trade. Conditions such as these have been very unfavourable for the introduction of new styles and fashions. Dealers have preferred to confine their commitments to a few standard articles, of which they are sure of a steady demand, rather than to try and attract new trade by offering a new fashion."

"What the trade in fancy cloths needs more than anything else at present in order to get back more closely to pre-war yardage is stability in price. Stability should help to-day even more than a further reduction. With greater confidence, dealers would launch out more, both in the direction of keeping larger and more varied stocks, and in the direction of bringing out new and attractive styles, which would encourage the development of fashions and the use of fancy cloths as a luxury trade as opposed to their use as necessary clothing."

On the subject of Italian competition in mixtures of cotton and artificial silk, an experienced observer in the trade raises a point which is of interest. He writes:—

"The methods of marketing employed by Italian firms have much to do with their progress. Goods are sent out in large quantities, in standard designs and colourings, against market recommendations. The overseas office of the Italian manufacturer, or group of manufacturers, may cable a recommendation of 1,000 cases in one line and the goods are sent out to be sold at best market price. A quantity of 1,000 cases of British goods would probably be divided among 20 or more Manchester shippers and the effect of this on overhead charges is obvious. Twenty or more exchanges of cables, twenty or more buying, packing and shipping departments, and all these charges have to be borne by the trade. It would probably pay the Italians to work these large quantity orders on as fine margins as those on which Manchester firms work bulk lines of staples."

It is satisfactory to learn that, although Germany and Czechoslovakia have made considerable progress, buyers are now beginning to discriminate between the superior British productions and cheap imitations of them, the main recommendations of which are a bright and attractive appearance when the goods are first opened out. There have been many complaints with regard to the inferior durability of the Continental goods. I am informed that sales of British qualities have recommenced at prices about 20 per cent. higher than Continental goods. It is unfortunate, however, that owing to this price disparity dealers make much less profit on British goods than they do on the cheaper Continental styles. Moreover, the trade in the higher priced qualities is very limited. At one period last year, however, it appeared as if quality would not receive any consideration in the market.

Although the imports of Japanese dyed goods of competing styles are as yet not very heavy, the great improvement in the quality, finish and general outturn is most noticeable. This is particularly the case in the Rangoon market, on which Japan has largely concentrated her attention. This competition is likely to extend to the larger Indian markets and deserves careful attention.

**Metals.**—*Aluminium Circles and Sheets.*—Competition is met with from the United States, Germany and Switzerland and is entirely based on price. The leading British and American

producers maintain their own offices and depots in India. They are also interested in the factories manufacturing utensils. Continental imports are almost entirely against indents from Indian importers, largely in Bombay. Our competitors do not enjoy any advantages as regards financial terms, selling methods, allowances to agents, packing, etc. The leading British firm has as efficient an organisation as any competitor and is in a slightly more favourable position, as the British metal is preferred on account of quality and because it is always uniform in gauge, finish and general appearance. I am informed that at equal prices British circles and sheets are bought in preference to any other. The whole difficulty is one of price cutting. The British firm fixes a price and their competitors then quote a fraction less. In this way the price has lately been brought steadily down from 1s. 3d. per lb. to 1s. 0½d. per lb. The production of aluminium in America and Europe has increased very greatly of late years and manufacturers are forced to find an outlet in overseas markets with the result that, failing an international agreement, the cutting of rates is likely to continue, particularly on the part of American producers, who are making a dead set at the Indian market. This would seem to be a trade where agreement between the principal manufacturers would be in the interests of all concerned.

*Copper Sheets.*—Competition is keenest from Germany and Japan. Here again British quality is said to be preferred and commands a slightly better price, but British makers are consistently being undersold by their competitors. Price is the determining factor.

*Yellow Metal Sheets and Circles.*—The United Kingdom is steadily losing ground in this valuable trade owing to the lower prices quoted by Germany. A leading importer states that the British product will usually command a premium over the German article due to its being more pliant and malleable. There is, however, a limit to the premium which importers can afford to pay for quality and, except for the highest class of work, they find it advantageous to purchase the slightly inferior but very much cheaper foreign product. The leading German brands are usually in fair demand at £2 to £3 per ton below British rates.

The question of gauge is most important. The sheets and circles are usually worked up by hand into utensils and therefore the thinner gauges are most in demand. I am informed that foreign manufacturers are more lenient in their premium charges for a preponderance of lighter gauges and are frequently willing to meet the demand without the usual increased charges for any extra proportion of light gauge goods. Japanese shippers are reported to be willing to give any size of circle required by the market whereas it is stated that British makers will rarely quote for circles less than 9 inches or 10 inches in diameter.

One of the leading importers writes as follows :—

“ Our conclusion is that price is the main factor all the time. British goods already lead in quality and will always be first in demand when their price is reasonably near that of foreign productions. British manufacturers have thoroughly examined the question of costs but it might be worth their while to reconsider the extras demanded for special specifications. They have this in their favour that British yellow metal of a given gauge is more pliant than its foreign equivalent and therefore the market can take British goods in heavier gauges than foreign, thus effecting a saving in rolling charges to the British manufacturer.”

**Cotton Textile Machinery and Engineering Stores.**—So far as machinery for spinning and weaving by power is concerned, British makers are “ *hors concours*.” The same remark applies to bleaching, dyeing and finishing plants. There are, however, a few specialities in which foreign and Indian competition is being met and I am indebted to a prominent firm in the trade for most of the following details.

*Cotton Waste Spinning Machinery.*—The only foreign competition met with is from a Polish maker who manufactures plant for the production of yarn from the very low classes of Indian cotton waste. The yarn is subsequently woven into coarse cotton blankets. British makers are taking the matter up and hope shortly to compete on equal terms. British plants remain in favour for the production of the better qualities of cotton waste yarn.

*Warping or Beaming Machines.*—A German high-speed machine is being sold in competition with the British slow-speed machine. The former beams from cheeses, the latter from flanged bobbins. It is still early to assess the relative advantages of the two types. It is three years since the attention of British makers was called to this German product, but so far no reply has been received.

*Hand Looms.*—A copy of a well-known British loom has recently been placed on the market by a Czechoslovak machinist and is being sold at a very low price.

*Dobbies.*—There is a large trade for dobbies in India, chiefly for power looms in large factories. In Surat there are about 2,000 to 3,000 hand looms and also a large number of small power loom factories and this town provides a most important market for dobbies. An Italian dobbie is being sold at £9 c.i.f. against British dobbies at £12 5s. 0d. c.i.f. Bombay. The Italian machine is not so well finished, but the low price stimulates its sale.

*Millgearing and Millwrights' Work.*—A large proportion of this work is now being secured by a Dutch firm which sells at very low rates and maintains an expert in India.

*Sundry Parts.*—My informants state that—

“ there is a tendency on the part of British manufacturers not to concern themselves very seriously with the sale of detail parts of machines but to regard it as almost obligatory that the user of a machine must buy his replacement parts from the maker of the machine. This may have been true years ago

but is not true to-day. Users show an increasing tendency to buy cheaper parts made in India or to make parts themselves in the mill's foundry and mechanics' shop, although most of them would prefer to buy the machine maker's parts were the prices not prohibitive. This state of affairs not only spells the loss of orders for sundry parts but also an encouragement towards the making in India of the machines themselves."

The firm's comments in reply to the questionnaire quoted at the beginning of the Chapter are so clear and explicit that it will be of interest to give them in extenso :—

" 3. (a) We do not find we suffer from any disability in regard to credit and general finance facilities. With the power to give service, with quality machines and competitive prices, special credit facilities rarely become necessary.

(b) Nor do we think we are at a disadvantage with foreign agents or representatives in the matter of remuneration. It is all a question of what remuneration an industry will stand and the rate of remuneration varies according to whether the state of trade is good or bad.

(c) Again, speaking generally, we have not found that we suffer in regard to packing, invoicing, quoting any special currencies required, meeting requirements as to make-up, etc., etc.

(d) Again, speaking generally, we find that with approximately equal prices and qualities the average Indian buyer prefers to entrust his order to a British rather than to a foreign salesman or firm. We do not therefore appear to be inferior in salesmanship. The same applies to cataloguing, although in this regard we think the tendency is for the foreigner to show greater resilience and the Briton to retard effort.

4. Apart from the aspect of foreign competition there is room for great improvement in British selling methods. It is hard to generalise because the variation in degree of efficiency as between one British firm and another is sometimes extraordinary and the same applies as between one trade and another. In some trades, as in many firms, the standard of efficiency in regard to catalogues, detail part lists, literature for propaganda work, quality of illustrations, etc., must be rated very low. We know of firms who manufacture first-class machines but possess no catalogue to illustrate them, the place of an informative catalogue being taken by uninformative leaflets. In extreme cases we have no literature to offer. Many firms do not possess detail parts lists, and this is not only a source of irritation to the user of a machine but often results in parts being made locally, which is bad alike for machinist and machine. There are still firms who resent or disbelieve complaints instead of going to the root of the trouble, who would do well to become more self-critical. Many British firms are lamentably short of travelling representatives and are only able to give their agents abroad occasional visits, or are unable or unwilling to send anyone at all. Such visits help to stimulate the efforts of agents abroad and more can be done in this direction, but in sending travelling representatives abroad for the purpose indicated British firms should only send men who will carry weight with buyers and agents alike. Representations from agents abroad of difficulties experienced in working machines, of suggested improvements and of new competition do not always receive deep or prompt consideration at the hands of machine makers."

**Dyestuffs.**—The following comprehensive note has been compiled by my colleague, Major R. W. Clarke, H.M. Trade Commissioner at Bombay, as a result of investigations made in Bombay, which is the headquarters of the dyestuffs trade in India :—

Dyestuffs in India are chiefly sold by Germany, America, Switzerland and Great Britain in order of importance. Of these countries Germany supplies

80 per cent. and all other countries 20 per cent. With reference to these figures it may be noted that published statistics are somewhat misleading, as a great many goods which are classified as Belgian and Dutch are of German origin and are shipped from Dutch and Belgian ports.

1. It may be stated that the dominating position of Germany with regard to dyestuffs in the Indian market is chiefly due to the fact that Germany can supply a much wider range than any other country. Her superiority in this respect is chiefly marked in the case of the more complicated dyes of which vat dyes and naphthol may be quoted as examples. Switzerland, though she has not such a wide range, is able to produce higher class and more complicated dyes such as those quoted above. As the volume of her trade is not very large, she comes third on the list of countries supplying dyes to India, but as she supplies the more expensive dyes her trade is extremely profitable.

America again has a limited range, and she specialises chiefly in the commoner kinds of dyes such as Sulphur Black and Congou red. It is interesting to note that not only do the Germans find that American competition in India is very keen, but Americans have lately instituted a very vigorous campaign in Germany itself in these lower classes of dyes. This competition is rendered possible by the fact that Germany, India and China are the only considerable dye-importing countries in the world which maintain an open door for imports of dyestuffs. This does not mean that dyestuffs enter these countries duty free, but no preference is given in these countries to dyes produced in any particular country. In other countries preferential duties and the system of import licenses make competition more difficult. In producing countries where the range of dyes is limited and where certain foreign dyes have to be imported under license, the countries which produce these particular dyes are able to take advantage of this by raising their prices for dyes imported under license.

Although the range of dyes produced in the United Kingdom is limited, Great Britain has a fair share in the trade of alizarine dyes imported into India, which they share chiefly with America. Unfortunately, however, these dyes command such a low price that there is very little profit for the manufacturer.

America is able to quote very low prices in India, as her trade in India in dyes may be correctly described as dumping. America is able to export dyes into India on account of the very high import duties on dyes in America, which keep up prices in the home market.

3. (a) This question can be answered emphatically in the negative. The Havero Trading Co., which, as far as India is concerned, is an amalgamation for sales purposes of the principal dye manufacturers in Germany, give only stringent credit terms. They have branches in Bombay, Calcutta, Karachi, Madras and Rangoon. At these branches very considerable stocks are kept. In addition to these branches or depots where large stocks are kept, they have 150 smaller depots scattered all over India in charge of people who might be termed sub-agents. Smaller stocks covering a very wide range are maintained at these depots on a consignment basis, the value of the consignments, however, being fully secured. Orders to various customs are supplied from these depots and 30 days' credit is given. I am assured that these credit terms are never exceeded, and I am informed on good authority that the present outstanding of the Havero Company during the year do not amount to more than one month's sales. Large orders such as orders to mills are supplied from the branches in the cities mentioned above where the same credit terms are given. These credit terms apply to the higher class of dyes; in the case of alizarine, the average sales of which are about £15,000 per month, only 8 days' credit is given. The reason for this is that these lower class dyes are not stocked to any considerable extent, but are imported on customers' account and consigned to them without any delay on arrival in India.

(b) The Havero Company, with the exception of these up-country depots, do not employ any agents or representatives.

(c) Very great attention is paid to packing and invoicing by the Germans. They are fortunate in this respect that having had a monopoly of the dye trade in India before the war their labels, which are of the most attractive description, are very well known throughout the bazaar and to dye consumers generally.

(d) The Germans maintain a large staff of so-called inspectors who visit the up-country depots at frequent intervals. The duty of these inspectors is to ascertain whether any particular depot is getting a fair share of the trade in that district. They also investigate complaints, if any, and supply information as to stocks to the particular branch from which stocks are drawn. It may be noted that up till twelve months ago the stocks kept in India both at the branches and the depots were excessive; these have now been reduced to normal condition. The question of substitution as in other trades in India is fairly serious, and a special staff is employed whose duty it is to watch in the bazaars for cases of substitution. It may also be noted under this heading that the Germans are not content only to sell dyes, they are also prepared to assist and advise customers in the proper use of these dyes. A large laboratory and a demonstration dye works on a small scale is maintained in Bombay where consumers can be shown the proper method of employing German dyes. A staff of seven highly paid dye specialists is maintained in order to advise and help millowners and other customers who find themselves in any difficulty.

**Chemicals.**—During the year under review the United Kingdom supplied 58 per cent. of the total imports of chemicals, her principal competitor being Germany with 21½ per cent. In the last pre-war year the corresponding percentages were 75 and 12. Largely on account of the efficient and widespread organisation of Messrs. Brunner, Mond & Co. (India) Ltd., whose sales organisation is second to none, the market in heavy chemicals such as soda ash, bicarbonate of soda, caustic soda and bleaching powder is largely regulated by the British supplies and price cutting by foreign firms is promptly met and overcome. The competition from the Havero Trading Company which is the local organisation of the German "I.G." and has already been referred to in the dyestuffs section, is likely to become more acute in the future. The great German Combine, starting from the distillation of coal and lignite, carry on the intensive manufacture not only of dyes but of bye-products of all kinds. These bye-products can be sold at very low rates and it is possible that the sales organisation already maintained for the distribution in India of dyestuffs will in future be utilised to market the other products of the German Group.

German competition at present is keenest in the bazaar trade for miscellaneous chemicals. Bombay is the principal market and the business is largely in the hands of small Indian firms, who, having very low overhead charges, are content to work on small margins of profit. Price is the controlling factor. Generally speaking, our foreign competitors do not give better financial or agency terms, nor are British firms at a disadvantage in regard to such details as packing, invoicing, etc. Where the trade is lost, it is lost because British products are dearer than Continental.



**Bazaar Hardware and Cutlery.**—This heading has been selected because British firms enjoy the greater share of the imports of the better quality hardware for use by Government Departments, railways, public bodies, industries and European enterprises in general. In the enormous trade in the bazaars, where low price is almost the sole consideration and where quality counts for little, it is no exaggeration to state that the British share has fallen to almost negligible proportions and in many sections British goods are unable to compete at all with the productions of Germany and other Continental countries. The representative of one of the largest Birmingham firms, who formerly controlled the trade in certain lines, informs me that at present it is almost impossible to compete although his goods still remain the standard type in the market. In practice, he quotes his lowest discounts off the list prices for the various standards and is followed by German, Belgian, Czechoslovak and other representatives, who first ascertain the British price and then quote say 10 per cent. lower and secure the business. In most cases they have not submitted samples of the goods and, of course, their quality is usually most inferior, but the Indian dealer is able to pocket so much of the difference in price that he is willing to take the risk of claims. The British maker not only loses the immediate business, but the quality is steadily lowered until it reaches a point where he is unable to compete at all.

The replies received to the questionnaire are most conflicting, but the following gives the consensus of opinion on each of the several queries, which are given seriatim :—

(1) Foreign competition is stated to be very keen in the following items :—Double-ended spanners, motor wrenches, combination pliers, Clyburn spanners, pipe wrenches, pipe cutters, stocks and dies, ratchet braces, hand vices, blacksmiths' jaw vices, pipe vices, bit braces, hand drills, screw augers, planes and plane irons, hack saws, files and rasps, hammers, anvils, punches, screw drivers, folding rules, meat choppers, mill knives, figure and letter punches, compasses and callipers, pipes and pipe fittings (bends, elbows, tees, sockets and unions), hand pumps, tube well fitter points, hose, graphite packing, horse shoe nails, brass garden syringes, wire hasps and staples, butt and other hinges, brass cased tubes, bright m.s. shafting, bolts and nuts, wood screws, wheel valves, etc., etc.

One authority states that *German* manufacturers predominate in :—

The cheaper grades of carpenters' and engineers' tools : on account of price.

Builders' and cabinet makers' brassfoundry : on account of price.

Padlocks : on account of price.

Wrought iron and galvanised pipes and fittings : on account of price.

Bolts, nuts and rivets : on account of price.

Roofing bolts, nuts and fittings : on account of price.

while *American* makers excel in :—

Lanterns : on account of design and price.

Files : on account of quality and price.

Pipe-screwing tackle : on account of price.

Hammers and carpenters' axes and saws : on account of finish and quality.

Locks : on account of quality, self-locking rustless keys designed not to break and of convenient shape.

Engineers' precision tools : on account of quality and price.

Household and tube well pumps : on account of price.

Pulley blocks and hoists : on account of design and price.

(2) German competition is reported to be due to price only, while American competition is chiefly due to better design and greater suitability. Thus, American lanterns, axes, precision tools and locks are superior in design and finish. The American malleable cast steel used in their machinery is reported to be superior to equivalent parts used in British machinery because it is more lasting and less liable to break. Agricultural implements are alleged to be of lighter make and of greater variety, while pumps and files are usually cheaper. The same informant writes :—

“ I do not think British firms realise the magnitude of the trade in Calcutta in hand pumps for tube wells and household use. Thousands of American hand pumps have been imported during the past three or four years and it is a trade which will increase rapidly as villages and small municipalities are realising the advantages of pure water.”

French competition in hardware and tools is stated to be growing rapidly. There have been recent imports of pickaxes, chisels, files, shovels, etc., which were never seen in the market up to two years ago.

(3) *a* The consensus of opinion among importers in the bazaars is that Continental firms give greater credit facilities in the form of D/A terms and that they are more lenient as regards renewals of drafts, remission of overdue interest, etc. This is not confirmed by the British banks, but it must be remembered that Continental goods are largely financed through Dutch and other Continental banks. It is exceedingly difficult to give exact information on the point. My own view is that the advantages derived by our competitors under this head are minor ones when compared with that of lower prices. The premium which British quality still commands when prices are almost equal would more than offset the extra credit facilities offered by foreign shippers.

(3) *b* British goods are usually purchased through London shipping houses on the basis of first cost, i.e. makers' prices *plus* actual freight, insurance and other charges together with a buying commission of  $2\frac{1}{2}$  per cent. which is divided equally between the British exporter and his agent in India. I am informed that, in the case of German goods, the agent in India receives a commission from the Hamburg or other shipper of from 3 to 5 per cent., varying with the nature of the goods. German and other Continental goods are usually offered on c.i.f.c.i. terms, which includes the remuneration both of the shipper in Europe and of his agent in

India. On the whole, I think the German exporter does give a greater incentive to his agent in India by allowing a more generous commission.

(3) *c* There is little to be noted under this head. In the details of packing, invoicing, quotations, etc., British firms have nothing to learn from their competitors. The Germans are very active in buying samples of goods in steady demand and then they counter-sample with a similar article at a lower price. One large firm of importers writes :—

“The Germans have always been prepared to manufacture any particular article which may be specially suitable to the country even though it may differ only slightly, whether in size, shape or weight, from a similar standard article of manufacture. British makers are rather more conservative in this respect and usually require guarantees or large orders before they will make any departure from their standard patterns.”

(3) *d* German and Continental export firms are showing a tendency to open offices in Calcutta and Bombay and the number of resident agents and travellers has increased enormously in recent years. It is sometimes stated that the German traveller is better adapted to sell to the bazaar, is harder working and more painstaking than his British confrère, but it is impossible to generalise on such a question as I know scores of British travellers, who have been visiting India for years, and who have every qualification for the work. I have no hesitation in recommending that more British firms should send out experienced travellers of their own or should utilise the services of men, who hold a group of agencies for non-conflicting lines.

American firms are paying very careful attention to this question of representation and actively support their agents by sending out travellers, supplying advertising matter such as blocks, etc., giving generous advertising allowances and supplying masses of well-produced and suitable catalogues, leaflets and other forms of propaganda literature.

(4) There is no doubt that if British prices were competitive, the other minor disabilities under which we suffer would rapidly disappear. Of the dozens of replies received from importing firms to this enquiry, all, without exception, emphasise the need for lower prices. In most cases this is probably a counsel of perfection, but—at all events—those British manufacturers, who are definitely losing their bazaar trade to foreign competitors, would do well to send out a special representative to study the situation on the spot and report on the measures which are necessary in order to recover the lost ground.

**Glassware.**—H.M. Trade Commissioner at Bombay reports as follows on conditions in Bombay, which is the most important Indian market for glassware :—

(1) The chief foreign competitors in this market are Austria, Germany, Czechoslovakia and Japan. Since 1914 the quality of these foreign imports has much improved, but increased sales are not due to improved quality but to reduced price. During the war Japan got a strong footing in this market.

(2) This competition is due to price and also to the fact that Indian dealers are apparently able to make a larger profit on goods imported from these countries than on goods imported from the United Kingdom.

(3) *a.* The competitors mentioned above are willing to give to dealers credit terms usually from 30 to 60 days. In the case of large dealers, who are well known, 60 days' credit is usually given.

*b.* No cases can be found where more generous terms are given to agents. Prices are cut so low that it would be impossible for them to do so.

*c.* The packing of these goods is in no way remarkable and the salesmanship is not superior. They have a cheaper article to sell and with prices ranging from 20 to 30 per cent. below glassware of British manufacture they have no difficulty in selling it.

The low rate of wages and the depreciated exchange in Czechoslovakia give them a great advantage in fixing prices.

**Drugs and Medicines.**—(1) The competition is mainly from Germany, Japan and the United States. German competition covers practically the whole range of drugs, fine chemicals, and galenicals. Japanese competition is met with in a few special lines such as iodine and iodide, menthol and camphor. American competition is almost entirely in proprietary articles and patent medicines. There is also a certain amount of French and Italian competition in febrifuges and blood mixtures.

(2) So far as German competition is concerned, price is the determining factor. The rivalry between the leading British and German makers of repute is perfectly straightforward and prices are largely governed by international conventions. Owing to the absence of a pure food and drugs act in India, Continental goods, which do not conform to the standard of the British Pharmacopœia, are sold at ridiculously low rates and this is competition which it is practically impossible to meet as there is no standard of quality. One of the largest importers writes as follows :—

“ In our opinion the competition in chemicals is principally due to price, while price is to a great extent governed by quality. The prevailing demand in this country is for cheapness, but as a general rule it may be said that British drugs and chemicals are of good quality, and the imports of inferior drugs and chemicals from England are but a fraction of the cheap rubbish dumped on this market by Continental export houses.

Here again, we must not be understood to imply that all Continental chemicals are of inferior quality. We ourselves purchase chemicals largely from Germany but confine our purchases to manufacturers of repute, and our only reason for these purchases is that German prices are lower than British goods of the same quality in very many instances. In Germany the fine chemical industry is very highly organised and the various manufacturers work together to a greater extent than in Great Britain, and by mass production supply very many fine chemicals of satisfactory quality at lower prices than British manufacturers can quote.”

“ The Indian demand is for cheapness and we consider that a large proportion of Continental imports is due to manufacturers meeting this demand by the sacrifice of quality. There is a very large percentage of inferior or adulterated drugs on the market and these are largely of Continental origin. Recently an eminent medical man ascribed the low status of medicine in India to defective education in medicine generally on the part of the Indian medical

man. This is undoubtedly true and the import of inferior chemicals can also be ascribed in a large measure to the defective education or entire lack of chemical education on the part of many dealers and importers of drugs and medicines."

The crux of the matter is the lack of a Pure Food and Drugs Act and in Chapter I will be found a statement of the steps so far taken towards the introduction of legislation of the kind required.

(3) *a* German manufactures are reported to give 90 days D/A terms to bazaar dealers, in some cases free of interest. An experienced British representative states that :—

"Where British firms are limited to selling goods on either a 30 days' sight or cash in London basis for convention lines such as bismuths and iodides, German firms offer 60 days' sight free of interest. I entirely agree with 30 days for the drug trade in India, but unfortunately one has to meet competition and it is now necessary to give extended credits."

(3) *b, c, and d* On the whole there does not appear to be any considerable variation between British practice and that of competitors. Most of the leading British drug houses are represented by competent and trained resident representatives, who give excellent service. Several informants state that German packing and make-up are superior to British.

(4) The introduction of State control of drugs and medicines would do more than anything else to eliminate unfair competition and would tend to restrict the trade to the products of reputable makers. Those British manufacturers who are not represented by an experienced resident agent should realise that they will always be handicapped in this market, which, year by year, demands greater service. They should send out a trained chemist with experience in salesmanship to tour the country and interview the medical profession and hospital authorities as well as the firms in the trade. He should also keep in touch with the Medical Stores Depots in order to secure a share of their orders which are placed in India.

Advertising with knowledge and discrimination is also most important. The extraordinary success of American patent medicines is largely due to efficient advertising which is carried out, not only in the Press, but by systematic campaigns among the doctors, hospital authorities, Government Departments and the Trade, by means of leaflets, samples and constant personal visits.

**Perfumes and Toilet Requisites**—(1) Competition in perfumery and face powders is almost entirely French while the United States supplies large quantities of tooth paste and talcum powders. German and Japanese toilet requisites are also sold in the bazaars, but these are usually of a much lower quality.

(2) The success of the French products is not attributable to lower price, in fact the majority of the articles are more expensive than the British, but is due to superiority both in quality and make-up and also to long established reputation and the dictates of fashion. The French have always enjoyed a great reputation

for luxury articles and it is only during recent years that British makers have begun to compete seriously with goods suitably prepared and made-up. I am informed that British quality in many cases now approaches and in some instances equals the best French makes. Many British manufacturers have still much to learn in studying the precise requirements of the market as regards an attractive get-up, the right shape, size and style of containers and good packing. Most of my informants emphasise the excellence both of the French and American packing. A large Calcutta House, however, state that in their opinion British toilet requisites are obtaining a firmer hold of the market.

(3) *a, b, c* and *d* The general opinion seems to be that our competitors do not as a rule give better financial or credit facilities and that the terms to agents are approximately the same. One representative, however, states that "whereas the British firm usually offers a maximum of 5 per cent. to his representative, the foreigner usually offers at least 10 per cent. and I know of one New York firm which allows 15 per cent."

Another reliable firm of agents with experience both of British American principals write that:—

"British manufacturers are undoubtedly slack in the matter of return commissions to their representatives and close co-operation in the selling field as regards local newspaper and other advertising. For instance, some American manufacturers pay as high as 15 per cent. return commission and the majority of the French firms give 10 per cent. Practically every American firm selling toilet requisites in this market is steadily and consistently advertising its products."

There is no doubt whatever that, in this as in so many other trades, the British maker loses through his disinclination to spend money on advertising. It is only with the greatest difficulty that travellers and agents are able to obtain even the most inadequate sums for this purpose, whereas their American competitors have secured most of their large trade in quality and semi-luxury articles by clever and consistent advertising backed up by an active selling organisation. The subject is so important that I shall revert to it later in this Chapter.

**Paper.**—Owing to the fact that the Continental makers possess the advantages of having woodpulp, water and hydro-electric power all on the site of manufacture, British paper makers have never participated to any extent in such items as unglazed newspapers, flint papers, tissues, marble papers, kraft or wrapping papers and glazed account book papers, which are mainly drawn from Norway, Sweden, Germany, Finland and Austria. The export trade to India in wrapping papers, however, is largely in the hands of British firms, who factor the Continental products so as to be able to offer the whole range of papers, including those of their own make. One well-informed importer in Calcutta writes that—

" the British paper trade is second to none in the efficiency of its organisation for foreign trade and the majority of the packing papers are imported through British firms, who would naturally place business in the United Kingdom if it were possible to obtain supplies there."

The following comments have been made by one of the largest firms of paper importers in Bombay :—

" *Printing Papers.* It is in this section of our trade that we are feeling the greatest competition from the foreigner. Prior to 1920 England held the bulk of the trade in what is known as the " Free Printing Papers." While supplies are coming in from Germany and Scandinavia, our chief competitor is Holland, and to-day hundreds of tons are coming into India from that country.

There are various reasons for this competition :

(1) The art of printing in India is still very low, and so long as the paper " does the job " that is about all that matters. The Dutch quality is quite a good sheet and " serves the purpose." The British paper would give a better printing result, but this weighs little with the Indian printer.

(2) The Dutch quality being inferior, the price is lower, and as price is the first and most important consideration to the Indian, orders are placed on the cheaper grade.

(3) The protective tariff on paper in India has adversely affected the imports of British grades, as this has forced up prices to a figure where every pie counts.

(4) To a point we could get a little extra price for a British paper when the unit cost was low, but now that that unit cost has increased, the consumer cannot afford that " little extra " for a British article.

*Writing Papers.* The same remarks apply to this as to the Printing papers. In the past the Scotch mills used to export to India a considerable tonnage of Writing papers made from Esparto grass, but owing to price, consumers have been forced to use a cheaper paper, viz., what we know as a Free Cream Laid. As far as the general public is concerned the Free Cream Laid writing serves exactly the same purpose as the Esparto paper.

With the general demand being for Free Cream Laid the same remarks apply as to the Free Printings, as the basis of both papers is the same."

*Envelopes.*—The keenest competition is from Scandinavia and is largely confined to one grade of envelope—the cheap cream and tinted Manilla, the basis of which is a kind of wrapping paper.

My informants state that, on the whole, they do not think our competitors gain by reason of any of the other factors referred to in the questionnaire. The whole question is one of price and it would appear that British prices are on as low a basis as is possible with the present cost of production in the United Kingdom.

*Stationery.*—In the higher grades of stationery such as note-paper pads, cream laid envelopes, cards, tag labels, etc., etc., the British supplier seems to be holding his own, but in the cheap varieties for the bazaar trade there is very keen competition from Germany at prices which are unapproachable. Thus, few British firms can compete with a Bavarian make of pencil which is being sold in the Calcutta bazaar at Rs. 2 per gross! Samples of and detailed particulars regarding this and other types of competing stationery may be obtained from the Department of Overseas Trade.

One of the most astonishing features of recent years has been the way in which American manufacturers of expensive, high-grade articles such as the Parker duofold fountain pen and the Eversharp pencil—to cite two glaring cases—have built up a considerable business in the market through extensive advertising and painstaking selling methods. All the British standard makes of fountain pens and pencils have been on the market for years and in most cases are cheaper in price, but by dint of advertising and propaganda the more expensive American product has forced its way in and a very large trade is being done. The secret of this success is that the American manufacturer realises that the local merchant and distributor will never bear the cost of advertising so he conducts his own campaign on most modern lines and follows it up with personal visits.

**Provisions.**—Speaking generally, British exporters are maintaining their position and supply at least two-thirds of India's imports of goods of the same class. The only serious competition which is being encountered is from the United States in tinned salmon and other fish, Californian tinned and bottled fruits, Quaker oats and the type of canned goods exported by Heinz. Australia now supplies a very large share of the jams and jellies, while Dutch cheeses hold the market largely on account of their better keeping qualities, being protected by the hard spherical casing.

British exporters give quite as good facilities and service as their competitors and, in addition to resident representatives and agents, send out special travellers each cold weather. The leading American firms such as Süssma & Wörmser ("S. & W.") and Heinz have their own offices in India with a trained staff of salesmen working in conjunction with their agents. These offices control advertising, etc., and during the last Calcutta Exhibition Messrs. Heinz & Co. opened a most attractive tea and coffee stall, at which they displayed the various types of provisions manufactured by them, providing visitors with any of the "57 varieties" they might care to sample.

Competition from France is stated to have increased during the last few years owing to the fluctuation of the franc exchange, but now that the franc is appreciating and French suppliers are quoting sterling rates, landed costs of French goods are not so attractive and the trade is likely to revert to normal proportions.

**Rubber Tyres.**—The most serious competition is encountered from the following makes in order of importance:—Michelin (French), Goodyear (American), Continental (German), Firestone (American), U.S. Rubber Export Company (American). All the principal competitors work on the same list price, so that, in theory, there is no price cutting. In practice, however, there is



reported to be a great deal of it, but whether this is approved by the manufacturers concerned or whether it is solely the fault of their Indian sub-agents cannot be determined.

Quality and service are the two factors that count in this market. The Dunlop Rubber Company (India), Ltd., have an organisation second to none and consequently secure a very large share of the trade. The sale of tyres in India is an intricate business, calling for a widespread and technical organisation and the holding of large stocks. Without such capital outlay the amount of trade which is likely to be obtained from agents in the ordinary way of business will not be great.

**Electrical Apparatus and Fittings.**—One of the leading British importing firms in Eastern India replies as follows to the questionnaire :—

“ 1. Speaking generally, the bulk of the competition met with is of Continental origin. It is difficult to take any particular type or line in which competition can be said to be keenest, and Continental prices in all cases for such items as tumbler switches, lamps, lampholders, wiring accessories, etc., are below ours. They are also under British prices for machines such as motors, dynamos, etc.

2. With regard to lamps (with one notable exception), fittings and accessories, the quality is undoubtedly inferior to British-made articles.

We consider Continental dynamos, motors and other machines are also inferior to British productions as regards suitability for Indian conditions. In our opinion it is purely a question of price and we do not consider Continental-made articles in any way superior to the British productions handled by us.

The possible exception to the above are electrical fittings, where, while perhaps the quality and finish are not up to the British standard, they are suitable for the work required and sufficiently well finished generally to meet the demand of the Indian markets.

3. (a) As a rule the large German houses are prepared to give extended credit, extending in some cases to as long as two years.

(b) As far as we know, the German firms are at the moment granting very favourable terms to their agents or representatives. It is probable, however, that such terms will be considerably restricted when the Principals consider they are well established in the Indian market.

(c) Generally speaking, Continental firms are more amenable to supplying catalogues giving rupee prices.

(d) We do not consider that our foreign competitors are better served than we are with regard to such matters as representatives, travellers, catalogues, etc.

4. The principal point we would draw your attention to regarding this competition is price. Generally speaking, a better price can be obtained in the bazaar, as well as from mercantile houses, for articles of British manufacture, but of course there is a limit to the margin that can be obtained, and no hard and fast percentage could be laid down for the various percentages of different articles.

Broadly speaking, the above remarks apply more to accessories and comparatively small machines, and we cannot give an opinion as regards articles that may be classed as non-standard or novelties, as we do not handle these.

With regard to heavy plant, the ruling factor here is price, but British manufacturers are frequently handicapped by being held to a very rigid and

often onerous specification against which they have quoted, while foreign manufacturers can largely evade the specification owing to the difficulties of inspection during manufacture.

In summarising, the principal point for British manufactures, where possible, is reduction of price consistent with the maintenance of British quality, prompt shipment, careful attention to any special instructions given by indenting firms, careful attention to packing, continuous progress as regards improvement in design and manufacture."

In Bombay competition is keenest in electric light bulbs from Austrian and Dutch manufacturers and in dry batteries from German makers. So far as electric lamps are concerned, it must be remembered that conditions are governed by the International Association of Manufacturers which controls prices and markets.

So far as heavy electrical machinery is concerned, British firms—thanks to their very efficient organisation on the spot—are holding their own. The leading foreign competitors, such as the Siemens-Schuckert group, the A.E.G., the Swedish General Electric, the General Electric Company of Schenectady and the Westinghouse Company have established their own offices in India, staffed with salesmen and engineers, and are prepared to give service. They submit tenders for Government requirements, etc., and are securing an increasing amount of business. German activities are specially noticeable in the Punjab, where they secured the contract for the Lahore power plant on long-dated terms and are endeavouring to promote companies for supplying light and power to towns, offering to supply the plant on long-dated terms of payment, taking debentures as security.

**Conclusions.**—It is most striking that in the case of each of the selected trades in which foreign competition is most acute, the main reason why British manufacturers are losing ground is that their prices are above those of their Continental competitors. Most authorities admit that British quality still commands a premium in the bazaars, but this premium is not sufficient to bridge the gap between British and Continental quotations, which in many cases is as much as 15 to 30 per cent. It would appear to be quite impossible, in view of present conditions in the United Kingdom, to reduce prices to anything like this extent. So far as I am aware, very few of our great export industries are making even normal profits and in many cases they are prepared to quote prices which just cover cost of production and a share of overhead charges in order to keep up their production and reduce their on-costs. Labour costs in the unsheltered export trades are already on a minimum level and every effort is being made to secure economies in manufacture. The burden of Imperial and local taxation is unlikely to be very materially lightened for years to come. In these circumstances, any suggestion that prices should be reduced would be merely a counsel of perfection. On the other hand, if certain British manufacturers, after a careful study of bazaar demands all over the East, were to establish special plants

for the manufacture by mass production of low grade articles of the type required, they would have a chance to compete. They would require firstly to ascertain the prices at which there was a demand and then to produce the best possible quality and finish at that price. Any effort on these lines should, of course, not be made by old-established manufacturers under their own names, as it would be fatal to create an impression in the bazaars that there was any lowering of standard British quality. There would appear to be no sound reason however why such lower grade goods under different names and trademarks should not be sold side by side with the established marks of quality goods. This is the only practical suggestion I can make to solve this problem of the bazaar trade which gives ground for some anxiety, as our foreign competitors, having secured such a strong position in the lower qualities, will gradually compete more and more in the finer goods, which hitherto have been obtained almost exclusively from British sources.

As regards the higher priced articles used by the European, Anglo-Indian and well-to-do-Indian communities, the inquiry clearly shows that American competition is gaining ground owing to strenuous salesmanship, careful attention to the precise requirements of the market, generous commissions to representatives and agents, and a systematic advertising propaganda. The American manufacturer appears to have grasped the fact that he must follow up his goods until they reach the hands of the consumer by assisting his agents in every way, by granting adequate advertising and travelling allowances, and by occasionally visiting the market himself. Many British makers, on the other hand, consider that when once the goods are sold to a shipping merchant in London or an importing firm in India they have no further interest in them. They hold that all the expenses of distribution, advertising and propaganda work should be borne by the merchant. The fact remains that the average merchant or agent will not spend adequate sums on propaganda unless he receives the active financial support and encouragement of the manufacturer.

Prior to the last few years, the art of advertising was very imperfectly understood in India. Credit must be given to American exporters for stimulating an interest in this question. The leading Indian daily papers and technical magazines have advertising branches both in India and in London, which are prepared to advise manufacturers and carry out their wishes. One or two expert firms of advertising agents are now established in India with branches in London, and are competent to give advice and draw up schemes for covering India with every form of advertising, e.g. European and vernacular press, posters, railway advertising, leaflet distribution and follow-up campaigns. Names and particulars can be obtained from the Department of Overseas Trade. It is advisable, however, that any campaign of

this kind should be conducted after consultation with and with the co-operation of the manufacturers' representatives in India. A somewhat novel form of propaganda has recently been carried out by two or three Indian railways who have equipped special propaganda coaches and in one instance a special demonstration train fitted with a cinematograph apparatus in order to give publicity to the work of the Public Health, Agricultural, Civil Veterinary, Co-operative Credit and Industries Departments of the Government of Bengal and the Indian Tea Cess Committee. A demonstration car was allotted to each department, the train stopped at 30 stations during the period of a month's tour, when more than 1,200 miles were covered. This idea might be taken up by Trade Associations or groups of manufacturers, for the advertising of their goods throughout the whole of India. Rates could be obtained from the Railway Board for the use and transport of one or more coaches, or even of a complete train, throughout the whole of the broad gauge system of India. All the leading towns could be visited in turn and an exhibition held at each of them without any movement or re-packing of the exhibits. This would seem to be a most efficient method of advertising and selling the products of any of the industries having a widespread market in India.

### CHAPTER III.

#### REVIEW OF THE ACTIVITIES OF THE INDIAN TARIFF BOARD DURING THE YEAR, WITH SPECIAL REFERENCE TO THE INQUIRIES INTO THE STEEL AND COTTON INDUSTRIES.

I have dealt at some length in previous reports with the adoption by the Government of India of the policy of discriminating protection. I have also described the previous inquiries by the Indian Tariff Board into the steel and other industries. In the present chapter I propose to deal at some length with the Board's reports on the steel and cotton industries, and then review quite briefly the inquiries into other industries such as coal, shipbuilding, wire and wire nails, galvanised hardware, &c.

#### STATUTORY INQUIRY INTO THE STEEL INDUSTRY.

On April 3rd, 1926, the Government of India issued the following resolution :—

“ The attention of the Tariff Board is drawn to the fact that the Steel Industry (Protection) Act, 1924, will expire on the 31st March, 1927, and it is requested to re-examine the measure of protection afforded to the various articles covered by the Act and by Act VIII. of 1926. It will report in respect of each class of article whether it is still necessary to continue protection, and if so, whether the measure of protection now given should be increased or diminished or whether the form of the protection given should be altered. In making its recommendations, the Tariff Board will take all relevant considerations into account, including that stated in part (b) of the Resolution adopted by the Legislative Assembly on the 16th February, 1923, and if it thinks that in any case the assistance required can most suitably take the form of bounties, the source from which the money for the bounties can be obtained should be discussed. In dealing with the Tinsplate Industry the Board will bear in mind its own observations in paragraph 31 of Chapter IV. of the second portion of its first Report. The Board will also be at liberty to examine the claims for protection of industries making steel products which do not come within the scope of the present Act and to report whether, having regard to the principles laid down in paragraph 97 of the Report of the Indian Fiscal Commission, such claims should be admitted.”

Following the issue of this resolution, the Board published a communiqué outlining the scope of the inquiry to be held, enumerating the steel articles with which it would be concerned and inviting the opinions of the firms or persons interested in the inquiry. In response to this communiqué representations were received from the Tata Iron & Steel Company, Ltd., and from other firms and associations interested in the inquiry. A great deal of evidence was heard, all of which has been published, and on December 14th the Board signed their report which was subsequently published early in January. This report gives such a lucid account of the position of the Indian steel industry and also of the competition of Continental with British steel in the Indian market, that it should be carefully studied by every British firm interested in the Indian market.

## Summary of the Board's Recommendations with regard to Steel.

" (1) A review of the progress of the steel industry during the past three years clearly shows the success of the policy of protection adopted in 1924. While the assistance given has been in no way excessive, it has substantially improved the position of the Indian steel industry.

(2) The output of finished steel at Jamshedpur was about 163,000 tons in 1923-24. The output in 1926-27 will probably be about 380,000 tons. We estimate that the output in the next seven years will average 500,000 tons and that the output in 1933-34 will be 600,000 tons of finished steel.

(3) The costs of manufacture have fallen as the output of steel has risen and we expect the reduction of costs to continue. The average works cost of all finished steel was Rs.126·5 per ton in 1923-24. Although the manufacture of the more expensive articles such as black sheet and galvanised sheet has commenced only since 1923-24, the average cost of all steel in August, 1926, was as low as Rs.98·4 per ton, and we anticipate that the average cost in 1933-34 will be only Rs.78·8 per ton.

(4) An allowance of Rs.39 per ton of finished steel will be adequate for overhead charges and fair profit for an average output of 500,000 tons during the next few years.

(5) If the rupee price of imported steel has remained at the 1923 level, little or no protection would be required. Prices of imported steel have, however, fallen substantially and unless protection is continued, it will not be possible to manufacture and sell Indian steel in competition with the imported product; the continuance of protection is, therefore, necessary.

(6) The payment of bounties should no longer form part of the scheme of protection.

(7) Competition in certain products comes almost entirely from the United Kingdom, and in others from the United Kingdom and the Continent. We regard it as probable that the prices of British steel in the future will be fairly stable, but the course of Continental prices cannot be foreseen. On economic grounds, therefore, it is advisable that two scales of duties be imposed, a basic duty fixed with reference to the price of British steel and an additional duty based on the margin between British and Continental prices, allowance being made for the difference in quality between the two kinds of steel. The basic duty will be levied on steel coming from all countries while the additional duties will be confined to non-British steel.

(8) A double scale of duties will best serve the economic welfare of the country generally and lead to an equitable distribution of the burden over the different classes of consumers, and at the same time ensure the stability of the scheme of protection.

(9) We have considered the question of recommending "anti-dumping" duties, and we are of the opinion that the imposition of such duties is impracticable.

(10) We believe that by 1933-34, the Indian industry should be able to meet British competition without the assistance of any protective or revenue duty, but that if Continental prices remain at their present level some measure of protection may still be required.

(11) While no time limit should be fixed for the continuance of the policy of protection, the basic duties should remain in force until increased, reduced, or otherwise modified after a statutory enquiry to be held not earlier than 1933-34.

(12) The additional duties may be reduced or raised during the period if the prices of non-British steel justify the change.

(13) The scheme of protection is not only adequate for the existing firm but affords the necessary encouragement for the expansion of the industry, provided that the Act giving effect to the proposals makes it clear that protection will be continued so long as economic justification for it exists.

(14) The scales of duties recommended involve a distinctly smaller amount of protection than the existing scheme, and the price of steel in India should be lower than at any period since the great war.

(15) We are of the opinion that power should be taken by the Governor-General in Council to ensure that proper provision for depreciation is made from time to time.

(16) The low level of duty proposed on rails is justifiable only if the Government arrange to purchase the whole of their requirements of rails in India so far as they can be produced in the country.

(17) It is essential in the interest of the Indian industry that railways should encourage the use of Indian structural steel by revising the designs for bridges and other structures so as to permit of the utilisation of the maximum amount of steel manufactured in India.

(18) The conditions of employment of Indian labour at Jamshedpur are found to be satisfactory, and good progress is being made in the appointment of Indians to the higher technical posts.

(19) Partly as a result of the recommendations regarding the duties required on rolled steel, it is proposed that in place of the present 25 per cent. *ad valorem* duty on fabricated steel, the basic duty should be 17 per cent. *ad valorem* and that an additional duty of Rs.13 per ton should be imposed on fabricated steel imported from elsewhere than the United Kingdom.

We recommend the imposition of the following duties :—

Product.	Basic Duty. Rs. per ton.	Additional duty. Rs. per ton.
Rails 30 lbs. per yard and over ... ..	13	—
Fishplates for above ... ..	Revenue duty (Minimum Rs. 6. per ton)	—
Structural sections (including wrought iron) Bar and rod (including wrought iron) spikes and tie bars, rails under 30 lbs. per yard and fish plates for same ... ..	19	11
Plates ... ..	26	11
Ordinary sheets ... ..	20	16
Galvanised sheet ... ..	35	24
Steel sleepers ... ..	38	—
Fabricated steel structures* ... ..	10	—
	17 per cent. <i>ad valorem</i> (mini- mum Rs. 22 per ton)	13
Coal tubs and tipping wagons ... ..	do.	13

### Summary of the Board's Recommendations with regard to Tinplate.

" (1) The tinplate industry has effected remarkable progress and fully justified the policy of discriminating protection adopted by Government. Production has increased from 9,000 tons in 1923 to approximately 35,000 tons in 1926. Works costs have fallen from Rs.459 per ton in 1924 to Rs.313 per ton in the first seven months of 1926. A notable increase in the efficiency and skill of Indian labour has been achieved, and within three years of the commencement of operations it has been found possible to reduce the number of employees by approximately one-third. Financially, however, the results have not been so successful. The Tinplate Company of India has incurred heavy losses which we should estimate for the years 1923 to 1925 inclusive at Rs.50 lakhs. Recent

\*The minimum basic duty and the additional duty on fabricated steel of other kinds vary according to the duties on the kinds of rolled steel used.

financial results, however, are more encouraging, and, with a reasonable measure of protection, we think the industry should be established on a firm basis in the near future.

(2) On a careful consideration of the possibility of effecting economy in manufacture during the period of protection, we have found it necessary to reduce the Company's estimate of works costs at the end of seven years from Rs.285 per ton to Rs.279.

(3) After considering the estimate of the present day valuation of the plant submitted by the Tinsplate Company and the estimate of erecting a plant of similar type and capacity in Wales furnished by the Welsh Plate and Sheet Manufacturers' Association, we have formed the conclusion that a fair replacement value of the Company's works and town is about Rs.85 lakhs, in place of Rs.162 lakhs, the amount at which it at present stands in the Company's books.

(4) With the adjustments necessitated on account of freight, boxes for packing and wasters, the fair selling price which we recommend is as follows :—

	Rs. per ton.
Works cost ... ..	293
Overhead charges ... ..	22·76
Manufacturer's profit ... ..	18·09
Adjustments :—	
Freight ... ..	12·76
Wasters ... ..	18
Packing ... ..	2·8
Total ... ..	367·41

(5) We have based our estimate of the future selling price of imported tinsplate, viz., Rs.320 per ton without duty, on the prices prevailing in the early months of 1926, disregarding the rise which has occurred subsequently on account of the coal stoppage in Great Britain.

(6) The difference between the fair selling price of Indian tinsplate and the future selling price of imported tinsplate is the measure of the duty which should be imposed and we accordingly recommend a reduction of the present scale of duty from Rs.85 to Rs.48 per ton.

(7) We are unable to support the claim that varieties of tinsplate not manufactured in India should be exempt from the protective duty. Special varieties of tinsplate bear a higher valuation and the duty which we propose will not be greatly in excess of a 10 per cent. *ad valorem* duty for such varieties. From the economic point of view we cannot agree to any discrimination of duty in favour of Wales, since it is with Welsh tinsplate that the Indian product has mainly to compete.

(8) We recommend that the period for which protection should be continued be fixed at seven years.

(9) We are of opinion that at the end of that period the industry should be able to stand without any protection other than that afforded by the revenue duty.

(10) Finally, we consider that there are good grounds for believing that the industry will eventually be able to face competition even if the fiscal system of the country is so organised as to result in the reduction or even abolition of the revenue duty."

**The Steel Industry Protection Bill (1927).**—The main recommendations of the Board were accepted by the Government of India, were passed by the Indian Legislature and are embodied in the Steel Industry Protection Act (1927), a copy of which will be found in the Appendix to this chapter on page 233.



### THE COTTON TEXTILE INDUSTRY INQUIRY, 1927.

The special Tariff Board inquiry into the Indian cotton mill industry was appointed by the resolution of the Government of India of June 10th, 1926, as follows :—

" The Government of India have received an application from the Bombay Millowners' Association requesting that the Tariff Board, or some other Committee similarly constituted and with similar powers, may be directed to enquire into the causes of the present depression in the Bombay cotton textile industry and to suggest the measures which might be taken to restore it to prosperity.

2. The Government of India agree that this enquiry should be made, and consider that it should be held as soon as possible. The Tariff Board is, however, at present fully occupied with the statutory enquiry into the steel industry required by the Steel Industry (Protection) Act, 1924. The Government of India have, therefore, decided to appoint a second Tariff Board for the purpose of the enquiry into the cotton textile industry, with the following terms of reference :—(1) to investigate the condition of the cotton textile industry in India, with special reference to the industry in Bombay and Ahmedabad; (2) to examine the causes of the depression in the industry and to report whether they are of a temporary or permanent character; (3) in particular, to consider whether, and if so to what extent, the depression is due to the competition of other countries in the home and export trade; (4) to report whether, having regard (i) to the fact that the industry has long been firmly established in India and (ii) to the interests of the consumer and to all other interests affected,—(a) the industry is in need of protection; and (b) if so, in what form and for what period protection should be given; and (5) to make any other recommendations that are germane to the subject.

3. The following gentlemen have agreed to serve on the Board :—

President :

F. Noyce, Esq., C.S.I., C.B.E., I.C.S.

Members :

Rai Bahadur Pandit Hari Kishan Kaul, C.S.I., C.I.E.

N. S. Subba Rao, Esq., M.A., Bar-at-Law, Principal and Professor of Economics, Maharaja's College, Mysore.

4. The headquarters of the Board will be at Bombay, but it will also visit such other places as it thinks necessary for the purpose of the enquiry. It will assemble at once and report to the Government of India at the earliest possible date."

The examination of witnesses began in Bombay on August 24th, 1926. The Board held forty sittings in all, in the course of which, in addition to the representatives of the Bombay, Ahmedabad and Baroda Millowners Associations, representatives of fifteen Chambers of Commerce, Labour Unions and other bodies were examined and also thirty-nine individual witnesses, almost all of whom had previously sent in written memoranda.

The report of the Board was not published until June 7th, 1927, when it was issued simultaneously in India and in London. It contains a very great deal of useful information which deserves careful study by Lancashire interests.

While a single report was presented, there was a difference of opinion between the President and his colleagues with regard to the proposal for a bounty on yarn. The majority of the Board proposed that the import duty on cotton piecegoods should be increased from 11 to 15 per cent. for a period of three years in order

to provide funds for a proposed bounty on the spinning of finer counts. The President, however, was opposed to the bounty and recommended that an additional duty of 4 per cent. should be imposed on all cotton manufactures, including yarn, imported from Japan for a period of three years.

**Summary of Conclusions and Recommendations.**—The Board summarise their findings subject to a long minute of dissent by the President as follows:—

(1) The most striking feature in the history of the cotton textile industry in India from 1899 to 1922 is the expansion in every direction, especially in weaving.

(2) Other important features in the history of this period are the loss of the export trade in yarn, the gradually decreasing dominance of Bombay and the increasing share of Japan in the import trade.

(3) The present depression in the cotton textile industry has been and is much more acutely felt in Bombay than in other centres.

(4) The mills which have spinning departments only have been affected to a greater extent than mills which have both spinning and weaving departments.

(5) The demand for protection has not been as earnestly pressed from other centres as from Bombay and Ahmedabad.

(6) The altered relation between agrarian and general prices since 1920 has contributed to the depression in the industry.

(7) The boom and the depression in India have presented all the features which characterise a trade cycle.

(8) The course of American cotton prices has contributed to the depression in the industry.

(9) The competition of Japanese yarn exercises a depressing effect on the price of Indian yarn.

(10) Japanese yarn of 32's counts is being sold at a price which is practically equal to the cost of manufacture alone of yarn of this count in India without any allowance for profit or depreciation.

(11) In cloth of the lower counts, that is, in drills and sheetings, Indian mills are able to hold their own and it is, therefore, doubtful whether the Japanese imports in these lines control prices in India.

(12) In cloth of counts of 30's and above, the cost of manufacture alone in Indian mills is either practically equal to or higher than the Japanese sale price and Japanese competition, therefore, exercises a depressing effect on the prices of Indian mill production.

(13) The depreciation of the Japanese exchange, while it lasted, stimulated exports from Japan to India, but Japan now enjoys no special advantage in regard to exchange.

(14) Double shift working in Japan gives the Japanese industry an advantage of 4 per cent. on the actual cost of manufacture both of yarn and cloth. This advantage is considerably increased if a reasonable return on capital is included in costs of production.

(15) It does not appear that mills in Japan can, as a rule, obtain higher prices in the home market than they can from exports and a charge of dumping in the usual sense of the word cannot, therefore, be substantiated.

(16) Conditions of labour in Japan are inferior to those in India in respect of hours and the employment of women and juveniles at night.

(17) It must, therefore, be held that there is unfair competition between Japan and India, and that this competition is an important cause of the present depression in the cotton textile industry.

(18) The stabilisation of the rupee at 1s. 6d. coming as it has done at a time of falling prices, has rendered the problem presented by the disparity between prices and wages in the industry somewhat more pronounced.

(19) Over-capitalisation has contributed to accentuate the depression in Bombay.

(20) The dividends paid by the Bombay industry during the boom period were unduly high.

(21) Except to the extent that defects in the managing agency system such as undue conservatism and lack of initiative have contributed to the present depression that system cannot be held to be responsible for existing conditions.

(22) The use of inefficient machinery cannot be held to have affected the industry to any appreciable extent.

(23) Difficulties in arranging finance both by mills and dealers in piecegoods have contributed to accentuate the depression.

(24) The loss of the China trade in yarn is an important cause of the present depression in Bombay.

(25) The loss of the export trade in yarn has not been compensated appreciably by an increase in the export of piecegoods.

(26) The increasing competition of mills in Ahmedabad and other centres is also an important cause of the present depression in Bombay.

(27) Greater attention to diversification of production, more direct contact with consuming centres and greater alertness on the part of commission agents would to some extent have mitigated the severity of the depressions in Bombay.

(28) The depression in India has not been accompanied by any decrease in production but over-production cannot be held to be a cause of the depression.

(29) Labour costs in Bombay are markedly higher than those in other centres.

(30) High labour costs in Bombay cannot be held to have caused the depression but they have undoubtedly accentuated it.

(31) High local taxation has added to the difficulties caused by the depression in Bombay.

(32) Examination of the figures of cost of production in the various centres shows that by far the greatest disability in costs of manufacture from which Bombay suffers in comparison with Ahmedabad and other up-country centres is in its high costs of labour.

(33) Bombay is under substantial disadvantages as compared with other centres in regard to cost of fuel and power, cost of water and higher local taxation, but these appear to be rather more than offset by advantages in regard to cost of stores, of insurance and of office expenses.

(34) In regard to supplies of raw material the balance of advantage as compared with other centres is, on the whole, against Bombay.

(35) Proximity to local markets is a factor which operates appreciably to the benefit of the mills in up-country centres.

(36) To the extent that the depression in the cotton textile industry in India is the outcome of the cyclical character of trade, it is not of a permanent nature.

(37) It is impossible to express a definite opinion as to how far foreign competition can be regarded as a permanent cause of depression.

(38) The loss of the China trade in yarn must be regarded as a cause of depression which is of a permanent character.

(39) Whether the increasing competition with the Bombay industry of Ahmedabad and other up-country centres is a temporary or permanent cause of depression must depend on the steps taken by the Bombay industry to meet it.

(40) In regard to the purchase of raw material in Bombay, a single hedge contract is the ideal to be aimed at but, in the meantime, proposals on the lines of the scheme put forward by Messrs. Forbes, Forbes, Campbell and Company for reducing the number of the existing hedge contracts and widening their scope should again be placed before the Representative Committee of the East India Cotton Association.

- (41) Managing agents would be well advised to employ brokers who do not operate on their own account and who are not themselves in actual possession of cotton.
- (42) No economies in the cost of fuel and power appear possible in Bombay.
- (43) A further reduction in the charge for water in Bombay is desirable.
- (44) Managing agents should exercise the closest supervision over all purchases of stores.
- (45) The only alternative to a reduction in wages in the Bombay mill industry is increased labour efficiency and it is in this direction that the true line of advance lies.
- (46) The general adoption in Bombay of the system of maintaining a labour reserve to provide against absenteeism is desirable.
- (47) The piecework system should be extended to spinners in Bombay and should be accompanied by an increase in the number of spindles allotted to each spinner.
- (48) The disparity between the wages of spinners and weavers is a matter which demands the attention of the industry.
- (49) An increase in the number of looms attended by a weaver would tend to economy and give increased earnings to the weaver even when accompanied by a slight reduction in rate.
- (50) Economies similar to those suggested in the spinning and weaving departments can be effected in the preparatory departments.
- (51) If the efficiency of operatives is to be improved, it is essential that there should be an improvement in the standard of efficiency of jobbers.
- (52) Increased efficiency cannot be expected from operatives unless they are provided with suitable raw material. The existing tendency to spin higher counts of yarn than the quality of the cotton warrants causes breakages and increases the work of the spinner and the weaver.
- (53) The fixation of a definite period of rest to enable operatives to take their morning meal is desirable.
- (54) Labour should be recruited directly by the officer in charge of the department of the mill which requires it or by a responsible assistant and not by the jobber.
- (55) The practice of compelling weavers to take over cloth spoilt by defective workmanship at its full value should be abolished.
- (56) Fines levied should be used for the benefit of the operatives as a body.
- (57) The standardisation of wages throughout the Bombay mill industry would undoubtedly strengthen the position of the industry. A suitable scheme could only be drawn up in consultation with the representatives of labour.
- (58) Blocks of the chawls built by the Bombay Development Department might be taken over and administered by groups of mills or by the Bombay Millowners' Association as a body.
- (59) The town duty of one rupee per bale should be reduced to eight annas per bale on all cotton consumed by the Bombay mills.
- (60) More attention to welfare work on the part of the Bombay mill industry is desirable when financial conditions permit.
- (61) Certain alterations in the courses in cotton textiles in the Victoria Jubilee Technical Institute are desirable.
- (62) The provision of more facilities for technical education of mill operatives, especially jobbers, is essential to any improvement in efficiency. The early establishment of Trade Schools in Bombay is, therefore, desirable.
- (63) The preparation and distribution of technical handbooks, in the vernacular, plentifully illustrated and drawn up on suitable lines, for the use of jobbers and operatives should be undertaken.
- (64) The high labour costs in Bombay cannot be reduced by the introduction of the Northrop looms but the experiments with the Whittaker attachment should be continued.

(65) Bombay is not a suitable centre for the adoption of the double shift system since the city is already very congested and the presence of the additional labour force which would be required would increase this congestion.

(66) The desirability of imposing additional assessment on "toka" lands in graduated stages when the present assessment expires should be considered.

(67) The Bombay Millowners' Association should consider the possibility of undertaking fire insurance for its members.

(68) No economies under the head of technical and supervising staff can be suggested but the proper training of such staff should be insisted on in all cases.

(69) Depreciation, including any amount which may be in arrears, should invariably be regarded as a first charge on profits.

(70) Mill stocks should in all cases be checked at audit.

(71) The practice of employing an auditor who is related to the managing agent is open to objection and should be discontinued.

(72) The Bombay Millowners' Association should take immediate steps to obtain a full range of samples and to maintain a full record of prices of all imported cotton manufactures which compete with Indian goods.

(73) The Bombay Millowners' Association should constitute sub-committees to deal with questions relating to export and home markets, finance, labour, registration of labels and numbers, supply of raw material and woollen mills.

(74) Combined action should be taken by the Millowners' Associations and other bodies interested to ensure that the quality of cloth sold under a particular number is maintained.

(75) At least one member of each firm of managing agents should have received technical training.

(76) The practice of investing the surplus funds of mills with firms of shroffs is undesirable and should be discontinued, as should that of lending the funds of one concern to another under the same managing agency.

(77) Writing down of capital in the Bombay mill industry is a matter which calls for further attention.

(78) Bombay should utilise to the full its natural advantages in the matter of climate and situation for the production of goods of higher counts than it has done in the past.

(79) The difficulties in regard to suitable raw material are not insurmountable, and can be overcome temporarily by greater use of American and African cotton.

(80) The charges levied for fumigation are a handicap to the use of American cotton.

(81) In a great expansion in the Bombay mill production of bleached, coloured, dyed and printed goods lies one remedy for the depression in the industry in Bombay.

(82) There is no reason why the printing industry should not be successfully established in India, provided the operations are on a sufficiently large scale, and the latest developments in technique are utilised to the full. It is necessary, therefore, that the matter should be taken up by a combination of mills.

(83) A large factory for combined printing, bleaching and dyeing should be established in or near Bombay and there would seem to be great advantages for placing it at Ambernath.

(84) Greater attention to the quality of production is desirable.

(85) The practice of selling yarn under double numbers is undesirable, and should be discontinued.

(86) Both the system of sales on commission and that of selling through the mills' own shops have advantages and it is not possible, therefore, to say which is preferable.

(87) Representatives of mills should visit the consuming centres from time to time in order to acquaint themselves closely with the character of demand.

(88) The Bombay Millowners' Association should arrange for trade correspondents in the principal consuming centres.

(89) Managing agents should not act as guarantee brokers for the mills they control.

(90) It is desirable that the finance of the cotton industry should be investigated and that an enquiry into the possibility of introducing the warehouse system into India should form part of this investigation.

(91) The development of the export trade of Bombay would be a valuable means of relieving the depression.

(92) Coloured and dyed goods form the largest part of the exports of piece-goods and further expansion of this side of the Bombay industry would, therefore, strengthen its position in the foreign market.

(93) It is essential to the development of the export trade of Bombay that adequate information regarding foreign markets should be available and that the industry should be in a position to utilise it.

(94) The industry should examine the feasibility of a combination of the mills interested in the export trade for the purpose of arranging such details as manufacture of lines required, allocation of quantities among the members and prevention of imitation of marks and numbers.

(95) The statistical information regarding the industry should be improved in certain respects.

(96) High protective duties on the scale advocated by the Bombay and Ahmedabad Millowners' Associations cannot be justified.

(97) The claim for a protective duty of  $4\frac{1}{2}$  per cent. to enable the Indian mill industry to make provision for depreciation of plant and machinery cannot be admitted.

(98) No justification exists for a differential duty against Japan on the ground of depreciated exchange.

(99) The case for a small all-round increase in the import duty on cotton manufactures other than yarn is strengthened by the undoubted temporary handicap imposed on the industry by the stabilisation of the rupee at *1s. 6d.*

(100) A moderate measure of protection both for yarn and cloth can be justified for such period as labour conditions in Japan continue inferior to those in India.

(101) An additional duty on yarn is undesirable in view of its effect on the handloom industry.

(102) A differential duty against Japan is undesirable.

(103) The proposal to give protection against unfair competition from Japan in the form of specific duties levied on the class of goods which are in the main imported from that country is open to several objections and cannot be supported. Protection to the industry should, therefore, be given in the form of an addition to the present duty on all cotton manufactures other than yarn.

(104) No justification for an export duty on cotton can be established.

(105) The concession of free entry enjoyed by cotton mill machinery and mill stores prior to 1921 should again be granted.

(106) The most satisfactory method of working the concession so far as stores are concerned would be to grant total exemption for stores which can only be used in the mill or handloom industries and to exempt other stores from duty if imported direct by a mill or to grant a refund on them when they are purchased from "stockists." Two lists have been drawn up accordingly.

(107) A stimulus to the production of goods of higher quality can best be given in the form of a bounty on the spinning of higher counts of yarn instead of by an additional import duty on yarn.

(108) A bounty of one anna per pound, or its equivalent on yarn of 32's and higher counts, based on the production of an average of 15 per cent. of the total working spindleage in a mill in British India would meet the situation.

(109) The operation of the bounty should be limited to four years.

(110) The bounty should be limited to the production of 15 per cent. of the spindleage in any mill and would not be given unless the total spindleage employed on higher counts exceeded  $7\frac{1}{2}$  per cent. and the average count spun was not below 34's.

(111) One great advantage of this scheme is that the position of the hand-loom industry will not be affected.

(112) As the majority of Indian mills have both spinning and weaving departments, the absence of protection for the lower counts of yarn is compensated by the additional all-round duty on cloth. Contingencies may arise in which an additional duty on yarn would be justified.

(113) If a satisfactory scheme for a combined bleaching, dyeing and printing plant can be put forward by the Bombay mill industry, assistance from Government should be given.

(114) No justification can be established for the grant of export bounties.

(115) Two Trade Commissioners should be appointed, one at Basra and one at Mombasa.

(116) Before Trade Commissioners are appointed for other countries, a rapid survey of the potentialities of the markets in those countries should be undertaken by a small mission.

(117) It is most important in the interests of the Bombay mill industry that it should have its own representatives in the principal export markets. Expenditure by the Bombay Millowners' Association in this respect should be supplemented for four years by the grant of an equal amount from Government up to a maximum of Rs.25,000 annually.

(118) The question of subsidising shipping freights should be investigated by the Trade Commissioners and by the commercial mission suggested in (116). Combination on the part of the Bombay Millowners' Association would place it in a much stronger position to negotiate with shipping companies.

(119) The difficulties in applying a policy of discrimination in regard to railway freights to the cotton textile industry are insuperable.

(120) Specific complaints in regard to inequalities of railway freights are a matter for investigation by the Railway Rates Advisory Committee.

(121) The existing facilities in the matter of railway sidings in Ahmedabad are sufficient.

(122) The charges for the fumigation of American cotton entering India are levied in the interests of the cultivators of cotton and should be borne by general revenues.

(123) No case has been made out for the abolition of company super-tax.

(124) The cost of those proposals which involve expenditure should be met by an additional import duty of four per cent. on all cotton manufactures other than yarn.

(125) This duty should be imposed for a period of three years.

(126) No justification has been established for the special treatment of the hosiery industry.

(127) The abolition of the duty on yarn of counts above 40's or the grant of a rebate of the duty to mills using such yarn cannot be supported."

**Resolution by the Government of India.**—The Government of India on June 7th, 1927, issued the following resolution of the Department of Commerce which was published along with the Report of the Board :—

*" Reference to the Tariff Board.*

On the application of the Bombay Millowners' Association, the Government of India appointed a special Tariff Board in June, 1926, to investigate the condition of the cotton textile industry, to examine the causes of the depression, and in particular to consider whether the depression was due to the competition of other countries. The Board was instructed to report whether the industry was in need of protection and, if so, in what form and for

what period protection should be given. The Board was further instructed to make any other recommendations germane to the subject.

*Findings of the Tariff Board.*

2. The Board has found that the present depression is largely due to causes which are not peculiar to India, but are world wide in their operation. In India itself the depression has been much more acutely felt in Bombay than in other centres, and the Board attributes this state of affairs partly to causes for which the mill-owners themselves are responsible, partly to the competition of the mills in other parts of India, and partly to competition from Japan. Under the first head stress is laid on undue conservatism and insufficient diversification of production, while the relative prosperity of the mills in other parts of India is ascribed mainly to the natural advantages they possess, particularly in a lower rate of wages, and also in their proximity to their markets and to the area from which they obtain their raw material. The Board has emphasised the importance of the increasing competition of the mills in other parts of India as a menace to the industry in Bombay, and considers that it constitutes a problem not less urgent than that which arises from competition from abroad.

3. The Board has found that the competition from abroad, from which the Bombay mill industry is suffering, is from one country only. It was not contended by the Bombay Millowners' Association that either the volume of the imports from the United Kingdom or the prices at which they were sold had in any way been a contributing cause of the present depression; and in regard to imports from all countries other than Japan, the Board has found that there has been no change to the disadvantage of India as compared with the pre-war position. On the other hand, Japanese competition is severely affecting the industry in respect both of yarn and piecegoods, and in so far as this competition is facilitated by inferior conditions of labour in Japan, the industry has, in the Board's view, established its claim to protection against it. The inferior conditions particularly referred to arise from the provision of the Japanese Factory Law which permits for the present the employment of women by night, and thereby enables the Japanese mills to work double shifts. The advantage to the Japanese mills in the actual cost of manufacture, according to the Board's estimate, is about 4 per cent. on both yarn and cloth; but if a reasonable return on capital is included in the cost of production, the advantage increases to 10 per cent. on yarn and 12½ per cent. on cloth. The Japanese mills will, the Board thinks, retain their advantage until the date when the amended Factory Law comes into full operation, which is expected to be the 1st July, 1929; and in that case any influence on the market of stocks accumulated before that date should have disappeared by the end of the official year 1929-30. All the findings of the Board which



have been mentioned are unanimous, except as regards the estimated advantage to a Japanese mill working double shifts, if a fair return on capital is included in the cost of production.

*Recommendations of the Tariff Board.*

4. In addition to a number of detailed recommendations directed towards the improvement of the internal organisation of the industry, which cannot be summarised here, the Board has made two important recommendations designed to assist the industry in securing greater diversification of production, and to stimulate a larger output of goods of higher quality. The first is the establishment, with financial assistance from Government, of combined bleaching, dyeing and printing works at Bombay. This recommendation is unanimous. The second, which is put forward by a majority of the Board, is for the payment, for a period of four years, of a bounty of one anna per pound, or its equivalent, on the production of yarn of 32's and higher counts, based on the output of an average of 15 per cent. of the total working spindleage in a mill. The cost of this bounty, including the cost of administration, is estimated to be about Rs.39 lakhs per annum. The President of the Board (Mr. Noyce) dissents from this recommendation.

5. A majority of the Board has proposed that the import duty on cotton piecegoods should be increased from 11 to 15 per cent. for a period of three years. The primary object of this increase is to provide funds to meet the cost of the proposed bounty on the spinning of the finer counts, and of certain other proposals made by the Board, but it will also serve to reduce the rigour of the competition from Japan from which the industry suffers. No increase in the duty on yarn is recommended by the majority in view of the effect that such a measure might have on the handloom industry. The President of the Board (Mr. Noyce) does not consider that an all-round increase in the import duty on piecegoods can be justified, but has recommended that an additional duty of 4 per cent. should be imposed on all cotton manufactures, including yarn, imported from Japan for a period of three years.

6. The Board has proposed several other measures for the assistance of the industry by Government. Most of these are under separate consideration, and only one can be mentioned here. The Board has unanimously recommended the remission of the import duty on cotton textile machinery and on certain mill stores for a period of three years, after which the question of continuing the remission would be considered in the light of the conditions then existing. The loss of customs revenue from this remission, according to the Board's estimate, is about Rs.50 lakhs per annum.

7. Finally, the Board emphasises its view that the State aid and the changes in the tariff which it has proposed can, in themselves, prove no more than palliatives, and would indeed fail in

their purpose if they did not succeed in stimulating and encouraging the industry to undertake reorganisation and effect economies on the lines suggested.

*Decisions of the Government of India.*

8. The Government of India are unable to accept the recommendation of the majority of the Board that the spinning of the higher counts of yarn should be stimulated by the grant of a bounty. They are satisfied that the administrative difficulties in working a scheme of the kind proposed are insuperable, and they agree with the view expressed by the President of the Board (Mr. Noyce) that a long established industry, such as the cotton textile industry in Bombay, should need no stimulus at the cost of the general taxpayer, if such a development is in its own interest. As regards the proposal that Government should contribute towards the cost of establishing combined bleaching, dyeing and printing works in Bombay, the Government of India are unable to express any opinion until they have ascertained the views of the Local Government and of the cotton mill industry in Bombay and elsewhere.

9. The rejection of the proposed bounty on the spinning of the finer counts removes the principal reason advanced by the majority of the Tariff Board for a general increase in the import duty on cotton piecegoods. The Government of India are also satisfied that, on the facts as found by the Board, no case has been established for a general increase in the duty as a measure of protection.

10. The Government of India accept the finding of the Board that the advantage to Japan resulting from labour conditions in that country, until the amended Factory Law comes into full operation, in actual cost of manufacture may be assessed at about 4 per cent. on both yarn and cloth. In making this calculation, the Board has allowed for the fact that double shifts are universal in spinning mills in Japan, but not in weaving mills, in which the average hours worked are only 14.45 hours. But the majority of the Board omitted to make a corresponding allowance, when calculating the advantage if a reasonable return on capital is included. Hence the advantage to Japan, when calculated on this basis, should be 10 per cent. on cloth and not 12½ per cent., as stated by the majority of the Board. It follows that the advantage to Japan, even if a reasonable return on capital is included, is already sufficiently covered by the existing revenue duty of 11 per cent. on cotton piecegoods. No additional duty on this account can, therefore, be justified. The existing revenue duty on yarn is only 5 per cent. and in this case, if calculation of the majority is accepted, the advantage to the Japanese mills is not fully covered. But an additional duty on yarn only would affect prejudicially the handloom industry, and for this reason should not be imposed.

11. The removal of the import duty on machinery and on the materials of industry was recommended by the Fiscal Commission and is in accordance with the principle of the resolution adopted by the Legislative Assembly on the 16th February, 1923, that the fiscal policy of the Government of India may legitimately be directed towards fostering the development of industries in India. In giving effect to this principle, as revenue considerations permit, the Government of India are prepared to give precedence to articles used chiefly by industries which are passing through a period of depression. But they would be unwilling to differentiate between industry and industry by allowing one industry to import free of duty articles on which other industries have to pay duty. The Government of India have decided, therefore, to deal on these lines with the recommendation of the Board that the import duty on cotton textile machinery and mill stores should be remitted for a period of three years.

12. The Government of India will introduce legislation at the next session of the Indian Legislature to remove altogether, with effect from the 1st October, 1927, the duties on the following articles :—

All machinery and component parts of machinery as defined in items Nos. 51, 51A and 51B of the Import Tariff Schedule (Schedule II to the Indian Tariff Act, 1894); aniline and alizarine dyes; bleaching powder and paste; farina; china clay; sago flour; magnesium chloride; starch; tallow; and cotton ropes.

It is estimated that the consequent loss of customs revenue will be Rs.45 lakhs in 1927-28 and Rs.85 lakhs in a full year. The removal of the duty on machinery is subject to the proviso that it may be necessary to re-impose an import duty on particular kinds of machinery, if it appears, on a report by the Tariff Board, that it is desirable to encourage the manufacture in India of such machinery and that a protective duty is required for that purpose, or that the imposition of a duty is necessary in order to secure equality of tariff treatment and remove a handicap under which the manufacture of such machinery in India would otherwise suffer.

13. The remaining recommendations of the Board, in so far as they concern the Government of India, are under consideration."

The Government of India have since modified their decision to leave the duty on cotton yarn unchanged and the 5 per cent. duty on cotton yarn has been made subject to a specific minimum of 1½ annas a pound. This increase will affect Japanese more than British imports. The decision not to increase the import duty on cotton cloth holds good.

## INQUIRY INTO THE COAL INDUSTRY.

This question was remitted to the Tariff Board in a resolution of the Government of India, dated 30th September, 1925, reading as follows :—

“ In accordance with the statement made in the Legislative Assembly on the 15th of March, 1924, the Government of India have now decided to refer to the Tariff Board for investigation the question whether a protective duty should be imposed on imported coal generally or on coal imported from any particular country or countries, and, if so, at what rates.”

After an exhaustive inquiry, the decisions of the Board were issued in April, 1926, in the form of a majority and minority report. The President and Mr. Matthai made the following recommendations :—

(1) On the South African railways coal for bunkering and export is carried at a rate which is lower by 5s. 7½d. a ton than the domestic rate for the same distance.

(2) Some reduction as compared with the domestic rate could be justified on the ground that, directly or indirectly, the railways gained from the increase in traffic, but it is not possible in this way to explain a reduction of about 45 per cent.

(3) The freight concessions to the export coal and part of the bunker coal are integral parts of a policy which aims at the development of a large export trade, and were granted not merely in order to increase the railway traffic but also in the interests of the coal industry. Special assistance of this kind is equivalent to a bounty on export and must be regarded as unfair competition.

(4) The exact amount of the bounty cannot be determined but it is not more than 5s. 7½d. nor less than 2s. 3d. a ton.

(5) An additional duty of Rs.1-8 a ton on South African coal would suffice to give the Indian coal industry all the benefit it could derive from a duty of this kind.

(6) It is doubtful whether the price of Indian coal in Bombay and Karachi would rise at all as a result of the duty, but the increase (if any) would not be more than 12 annas a ton. There would be no increase elsewhere.

(7) A duty on South African coal would not add appreciably to the costs of any Indian industry.

(8) The invasion of the Indian markets by South African coal is not due to the bounty alone but also to the unsatisfactory quality and condition of the Indian coal sent to Bombay and Sind in recent years. Part of the responsibility for the latter factor rests on the shoulders of the coal industry in Bengal and Bihar.

(9) The increase in the sales of Indian coal in Bombay and Sind resulting from the duty would not exceed 100,000 tons a year when allowance is made for the coal re-exported, the probable increased imports from other countries, and the increase which is probable even without protection.

(10) A duty on South African coal would do little to diminish employment or to prevent the shutting down of mines.

(11) The competition of South African coal has been felt not only in Bombay and Sind, but also in Ceylon and the Far East, and the loss of the latter markets is a much more serious matter than any injury suffered in the former. The imposition of a countervailing duty on South African coal will do nothing to help the coal industry where help is most needed.

(12) A duty on South African coal might provoke retaliatory measures and the possibility of effective retaliation by the South African Government cannot be excluded.

(13) In all the circumstances of the case it is inadvisable to impose a countervailing duty on South African coal.”

Mr. Ginwala, however, while concurring substantially in the findings numbered 1, 3, 4, 5, 6 and 7 above, considered that there was no justification for imposing a protective duty on imported coal generally, but definitely recommended:—

“ (1) that a duty of Rs.1-8-0 per ton in addition to the present duty of Rs.0-8-0 per ton should be imposed on all South African coal entering India. This should suffice to enable Indian coal to compete successfully against South African coal in any port in India.”

— and —

“ (2) that the duty should be increased if any counter action is taken by the South African Government or if South African coal still enters India.”

**Decision of the Government of India.**—The decision of the Government of India was announced in Resolution No. 47-T (78) of the 17th July, 1926, reading as follows:—

“ The report of the Tariff Board on the question whether a protective duty should be imposed either on all imported coal or on coal imported from any particular country or countries was published for general information on Friday, the 16th July.

The Government of India accept the unanimous finding of the Tariff Board that the case for a protective duty on all imported coal has not been established.

The facts reported by the Tariff Board show that an additional duty on coal imported from South Africa might be imposed under section 8A of the Indian Tariff Act, 1894, but the Government of India accept the finding of the majority of the Board that in present circumstances action under that section is not advisable.”

#### INQUIRY INTO THE SHIPBUILDING INDUSTRY.

The Tariff Board were directed to examine the question of the import duties on imported boats, barges, flats and steamers and on the imports of shaped and fabricated parts for such vessels by the resolution of the Government of India in the Commerce Department, dated 28th March, 1925, which reads as follows:—

“ In paragraph 16 of the second portion of the original Report regarding the grant of protection to the steel industry, the Tariff Board considered as a general conclusion that an increase in duties on unfabricated steel did not necessitate any increase in the duties on imported boats, barges, flats, steamers, etc. The Board did not arrive at any distinct finding as to the duties which ought to be imposed when such vessels were imported as shaped and fabricated parts for erection in India, as that question was not brought to the notice of the Tariff Board. This question is now referred to the Tariff Board for enquiry and report with special reference to a representation received from the Irrawaddy Flotilla Company that the general conclusion of the Tariff Board should be held to cover the imports of shaped and fabricated parts for such vessels.”

**Findings of the Board.**—The Board summarise their conclusions by stating:—

“ It is clear that before the war the Indian shipbuilding industry did not require protection, for materials and finished product alike were free of duty, and the industry grew and prospered. It has not been shown that present-day conditions are more unfavourable to the Indian shipbuilder than they were

formerly; except in respect of (a) the protective duties on steel and (b) the rise in the exchange, there is no evidence that the British builder can underquote the Indian builder and very few ships have been imported. The natural inference is that, if there were no duty on unfabricated steel and the exchange were at 1s. 4d., no duty on imported ships would be necessary. The protective duties on steel increase the costs of the Indian builder by Rs.35 per ton of fabricated material, and a specific duty of the same amount on imported material would equalise matters in this respect. A 10 per cent. duty on the galvanised material imported by the Irrawaddy Flotilla Company would amount to from Rs.72 to Rs.84 a ton, and obviously a higher duty is not needed. What a 10 per cent. duty on ungalvanised shipwork would amount to cannot be ascertained, but if the British costs are approximately the same as the Indian, it would be about Rs.24 a ton on flats and barges and Rs.30 a ton or more on power craft. The effect of the rise in the exchange on the cost of the imported material cannot be calculated precisely, because the British cost of fabrication is unknown. There are reasons for believing, however, that the Indian builder has the advantage in this respect, for flats and barges are almost never imported, and when orders for steamers and other craft are placed in England the price is not the decisive factor. The rise in the exchange is not itself a sufficient ground for imposing on imported vessels a higher duty than 10 per cent., but it makes it more necessary to ensure that the duty on the fabricated steel hulls of imported vessels should not be less than the duty which the Indian builder has to pay on the unfabricated steel which he purchases. It is only to this extent that there are sufficient reasons for imposing a higher duty than 10 per cent. on imported ships.

Our proposal is that the duty on the fabricated steel parts of ships and other inland vessels should be fixed at 10 per cent. but subject to the proviso that the duty shall in no case be less than Rs.35 a ton. There will then be no danger that the Indian builder will pay a higher duty on the material he purchases than the importer pays on the finished product. The minimum rate of duty proposed is based on the existing rates of duty on plates and structural sections, and may require modification if, as a result of the statutory enquiry which is about to commence, the duties on unfabricated steel are changed. It will be a simple matter, however, to make the necessary alteration, for full information has been obtained in this enquiry as to the proportion of the various kinds of unfabricated steel in several types of vessel and the extent to which the Indian shipbuilder's costs are increased by the protective duties can be calculated without difficulty."

**Decision of the Government of India.** — This was published in the resolution No. 221-T (2) of the 14th August, 1926, as follows:—

"The report of the Tariff Board regarding the grant of protection to the shipbuilding industry was published for general information on Friday, the 13th August.

The Government of India accept the finding of the Tariff Board that the shipbuilding industry in India does not require protection, except in so far as it is affected by the protective duties on iron and steel.

They also agree with the Board that the duty on ships and other vessels for inland and harbour navigation when imported in parts, should be 10 per cent. *ad valorem* subject to a minimum of Rs.35 per ton on protected iron and steel.

But as the Board have pointed out, this minimum rate is based on the existing rates of duty and may require modification as a

result of the statutory inquiry into the iron and steel industry which is now in progress. The Government of India, therefore, have decided to postpone legislation to give effect to the Board's present recommendation until the result of the statutory inquiry is known. Meanwhile, however, they have decided to exempt by notification under Section 23, Sea Customs Act, the iron and steel in ships and other vessels imported for inland and harbour navigation from so much of the protective duties as is in excess of 10 per cent. *ad valorem* or Rs.35 per ton, whichever is higher."

#### INQUIRY INTO THE WIRE AND WIRE NAIL INDUSTRY.

In the resolution of the Government of India in the Commerce Department dated June 18th, 1925, the Tariff Board were directed to examine the question to what extent the protection given to certain classes of steel by the Steel Industry (Protection) Act, 1924, required to be supplemented. This inquiry falls into three parts as follows:—

I. The application for supplementary protection of wire and wire nails put forward by Indian Steel Wire Products Ltd.

II. A proposal made by the Pioneer Nail Manufacturing Company and the Punjab Wire Nail Factory that a higher duty should be imposed on nails than on wire; and

III. A request by Halley Brothers Ltd. for exemption from the protective duties on the wire and wire rod used by them in the manufacture of hackles.

**Conclusions of the Board.**—I. As regards the grant of supplementary protection to the manufacture of wire and wire nails, the Board find as follows:—

"(1) The amount of the supplementary protection required, so long as imported rod is used, is Rs.40 a ton and Rs.53 a ton from the date when the Tata Iron and Steel Company begin to supply rod.

(2) The supplementary protection, if given, should take the form of a bounty on production.

(3) Facts have been brought to light which suggest that, if protection for wire and wire nails is continued after March 31st, 1927, it may be on the basis that the industry is a separate one using imported materials.

(4) Until this question has been examined, it is not desirable that Government should incur further commitments in support of the industry. We have, therefore, no recommendation to make for the grant of supplementary protection."

The Board proceed to recommend that as a special concession Indian Steel Wire Products, Ltd., should be granted a rebate of the duty already paid by them on certain imports of wire rod amounting to the difference between the duty already paid and a duty calculated at 10 per cent. *ad valorem*. They also recommend that until March 31st, 1927, the Wire Company should be allowed to import the rod they require subject to a duty of 10 per cent.

II. With regard to the proposal that a higher duty should be imposed on nails than on wire, the Board find that:—

"No good grounds have been made out for protecting the manufacture of nails as a separate industry using imported materials. The industry, since it does not utilise Indian steel, has no natural advantages except cheap labour, its developments would be of no substantial advantage to the country for the

number of workmen employed would be small, and the opportunities for acquiring industrial experience and training inconsiderable, and if protection were once granted, it could never be discontinued. For these reasons we have no recommendation to place before the Government of India."

III. The Board do not recommend that any special concession should be given to Messrs. Halley Brothers Ltd.

**Decision of the Government of India.**— This was published in resolution No. 362-T (3) of the 17th July, 1926, as follows:—

#### *Section I.*

"The protection of wire and wire nails was recommended by the Tariff Board in their report on the first inquiry into the steel industry. Effect was given to the Tariff Board's recommendations in the Steel Industry (Protection) Act, 1924, which imposed a protective duty of Rs.60 per ton on wire and of Rs.3 per cwt. on wire nails. The Tariff Board have no recommendation to make for the grant of supplementary protection, and consider that the question of future protection should be fully examined in the statutory inquiry into the steel industry which is now proceeding. The Government of India accept this finding.

The Steel Industry (Protection) Act, 1924, also imposed a protective duty of Rs.40 per ton on all sizes of steel bar and rod. Wire and wire nails are manufactured from steel rod of small gauge. But the Indian Steel Wire Products, Limited, which was the only firm making wire and wire nails, had an agreement with the Tata Iron & Steel Company for the purchase of wire rod at a price which was not dependent on the import duty. The Tariff Board, therefore, considered that the protective duty on steel rod would not conflict with the protection of wire and wire nails. But the Tata Iron & Steel Company have not yet produced steel rod of small gauge, and it is reported that it would not be to their interest to manufacture it. Thus the protective duty is not only unnecessary, but also operates to diminish the protection on wire and wire nails which the Act was intended to give. In these circumstances, the Tariff Board recommend that the protective duty on steel rod and round bar of less than  $\frac{1}{2}$  inch diameter should be removed. The Government of India accept this recommendation, and have decided to remit, by notification under section 23 of the Sea Customs Act, so much of the present duty as is in excess of the former revenue duty of 10 per cent. *ad valorem*.

#### *Section II.*

The Tariff Board do not recommend that a higher duty should be imposed on wire nails than on wire. The Government of India accept this finding.

#### *Section III.*

The Tariff Board consider that the removal of the protective duty on steel rod and round bar of less than  $\frac{1}{2}$  inch diameter will give sufficient relief to the manufacture of hackles. The Government of India accept this finding."



### INQUIRY INTO THE GALVANISING INDUSTRY.

This inquiry was remitted to the Board in the resolution of the Government of India dated March 28th, 1925, and deals with two applications presented by the Indian Galvanising Company, Ltd., as follows :—

- (1) that the 15 per cent. duty on imported spelter should be abolished ; and
- (2) that the 15 per cent. duty on imported galvanised hardware should be increased to at least 20 per cent.

With regard to the first application, the Board recommend that :—

“ The duty on spelter should be removed at the earliest opportunity. It will result in a reduction of between 3 and 4 per cent. in the cost of galvanised sheet and of about 3 per cent. in the cost of galvanised hardware. In addition it will benefit a number of small manufacturers, of brass and other alloys, and it might assist the establishment of brass manufacture on a large scale. The loss of revenue occasioned by the removal of the duty would be about Rs.5 lakhs at the present rate of consumption, or if allowance be made for the larger consumption of spelter at Jamshedpur when the sheet mills reach their full output, Rs.6 lakhs. We have considered whether the duty should be retained on those imports where the zinc has been given a special shape, such as zinc sheet, rolled zinc, boiler tiles and zinc tubes and tubing, about which no special representation has been made, but we do not consider this course is advisable. The imports of this sort are apparently small in quantity, the revenue derived from the retention of the duty would be trifling, and difficulties might arise in the Customs when it was necessary to discriminate between zinc which was dutiable and zinc which was not. For this reason we propose that all kinds of zinc, which are at present subject to duty under entry No. 98 in the statutory Tariff Schedule, should be admitted free.”

With regard to the second application, the Board were unable to recommend the imposition of a protective duty on imported galvanised hardware.

**Decision of the Government of India.**— This was made known in resolution No. 267-T (2) of 3rd July, 1926, as follows :—

“ The report of the Tariff Board on applications for the removal of the duty on spelter and for the enhancement of the duty on imported galvanised hardware was published for general information on the 2nd July.

The Board recommend the removal of the duty on spelter, in accordance with the general principle enunciated in paragraph 113 of the Fiscal Commission's report that raw materials required for Indian industries should ordinarily be admitted free of duty. The principal Indian industries for which spelter is a raw material are :—

- (1) the manufacture of brass and other alloys ;
- (2) the manufacture of galvanised sheet ; and
- (3) the manufacture of galvanised hardware.

The manufacture of galvanised sheet is already protected, and the Board have pointed out that there are special reasons in such cases for removing the duties on materials in order that the protective duties may be kept as low as possible.

The Government of India are of opinion that recommendations for the removal of duties, based on general principles rather than

on the immediate need of a particular industry, should ordinarily be considered at the time of the annual Budget. In this case also, the statutory inquiry into the steel industry, which is now in progress, embraces the existing protective duty on galvanised sheet. The Government of India, therefore, have decided that the present recommendation of the Tariff Board that the import duty on spelter should be removed, should be considered at the time of the next Budget and in connection with the further protection of the steel industry, at the Delhi Session of the Legislature, 1927.

The Board are unable to recommend the imposition of a protective duty on imported galvanised hardware, and the Government of India have accepted this finding."

## CHAPTER IV.

AN ACCOUNT OF THE FURTHER DEVELOPMENT OF PURCHASES OF GOVERNMENT STORES IN INDIA BY THE INDIAN STORES DEPARTMENT AND OTHER DEPARTMENTS OF THE GOVERNMENT OF INDIA WITH SPECIAL REFERENCE TO THE BEARING OF THIS TENDENCY ON THE POSITION OF BRITISH MANUFACTURERS.

During the past six years in previous reports I have traced with some care the gradual steps taken by the Government of India to give effect to their avowed policy of developing the purchase of stores as far as possible in India, of granting a preference to articles manufactured or partly manufactured in the country, and of utilising the activities of the recently created Indian Stores Department as a lever to stimulate the local production of such articles.

Before this report is published it is probable that the details with regard to the institution of a system of rupee purchase in India will have been made known. As the matter is still under consideration by the Government of India, it is not possible at the present time to do more than state that the Departments of the Government of India concerned, namely, the Indian Stores Department, the Railway Department and the Army Department are now engaged in revising the Stores Rules and in working out the precise arrangements required for the adoption of a system of rupee purchase to the utmost possible extent. It is expected that the revised Stores Rules will be promulgated with the least possible delay, and that adequate time will be given for suppliers to modify their organisation before the system comes into force. Once the rupee tender system is adopted, it will be practically essential that each manufacturer who is interested in the stores purchased by the Indian Stores Department, the Railway Board and State Railways, and also by certain sections of the Army Department, should have an active organisation in India to deal with the calls for tender, and to keep in touch with the purchasing departments concerned.

I propose now to deal with the development of the Indian Stores Department in 1926-27, to consider the purchases of railway material during the last year in respect of which details are available, and generally to bring the record up to date so that British manufacturers may realise the far-reaching changes which are taking place, and which call for increased efforts and greater vigilance on their part if they wish to maintain that predominant share in the supply of Government stores which has always been theirs in the past.

## THE INDIAN STORES DEPARTMENT IN 1926-27.

NOTE.—I am indebted to Mr. J. S. Pitkeathly, C.I.E., C.V.O., C.B.E., Chief Controller of Stores, for the information which follows and for valuable co-operation and help which has always

*been most willingly given. His lucid 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 Government.*

The Chief Controller reviews the progress made during the year 1926-27 in the following terms :—

“ The last report issued on the administration of the Indian Stores Department brought the record of the operations of the Department up to the end of March, 1926. That report exhibited continuous progress of the activities of the Department in the various fields wherein it has been set to operate. The present report continues that record up to the end of the financial year 1926-27. This latter record is one of still further and marked progress in all directions. The clientèle of the Department, both in its purchase and inspection branches, not only received an addition of strength, but also employed the Department to a larger extent than in the previous year. As a result, there was a substantial increase in the volume of the business actually transacted by the Department.

**Activities of the Purchase Branch.** — The value of the purchases effected by it rose from Rs.2,66,68,000 to Rs.3, 98,82,000—an increase of 49·5 per cent. In the case of textile goods these purchases were, as in previous years, confined almost wholly to the products of India, the proportionate value of Indian products purchased having amounted to nearly 97 per cent. of the total. The bulk of the purchases of engineering and allied stores was, as formerly, represented by articles of foreign manufacture. This must continue to be so until considerable progress has been made in the development of the engineering industry of India, and until the Indian Stores Department is utilised to a larger extent than at present for the purchase of engineering material which is manufactured in India.

**Activities of the Inspection Branch (general).**—The expansion of the purchasing operations of the Department naturally reacted on the volume of the work carried out by the Inspection Branch; but the operations of that Branch were further, and to a larger extent, broadened by the larger resort to the Department of authorities who effected their own purchases.

**Activities of the Metallurgical Inspectorate and the Government Test House.** — The tonnage of materials inspected at the Metallurgical Inspectorate at Jamshedpur increased by 14·9 per cent., having risen from 293,053 tons to 336,820 tons. There was also a substantial increase in the number of tests and analyses carried out by that organisation and the Government Test House at Calcutta, both of which institutions undertook in addition a good deal of research work in various directions which will prove

of substantial practical benefit to the industry and commerce of the country.

**Activities of the Provincial Inspectorates.**— The work entrusted to the Inspection Circles also was considerably larger than in the previous year, more noticeably in the Calcutta and the Bombay Inspection Circles, in which the increase of business amounted to 29·7 per cent. and 164·8 per cent. respectively.

**Specification and Advisory Work.**— Much useful work was done in revising and bringing up to date a number of the existing specifications, in framing new specifications, and in affording technical advice in connection with certain important schemes involving the expenditure of several lakhs of rupees. In addition, progress was made in extending the survey of the indigenous sources of supply, and every opportunity that presented itself was taken to indicate to suppliers directions and the manner in which the quality of their products might be improved.

**Financial Position.**— The accounts of the receipts of the Department, and of the expenditure debited directly to its budget grant, exhibit a satisfactory improvement, the year having ended with a debit balance of about one-third the amount of the corresponding balance of the previous year."

#### *Work Done.*

**"Progress in extending the field of operations.**— The progress made in the year 1925-26 in extending the Department's field of operations was more than maintained during the year 1926-27. A number of authorities, comprising not only Departments of the State, both Central and Provincial, but also public bodies, such as Company Railways and Municipalities, Indian States and a certain number of private firms, who had not previously resorted to the Department for the purchase or inspection, or both, of stores required for their use, entrusted it with a not inappreciable volume of such business; while many of the previous clients of the Department utilised its services to a greater extent than hitherto.

**Inclusion of the Stores Department in the major local Governments' arrangements for Stores Purchase.**— A new development during the year, which may well prove to be of considerable practical importance to the Department, was the promulgation by some of the major local Governments of definite rules to regulate the purchase of stores required for the use of the Departments and officers subject to their authority. Most of these rules provide for the utilisation in some form or other of the services of the Indian Stores Department. Thus, the Government of the Central Provinces have constituted the Indian Stores Department as one of the agencies which should be utilised by Departments and officers under their control for the purchase of plant

and machinery and component parts from branches in India of manufacturing firms. The Governments of Bengal and the Punjab have gone further, having appointed the Indian Stores Department to be the sole purchasing agency for such stores. The Government of Bombay have prescribed that all purchases in India above Rs.500 in value, whether of indigenous articles or of imported stores, except plant and machinery and component parts, shall be made through the agency of the Indian Stores Department, unless indenting officers can show that they can themselves purchase the materials more cheaply or (in cases of urgency) more expeditiously. They have also issued directions that all indents on the India Store Department, London, made by their Departments and officers should be forwarded through the Indian Stores Department, and further that the agency of the latter should, as far as possible, be utilised for the testing and inspection of all articles purchased in India which are required to conform to tests or specifications laid down by competent authority. These prescriptions imply a recognition in varying degrees by these Governments of the facilities which the Department is in a position to offer, and this recognition is rendered all the more gratifying by reason of the fact that these Governments are completely autonomous in this matter, and are under no sort of obligation to utilise the services of the Department.

**Work of the Purchase Branch.**— The total number of indents and items dealt with rose from 6,401 and 39,485 respectively, to 8,561 and 56,058 as detailed below :—

	No. of Indents.		No. of Items.	
	1925-26	1926-27	1925-26	1926-27
Headquarters	3,016	3,925	16,128	23,193
Calcutta	1,740	2,334	12,051	16,916
Bombay	1,157	1,079	7,645	6,989
Karachi	488	1,213	3,661	8,960
	6,401	8,561	39,485	56,058

The total value of the purchases made during the year increased from Rs.2,66,67,933 to Rs.3,98,82,245. This increase was distributed over both textile goods and engineering and allied stores, but it was more marked in the case of the latter.

**Purchase of Textile Stores.**— The textile purchases, amounting to Rs.1,62,86,293 in value, exceeded those of the preceding year by 37 per cent. A portion of this increase was due to the late receipt of certain important indents during 1925-26, but even if these particular purchases were excluded from the comparison there would remain a satisfactory increase of about 11 per cent. in the value of this class of business.

The figure of Rs.1,62,86,293 approximates closely to the highest recorded since the constitution of the Department, and this fact

gains in importance when it is remembered that since the record figure of Rs.1,64,78,305 was reached in the year 1922-23 there has been both a diminution of the requirements of the Army in India, the largest consumer of textile goods, and also a general fall in prices.

Following previous practice, practically the whole of the textile goods bought were of Indian origin and manufacture, the proportion of goods of overseas manufacture purchased in the market amounting to 3.3 per cent. only.

**Purchase of engineering and miscellaneous stores.**—The value of the purchases of engineering and allied stores amounted to Rs.2,35,95,952, representing an increase of about 60 per cent. over the figure of the preceding year. The Central Departments increased their purchases through the Indian Stores Department by 45 per cent., the Railway Administrations (State and Company worked as well as those worked by Indian States) by 82 per cent., and the provincial Governments by 70 per cent. There was a considerable decline in the volume of the purchases made on behalf of Indian States, but this was counterbalanced by a corresponding increase in the purchases made for public bodies.

The bulk of these stores continued, for the reasons explained in the previous report, to be of foreign origin.

**Details of important purchases.**—The following were the more important purchases made during the year under report :—

TEXTILES.		Amount. Rs.
1.	Tents and components	33,00,000
2.	Blankets, woollen	22,62,000
3.	Drills, khaki and drab dark	17,09,000
4.	Cotton waste (for cleaning and axle box packing)	7,99,000
5.	Socks and stockings, woollen	6,03,000
6.	Paulins	5,56,000
7.	Putties, woollen and cotton	5,52,000
8.	Drills, white and coloured	5,46,000
9.	Serge drab mixture and serge lining	3,67,000
10.	Waistcoats, cardigan jackets and jerseys	3,26,000
11.	Yarn, cotton and woollen	2,87,000
12.	Durries, cotton and woollen	2,77,000
13.	Pagri cloth, khaki and other colours	2,59,000
14.	Rugs, horse	2,55,000
15.	Hessians and gunnies	2,41,000
16.	Blanketing cloth for overcoats	2,36,000
17.	Great coat cloth and coats	2,28,000
18.	Cordages and ropes	2,10,000
19.	Cotton white, sleeve lining	2,09,000
20.	Bags, waterproof	1,95,000
21.	Melton cloths	1,91,000
22.	Bags, postal	1,66,000
23.	Towelling cloth	1,29,000
24.	Dosuti cloth	1,16,000
25.	Twines, jute, hemp, cotton, etc.	1,16,000
26.	Twill, cotton	1,15,000

	Amount Rs.
27. Sheets, barrack ... ..	1,06,000
28. Serge, lining ... ..	96,000
29. Longcloth ... ..	92,000
30. Sheets, hospital ... ..	90,000
31. Cotton wool, absorbent (surgical) ... ..	87,000
32. Cambric, mulmul and muslin ... ..	86,000
33. Cotton, grey, blue, etc. ... ..	84,000
34. Cases, mattress, pillow, etc. ... ..	73,000
35. Flannelette, mark III. ... ..	67,000
36. Gloves, worsted ... ..	59,000
37. Cloth, linen, paramatta, alpaca, etc. ... ..	57,000
38. Tape, cotton ... ..	52,000
39. Kullahs ... ..	51,000

#### *ENGINEERING AND MISCELLANEOUS.*

40. Electrical power generating plant and equipment ... ..	13,42,000
41. Cement ... ..	10,85,000
42. Oil, fuel ... ..	10,18,000
43. Dragline excavators ... ..	9,41,000
44. Road rollers ... ..	8,64,000
45. Bitumen and asphaltum ... ..	8,39,000
46. Rolled steel beams and joists, etc. ... ..	8,23,000
47. Mild steel sections ... ..	7,02,000
48. Pipes, C.I., and fittings, etc. ... ..	6,92,000
49. Oil, axle ... ..	6,10,000
50. Oil, kerosene ... ..	5,95,000
51. Sheets, galvanised corrugated ... ..	5,84,000
52. Rails and permanent-way materials ... ..	5,12,000
53. Tyres and tubes, rubber ... ..	4,50,000
54. Structural steel work ... ..	4,80,000
55. Barges, steel ... ..	4,29,000
56. Paints ... ..	4,01,000
57. Oils, lubricating, miscellaneous ... ..	3,79,000
58. Electrically driven haulage equipment for Uhl River ... ..	2,56,000
59. Locomotives, electric ... ..	1,98,000
60. Tubes, steel ... ..	1,87,000
61. Oil, cylinder, ordinary and superheat ... ..	1,80,000
62. Tunnel construction plant ... ..	1,77,000
63. Wagons, tipping and trucks ... ..	1,71,000
64. Cables and wires, electric ... ..	1,33,000
65. Oil, linseed, raw and boiled ... ..	1,32,000
66. Creosote ... ..	1,23,000
67. Tractors and trailers ... ..	1,23,000
68. Stone breakers ... ..	1,19,000
69. Workshop machinery ... ..	1,10,000
70. Locomotives, steam ... ..	1,06,000
71. Weaving machinery ... ..	1,00,000
72. Merryweather valiant pumps ... ..	93,000
73. Cultivating machinery ... ..	88,000
74. Fans, lamps and fittings, electric ... ..	85,000
75. Air compressors ... ..	80,000
76. Wire, baling ... ..	75,000
77. Girders, bridge ... ..	71,000
78. Petrol ... ..	70,000
79. Pumping plant ... ..	69,000
80. Belting of sorts (hair, leather, etc.) ... ..	67,000
81. Timber for packing cases ... ..	66,000
82. Timber (teakwood, etc.) ... ..	57,000



*Encouragement of Indian Industries and Local Purchases.*

**Registration of firms at the Headquarters Office.**—Investigations continued to be made during the year into the potentialities of Indian sources of supply, and, as one result of these enquiries an addition of 278 was made to the list of “ approved contractors ” to the Department and to the lists of firms maintained under the rules for the supply of articles for the public service. Applications for registration which had been received from 109 other firms were rejected for the reason that these firms did not entirely satisfy the necessary conditions for enrolment on the lists; and the names of three firms who had previously been enrolled were removed from the lists, as it was found that they could not safely be entrusted with the efficient carrying out of contracts placed with them. The table on page 106 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.

	Eengal.	Bombay Presy.		Madras.	Punjab.	U.P.	Delhi.	Burma.	B. & O.	C.P.	Indian States.	TOTAL.
		Bombay.	Karachi.									
Railway materials ... ..	59	39	4	9	6	4	6	5	5	—	1	138
Hardware ... ..	78	54	14	12	12	23	12	9	3	—	6	223
Implements and tools ... ..	51	41	11	15	12	5	10	10	3	1	2	161
Metals ... ..	86	48	12	13	11	9	11	10	4	1	1	206
Mechanical equipment ... ..	147	126	12	29	19	12	17	25	3	—	5	395
Electrical equipment ... ..	95	59	14	23	15	16	15	11	3	—	3	254
Oils ... ..	39	33	5	10	6	6	3	8	—	—	4	114
Paints, colours, enamels and varnishes ... ..	49	40	10	11	5	2	1	6	1	—	2	127
Chemicals (excluding medicines and drugs)	37	16	3	4	2	4	2	3	—	—	1	72
Textiles—												
(a) Cotton materials ... ..	68	68	3	6	28	19	10	5	—	1	5	213
(b) Woollen materials ... ..	24	17	1	4	9	12	1	2	1	—	4	75
(c) Jute, flax and hemp materials ... ..	54	23	4	2	10	6	—	3	1	1	—	104
(d) Silk ... ..	—	—	—	—	—	1	—	—	—	—	—	1
Leather goods ... ..	16	9	—	2	5	10	—	3	—	—	1	46
Structural engineering ... ..	41	16	3	6	2	4	3	7	2	—	—	84
Miscellaneous stores ... ..	154	94	19	23	37	24	22	17	3	6	7	406
Medical, surgical and scientific stores and equipment (excluding medicines, chemicals and drugs) ... ..	10	3	—	1	1	2	—	—	—	—	—	17
Wireless stores ... ..	1	1	—	—	—	—	—	1	—	—	—	3
Mathematical, drawing and surveying instruments and equipment ... ..	8	8	—	—	—	—	1	1	—	—	—	18
Total ... ..	1,017	695	115	170	180	159	114	126	29	10	42	2,657
<i>Deduct overlapping figures for firms appearing against more than one item ... ..</i>	581	372	64	102	65	43	57	66	21	3	14	1,388
Net Total ... ..	436	323	51	68	115	116	57	60	8	7	28	1,269

**Registration of firms at local Purchase Circles.** — In addition to the firms mentioned in the preceding paragraph, 180 firms were registered for small orders on the lists maintained by the subordinate purchasing agencies of the Department. Of these 50 are located in Calcutta, 103 in Bombay, 16 in Karachi and 11 in Madras.

**Advice to Manufacturers.** — The Department continued to advise and instruct manufacturers in India whenever opportunity offered in the matter of the improvement of their products, and also of their organisation generally. Whenever it was found that a manufacturer was able to produce an article which could be purchased in India in conformity with the Stores Rules, the fact was brought to the notice of consumers.

**List of stores indented for by Government Departments on the India Store Department, London.** — In para. 66 of the previous year's report it was pointed out that there had been a very small demand for the bi-monthly lists of stores indented for by Government Departments on the India Store Department, London. There was no improvement in the sales of these publications during 1926-27; but, as certain industrial and commercial bodies urged either that the publication of these lists should be continued, or that some other means should be adopted for keeping them informed of the nature and volume of stores demanded from abroad, it has been decided to continue the issue of the lists for the present.

**Scrutiny of home indents.**—Much valuable work was done during the year in connection with the scrutiny of indents placed by the consuming Departments on the India Store Department, London. The question of the treatment of indents from the various railway administrations was fully examined in consultation with the Railway Board, and a satisfactory procedure was devised which is already effecting a considerable increase in the value of purchases made in India. During the year copies of 1,228 indents on the India Store Department, London, of an estimated value of Rs.8,81,53,278, were received for scrutiny, as compared with 1,226 indents of an estimated value of Rs.7,86,82,867 during the year 1925-26. The Department challenged items aggregating Rs.76,57,000 in value, as against Rs.41,75,000 during the preceding year, with the result that purchases to the value of Rs.6,44,000 (against Rs.4,88,000 in 1925-26) were diverted to the Indian markets, and assurances were received from indentors that items, the present requirements in respect of which aggregate Rs.36,36,000 in value at current rates, would, if required in future, be purchased in India, provided that the purchase could be effected in conformity with the provisions of the Stores Purchase Rules."

### PURCHASE OF RAILWAY MATERIALS.

Each of the Indian Railways, whether operated by the State or by a Company, maintains a Stores Controller at its headquarters in India, who purchases all stores bought locally and forwards indents for articles which must be imported. In the case of the State-operated railways, these indents are despatched to the India Stores Department, London, and in the case of Company-worked lines the indents are made on the head office of the Company in London, which effects the purchases in consultation with the consulting engineers.

Of recent years it has become the practice of the Railway Board in India to call for tenders for any large number of locomotives or wagons required for use on State-worked lines simultaneously in London and in India, and the order is placed either by the Director-General of Stores, London, or by the Railway Board in Delhi-Simla, according to whether the foreign or the local tender is accepted.

The inauguration of the system of rupee tender will mean that, in the case of State-worked lines, tenders for all supplies will be called for in India and in rupees, although, in certain cases, tenders will be called for simultaneously by the Director-General of Stores, London. The decision as to the placing of the contract will, however, in every case, be made in India. It is too early to make a definite statement as to the exact procedure to be adopted, as it has not yet been definitely decided to what extent the Railway Board will utilise the services of the Indian Stores Department. It is probable that the great bulk of the purchases will be made, as heretofore, by the Stores Controllers of the several lines, and large contracts for the grouped requirements of locomotives or other rolling stock and important bridgework will be placed by the Railway Board.

**Value of Railway Materials Purchased in 1925-26.—**  
The last Report on Indian Railways for 1925-26 deals exhaustively with the subject of stores purchases. The total value of materials purchased by Indian Railways in 1925-26 was 23·30 crores, as compared with 20·83 crores in 1924-25, excluding coal, stone, bricks, lime, etc., and other locally purchased stores. The purchases in India and from abroad are shown in the subjoined statement, from which it will be seen that the principal increases were 1·04 crores for rolling stock, and 84 lakhs for tools, stores and permanent way. The value of materials purchased in India shows an increase, particularly in the case of rolling stock, the value of which advanced from 37 lakhs to 98 lakhs. The report states that this figure does not include expenditure on the building of coaching stock bodies, all of which is undertaken in railway workshops, the expenditure on spare parts and fittings for rolling stocks also manufactured in railway workshops, and the expenditure on wagon

building in the workshops of the Bombay, Baroda and Central India Railway, the Bengal and North Western Railway and the Burma Railways. Nor is the expenditure on structural and other engineering works completed *in situ* taken into account. It is intended in future years to embody this information in the Annual Report. During the year the Railways bought from the Tata Iron and Steel Company Ltd., 109,850 tons of steel rails and 4,071 tons of fishplates at a cost of Rs.1,44,83,464.

VALUE OF IMPORTED MATERIAL.

Headings.	Purchased direct.	Purchased through Agents in India.	Total imported materials.	Value of indigenous materials.	Total purchases, 1925-26.	Total purchases, 1924-25.
	Rs. crores.	Rs. crores.	Rs. crores.	Rs. crores.	Rs. crores.	Rs. crores.
Rolling stock ...	5.52	0.66	6.18	0.98	7.16	6.12
Tools and stores ...	0.81	2.73	3.54	3.22	6.76	6.36
Permanent way ...	1.29	0.32	1.61	4.28	5.89	5.45
Electric plant ...	0.72	0.54	1.26	0.01	1.27	1.11
Building and station materials and fencing ...	0.23	0.52	0.75	0.17	0.92	0.61
Bridge work ...	0.43	0.07	0.50	0.04	0.54	0.51
Workshop machinery ...	0.45	0.15	0.60	...	0.60	0.45
Engineer's plant ...	0.04	0.09	0.13	0.03	0.16	0.22
Total ...	9.49	5.08	14.57	8.73	23.30	20.83

The next table, also abstracted from the Report on Indian Railways, gives the value, in thousands of rupees, of stores purchased by each of the principal railways during the year 1925-26.

Railway.	Value of stores imported direct.	Value of imported stores purchased in India.	Value of stores of Indian manufacture or of indigenous origin.
	Rs. (1,000)	Rs. (1,000)	Rs. (1,000)
Bengal-Nagpur ...	1,21,49	57,04	39,39
Bombay, Baroda and Central India ...	1,18,16	50,11	1,39,00
Eastern Bengal ...	24,19	29,21	92,31
East Indian ...	1,73,92	1,20,57	2,06,08
Great Indian Peninsula ...	1,82,07	87,99	69,53
Madras and Southern Mahratta ...	93,85	21,65	47,22
North Western ...	92,34	86,85	1,67,34
South Indian ...	80,05	31,04	42,08
Assam-Bengal ...	6,08	6,38	12,23
Bengal and North Western ...	15,41	7,15	12,82
Burma ...	40,18	8,52	41,23
Rohilkund and Kumaon ...	91	2,08	3,08
Total expenditure ...	9,48,65	5,08,59	8,72,31

The broad question of the standardisation of railway equipment of all kinds has received very careful consideration by expert committees of the Railway Board during the past three years. I cannot do better than quote the remarks of the Railway Board in this connection.

**Standardisation of Locomotives.** — “As the result of the reference of the recommendations on their 1924 Report to the Consulting Engineers, the Locomotive Standards Committee made certain modifications in the proposals for the adoption of new types of locomotives. The new types were finally accepted by the Railway Board for trial as standards for general adoption, and it has been decided to order the following engines of the new types for trial on different railways :—

	4-6-2 type.			2-8-2 type.	
	Branch.	Light.	Heavy.	Light.	Heavy.
Broad Gauge ...	6	28	12	13	14
Metre Gauge ...	—	4	5	11	—

During the manufacture of these locomotives the consulting engineers will supervise the preparation of accurate standard drawings of all details assisted by a member of the Locomotive Standards Committee.

The standardisation of narrow gauge (2ft. 6 in. and 2 ft.) locomotives was referred to this committee during the year, and on receipt of their proposals they were referred to the consulting engineers for their opinion on the types recommended.”

These locomotives were ordered in the United Kingdom last year, and are now in service on the various lines.

**Standardisation of Rolling Stock.** — “The technical committee appointed in November, 1924, by the Railway Board to revise the Indian Railway Conference Association designs of coaching underframes and wagon stock and to prepare designs of any other types for which there might be a demand, is known as the Carriage and Wagon Standards Committee. The revision was necessitated owing to the fact that in some instances existing designs had not been entirely satisfactory in service, also because it was necessary to redesign all underframes to take the automatic centre buffer coupler. The report of the Committee, which was received in September, 1925, was forwarded to the Locomotive and Carriage and Wagon Superintendents' Committee of the Indian Railway Conference Association and to the consulting engineers to the India Office for examination, and the latter were asked to prepare general drawings embodying the recommendations made. These recommendations included one new design for broad and

metre gauge carriage underframes, thirteen instead of sixteen types of broad gauge, thirteen instead of twenty types of metre gauge wagons, and two new broad and one metre gauge types of special wagons. The revised drawings for the broad gauge types have since been received and examined by the Carriage and Wagon Standards Committee, and their recommendations with certain modifications have been approved by the Railway Board. Instructions have issued to the High Commissioner for India to the effect that six sample vehicles and underframes of each type are to be constructed, and these will be put into service to ascertain what modifications, if any, are required before the revised designs are finally approved by the Railway Board. The Carriage and Wagon Standards Committee is intended to be a permanent body. In order to prevent stagnation and ensure progressive improvements in and additions to designs of coaching and goods stock the Committee will be convened as required to report on and advise the Railway Board on suggestions made from time to time by the different Administrations."

**Standardisation of Permanent Way, Bridgework, Signalling and Interlocking.**—"The advisability of standardising the main essentials of permanent way, bridgework, signalling and interlocking has been recognised for some time past, and as the result of their increased responsibilities in regard to standard (5 ft. 6 in.) gauge railways the Railway Board came to the conclusion that both their own requirements and those of the important Company-managed Indian Railways would best be met by the formation of a Standing Committee of Chief Engineers of Class I Railways. It was decided that the Standing Committee should have three Sub-Committees, functioning under it, which would deal in detail with (1) permanent way, (2) bridgework, and (3) signalling and interlocking.

This Committee, in addition to controlling the work of the proposed standardisation, Sub-Committees would control the work of the sleeper pool committee, and also form a body of experts to whom important matters could be referred for advice or opinion. In so far as the work of the standardisation Sub-Committees was concerned, the duties of the Standing Committee would be (1) to act as a connecting link between the former and the Railway Board in the matter of settling the various matters to be included in the agenda for the meetings of the Sub-Committees, (2) to receive and review the reports submitted by the latter, and to make recommendations thereon for the consideration and orders of the Railway Board, and (3) generally to ensure that the work of standardisation was carried out on a continuous and progressive basis.

The Railway Board's scheme met with a ready response from the railway administrations concerned, who agreed to place the

services of their chief engineers at the disposal of the Railway Board, when required. The Standing Committee of Chief Engineers of Class I Railways was accordingly constituted, and held its first annual meeting at Simla from the 6th to the 11th July, 1925. Among other matters dealt with at that meeting, the Fundamental Rules for the constitution and procedure of the Standing Committee, which had already been drafted by a special Sub-Committee, were considered and adopted; and the first Reports submitted by the Track and Bridge Sub-Committees were received and considered.

The Track Sub-Committee was convened for the first time on the 15th January, 1925, and remained in session till the 7th March, 1925. At that meeting they dealt with two important subjects, namely, the standardisation of points and crossings for 5 ft. 6 in. gauge railways, and the revision of the standard dimensions of timber sleepers for the 5 ft. 6 in. metre and 2 ft. 6 in. gauges. Their report on these subjects was, as stated above, submitted to and considered by the Standing Committee of Chief Engineers in July, 1925, and the latter referred back to the Sub-Committee the proposed standard designs of points and crossings for further consideration and modification. This Sub-Committee has also had referred to them, for necessary action, the standardisation of cast iron and steel sleepers for 5 ft. 6 in. gauge railways, as well as a number of other questions of varying importance, ranging from the suitability of the design of the new British standard section fishplates to the merits of a number of patent devices. These matters were under consideration during the second meeting of the Sub-Committee which commenced on 8th February, 1926.

The Bridge Sub-Committee met on 1st April, 1925, and remained in session till September of that year. They submitted for consideration by the Standing Committee of Chief Engineers, at their meeting in July, a First Interim Report, embodying recommendations regarding the revision of the general formula for "Impact" in the case of girder bridges on 5 ft. 6 in. gauge railways, which were generally approved by the Standing Committee. They later submitted a Second Interim Report, containing recommendations regarding the revision of the Bridge Rules for 5 ft. 6 in. gauge railways. Proposed revised Bridge Rules, based on these two Reports of the Bridge Sub-Committee, are now under consideration by the Railway Board, under whose orders they have been circulated to all Railway Administrations, Government Inspectors of Railways, and the Consulting Engineers to the Secretary of State and the High Commissioner for India, for examination and remarks. During their first session, the Bridge Sub-Committee also considered the question of the co-ordination of weight of rail with locomotive and wagon axle-loads, for both unrestricted and restricted speeds, which had been referred to them by the Standing Committee of Chief Engineers at their meeting in



July, and submitted a very comprehensive and detailed report on "Track Stresses," which will be of great value in the future, whenever questions regarding co-ordination of weight of rail and axle-load arise. This Sub-Committee are now carrying out deflection tests on metre gauge girders, with a view to formulating a revised Impact Formula and revised Bridge Rules for metre gauge railways."

**State Railway Workshops Committee.** — The Railway Board make the following comments in their report for 1925-26 :—

"A number of schemes aiming at improvement in the capacity of the workshops of the North-Western Oudhand, Rohilkhand and Eastern Bengal Railways in regard to repairs to locomotives and rolling-stock had been proposed, and in some cases had been put in hand when the transfer to State management in 1925 of the East Indian and the Great Indian Peninsula Railways gave an opportunity of effecting economies and improving efficiency by a definite co-ordination of the work of the State Railway Workshops. At the same time improvements in workshop methods in Great Britain and elsewhere made it advisable that the whole of the workshop organisation on these railways should be overhauled and modernised. The Railway Board, therefore, appointed a committee, consisting of Sir Vincent Raven, K.B.E., formerly Chief Mechanical Engineer of the North-Eastern Railway and President of the Institution of Mechanical Engineers, as Chairman, and Mr. J. M. D. Wrench, Chief Mechanical Engineer, Great Indian Peninsula Railway, lately officiating Director of Mechanical Engineering, Railway Board, as a member. Mr. K. C. Srinivasan, an officer of the Accounts Department, with special knowledge of workshop accounts, was attached to the Committee as Financial Assistant. Mr. R. McChesney, Technical Assistant to the Chief Mechanical Engineer, North-Western Railway, was appointed Secretary to the Committee.

The Committee was instructed to enquire into and report on :—

(a) The capacity or otherwise of the existing workshops of State Railways to deal economically and expeditiously with the maintenance of rolling-stock at the present time.

(b) The necessity or otherwise of enlarging and extending the existing workshops, man-power and machinery with a view to the maintenance of an increased quantity of rolling-stock.

(c) The advisability of concentrating the manufacture of spare parts in one or more of the larger workshops and to relieve the repair shops of all such manufacturing processes.

(d) The alternative of establishing an entirely independent workshop wherein manufacturing work could be standardised and, if necessary, such maintenance work performed as other workshops may be unable to undertake consideration to be given to the question of the site or locality most likely to lead to economic manufacturing costs and expeditious output.

(e) The question of increased utilisation of Indian products in railway workshops.

(f) Whether the manufacture of spare parts is done at rates which show favourable comparison with the rates at which they could be obtained from outside agencies."

The report of the Committee was signed in April, 1926, and published in June of that year. A copy is available at the Department of Overseas Trade for perusal by interested parties. Mr. J. M. D. Wrench, a member of the committee, has been placed on special duty by the Railway Board in order to supervise the carrying into practice of those of the recommendations on which action is being taken by the Board. Several important schemes of re-arrangement and extension of Railway Workshops are in progress which will involve the purchase of considerable quantities of machine tools, etc. British representatives of interested firms have for some time been in close touch with the Board, who recently sent an officer to London to supervise the purchase of some of the machinery required.

**Automatic Centre Buffer Coupler.**—The Railway Report states :—

"As a result of further investigations of the problem of converting rolling-stock for use with the automatic centre buffer coupler, it was found to be necessary to obtain a more accurate knowledge of both the expenditure and the mechanical alterations involved in converting the large number of different types of wagons and vehicles in use. It had been recognised that in some cases fundamental alterations in the underframes would be necessary, but the problem owing to the wide differences in design was found to be somewhat more extensive than had been hoped. It was considered advisable to ask the consulting engineers to prepare detailed drawings and estimates of the alterations required to be carried out to each of the various types of 5 ft. 6 in. gauge stock now in use before proceeding to establish conversion depots for fitting the automatic centre buffer coupler to the existing stock. The grant for the work voted by the Assembly was accordingly not utilised during the year.

In the meantime, railways were instructed to continue to experiment with various types of automatic couplers and transition devices. A senior mechanical engineer was placed on special duty to co-ordinate and collate the results of trials which were still proceeding at the close of the year."

No definite decision has yet been reached (June, 1927) with regard to the adoption of automatic couplers.

**Supply of rails and structural steel from indigenous sources** — "The year under review was the 6th year of the Railway Board's seven year contract with Messrs. The Tata Iron and

Steel Company for the supply of rails and fishplates to the State-worked Railways and the last year of the Company-worked Railway contracts. The total demands of the State-worked Railways to be supplied during the year 1925-26 amounted to 52,206 tons, and orders for the entire quantity were placed with the Steel Company. The demands of the Company-worked Railways for which orders were placed with the company amounted to 69,535 tons, orders for the balance having been placed abroad. Of these demands the Steel Company were able to supply 47,694 tons to the State-worked Railways and 66,227 tons to the Company-worked railways, leaving a balance of 4,820 tons, which was carried forward to the year 1926-27.

The pre-existing arrangement with the Company for supply of steel, other than rails, to State-worked railways under which the price per ton was fixed every quarter at an average c.i.f. landed price *plus* duty less Rs.7/8/- per ton of imported steel, was allowed to continue to 31st December, 1925. It was settled in communication with the Company that, thereafter, the State-worked railways should call for tenders as and when necessary in the usual way, opportunity being given of course to the Steel Company to tender in rupees in India."

**Electric Headlights for Locomotives.**—"Electric headlights on locomotives have been in use on most of the railways to some extent for a number of years and initial difficulties connected with their use have been largely overcome.

The additional security which has been obtained in night running has been almost universally recognised, and the Railway Board has finally decided to make their use universal. They have, therefore, issued orders that as a safety measure on State-worked railways electric headlights shall be provided by all Railway Administrations on all locomotives working mail, passenger, or mixed trains, whether on double or single line sections by 31st March, 1928. This decision, however, does not extend to branch lines where trains are infrequent and run at slow speeds.

The total number of mail, passenger and mixed engines belonging to Class I Railways equipped with electric headlights, at the end of the year under review was 716 out of an average number in daily use on such services of 2,200."

Almost all the headlights so far fitted to locomotives in India are of American origin, and it has hitherto been difficult to interest any British firm in the production of this article. One enterprising British firm, however, has recently produced a most suitable headlight and has supplied several trial sets to various railways in India.

**The position of British suppliers of Railway Plant.**—In my last Report for 1924-25, pages 102-103, I outlined the position in the following terms :—

“ I have dealt at some length in this and in previous reports with the policy of the Government of India of purchasing more and more stores in India and less and less material in London. So far this policy has not affected railway purchases of imported articles to any considerable extent. Most of the items purchased, such as rolling stock, bridgework, permanent way materials, special tools, etc., are of such a complex nature and require such efficient inspection at each stage of manufacture that it is much more convenient and satisfactory to purchase in London than in India. Moreover, it is most desirable that the Indian railways should be in close touch with the most modern railway practice and improvements in material, and this object can only be satisfactorily attained in London through the medium of consulting engineers. It is likely, therefore, that for some time the bulk of the purchases of imported railway material will continue to be made in London. At the same time, if as would appear to be likely, the rupee tender in India is insisted upon in the case of Government purchases in the course of the next few years, the centre of purchase will be definitely shifted from London to Delhi-Simla, and the position of British suppliers of railway plant will be seriously threatened unless, in the meantime, steps have been taken to build up a technical and highly-efficient organisation in India, which is competent to draw up tenders and advise the railways on all technical points connected with the plant supplied.

Most of the principal suppliers of rolling stock, etc., have hitherto contented themselves with maintaining touch with the India Stores Department, London, and the London head offices and consulting engineers of the company-operated lines. They have, quite naturally, not considered it necessary to keep in touch with the Railway Board and indenting officers in India, as the orders have been forthcoming in London, and they hesitated before incurring the additional expense of an organisation in India. The time, however, has come when an organization in India is essential, if our position is to be safeguarded when the changes outlined above have materialised. Foreign competitors, both Continental and American, are already in the field, and unless British firms follow suit, they will be seriously handicapped in the future. A few of the locomotive and wagon builders are already represented in India, and several makers of permanent way materials and machine tools have an active organisation on the spot. It is to be hoped that the remaining British firms of suppliers and railway contractors will lose no time in reaching a decision on this point. I feel sure that if they would, as a preliminary measure, send out a director or other senior officer to survey the position and consult with the members of the Railway Board and the leading railway officials throughout the country, they would quickly realise the dangers of the present position.”

The probable introduction of some system of Rupee tender in 1928 will necessitate a complete overhaul by suppliers of railway plant to the Indian Railways of their methods of representation in India. It is to be hoped that those of them who do not already maintain active representatives or agents in India will take early steps to establish an organisation on the spot.

#### **PURCHASE OF ARMY REQUIREMENTS.**

The conditions have not changed since they were described in my last Report. The Master-General of Supply is in general charge of purchases of military stores. The bulk of the imported stores contracted for in India are purchased by the Director of Contracts at Army Headquarters, Delhi-Simla (Col. Dunlop). Textile Stores are purchased by the Indian Stores Department, which now also deals very largely with the engineering requirements of the Military Works Department. 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.

#### **STORES PURCHASED BY THE DEPARTMENT OF POSTS AND TELEGRAPHS.**

Telegraph stores are the most important item. In his report for the year 1925-26, the Director-General of Posts and Telegraphs states that the value of telegraph stores purchased locally rose from Rs.12,04,000 in 1924-25, to Rs.15,60,000 in 1925-26. At the same time the value of stores obtained by direct indent on the United Kingdom fell from Rs.18,51,000 in 1924-25 to Rs.13,39,000 in 1925-26. The local purchases include hard-drawn copper wire, glass battery jars and insulators, all of which are now manufactured in India. The local supply of insulators still falls far short of the demand, and the balance is obtained by indent on the Director-General of Stores, London.

Increasing use is being made of the Indian Stores Department, which purchases all the heavy textile stores, such as canvas, paulins, mailbags, etc. The system of running contracts recently introduced by the Stores Department has been found to be most convenient.

#### **ARMY CANTEEN BOARD (INDIA).**

After a short and somewhat chequered career, the Army Department decided in February last to liquidate the Army Canteen Board (India) and to revert to the previous system of utilising the services of private contractors. An experienced officer of the

N.A.A.F.I. came out from Home as official liquidator, and the winding-up is still being carried on, the large stocks being now almost all sold.

Meetings are now (June, 1927) being held between the Quartermaster-General's branch of A.H.Q. and the All-India Contractors' Association Ltd., Ashiana, Lahore, to discuss future procedure. It is proposed to organise a central purchasing authority and depots at Bombay and Karachi, which would be financed by the Contractors' Association, and from which their members would purchase imported Stores. By this means great economies in purchasing would be effected, and large stocks would be available in case of war. No definite decision has yet been reached.

## CHAPTER V.

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 progress report on the various irrigation works, either under construction or projected, in the Punjab :—

**Sutlej Valley.**—The last report gave progress up to June, 1925. The information below carries us on to June, 1927.

**Gandasinghwala.**—The headworks have been so far advanced that the river has been diverted over the weir and it is hoped that the opening ceremony will take place in October. The Bikaner Canal which is being lined with concrete for 86 miles where it passes through British territory is so far advanced that it is hoped irrigation will commence when the Gandasinghwala headworks are opened in the autumn.

The Eastern Canal on the left bank and the Divalpur Canal on the right bank, non-perennial canals, are also so far advanced that irrigation will commence from the summer crop of 1928.

**Suleimanki.**—These headworks are now completed, having been opened in April, 1926, from which date all three canals taking off therefrom, the Pakpattan, Sadiqia and Fordwah Canals, commenced irrigation for the summer crop of 1926.

**Islam.**—The progress on these headworks is similar to that at Gandasinghwala; the river has been diverted over the weir and it is hoped that the opening ceremony will take place in October, from which date regular irrigation will commence from the canals on both banks.

**Panjnad.**—These headworks are situated below the junction of the Sutlej and Chenab and will utilise water from the latter river when all the supplies in the Sutlej are drawn off by the three headworks above. The construction of Panjnad headworks was deferred pending the completion of the Suleimanki headworks so that the plant used on the latter could be utilised. Work in connection with these headworks has now started, the railway line having reached the site and preliminary work undertaken to enable work in the river bed to start next cold weather. These headworks will probably be completed in three or four years.

**The Haveli Project.**—Taking supplies from a headwork below the junction of the Chenab and Jhelum will command 1·2 million acres and mature three-quarters of a million acres a year, the total capital cost being estimated at four crores. This project is being recast for submission for sanction. Works will not commence before 18 months.

**Jalalpur Project.**—This project contemplates irrigating 100,000 acres by pumping from the river Jhelum by power hydro-electrically developed by dropping water 70 feet from the Upper Jhelum Canal into the river Jhelum.

**Thal Project.**—This contemplates irrigating two million acres by water withdrawn from the Indus where it leaves the hills by

the construction of a weir at Kalabagh at a total capital cost of Rs.14 crores. This project is, however, held up by the opposition of Sind to any further withdrawals from the Indus by the Punjab.

*Bhakra*.—This project involves storage on the Sutlej by a high masonry dam of a portion of the surplus summer supplies for utilisation in the winter. The increase of irrigation will be about  $2\frac{1}{2}$  million acres, and the total cost is estimated at Rs.29 crores.

The objection of Sind to the Thal project does not apply to this, as these withdrawals will not have an adverse effect on the supplies for Sind.

The question of storage on the other rivers of the Punjab is receiving serious consideration, as with the completion of the Sutlej Valley project the whole of the winter supply of the five tributaries of the Indus is utilised, and further developments depend on storage.

The question of waterlogging in the Punjab is becoming a matter of serious moment, and a solution is being looked for; at present research is directed to the question of subsurface drainage and to the possibility of pumping from the subsoil where the spring level is too high to permit of waterlogging being prevented by lining the canals with an impervious medium, such as concrete or bitumen compounds.

**Sind. Lloyd (Sukkur) Barrage and Canal Scheme.**—The following report, showing the progress made during 1926/7 on the Lloyd Barrage and Canals Scheme, has been courteously provided by the Secretary to the Government of Bombay in the Public Works Department :—

As may be generally known the Secretary of State for India accorded sanction to the Sukkur (now Lloyd) Barrage and Canals Construction Project in April, 1923, subject to the formal approval of the Bombay Legislative Council being obtained. At a special session in June, 1923, the approval of the local Legislature was obtained and Government issued orders for construction work to start with effect from 1st July, 1923.

2. The scheme consists of the construction of a barrage across the Indus three miles below the gorge at Sukkur, with three canals on the right and four on the left bank taking off therefrom, each with a separate head regulator. The right bank system comprises the North Western Perennial, Central Rice and South Eastern Perennial (now Dadu) Canals. The left bank comprises the new perennial Rohri Canal; a perennial supply channel to feed the Eastern Nara river and the canals dependent thereon, and two feeder canals for irrigating lands in the Khairpur State.

The Barrage under scientific control will give the necessary supply to each canal, no matter how low the natural level of water in the river may be, provided there is sufficient water in the river Indus from time to time for the combined requirements of all seven canals. All the canals taken together will command about  $7\frac{1}{2}$  million acres and enable some  $5\frac{1}{2}$  million acres of crops to be irrigated annually. The total length of the main canals and branches will amount to nearly 1,600 miles and that of the distributaries to 3,700 miles. The sanctioned project is for Rs.1,835 lakhs.



3. The scheme is divided into five circles of superintendence with a chief engineer at the head. One superintending engineer is in charge of the construction of the Barrage and the head regulators of the canals, including the first 12 miles of the perennial channel to feed the Eastern Nara, while the remaining superintending engineers are in charge of canal construction.

4. In the Lloyd Barrage Circle two townships, one on either bank of the river, have been constructed to facilitate the execution of works, the larger of the two townships being on the right bank. This main right bank township is provided with a hospital with 24 beds, a bazaar, market and an institute, while the smaller township on the left bank is provided with a dispensary, bazaar, market and small institute. The two townships provide accommodation for 18 officers of and above the rank of assistant executive engineers and 468 officials of assistant engineer's rank and below, close to the site of works. In addition, cooly lines have been constructed and more are under construction for the accommodation of semi-skilled labour on both banks of the river. These when completed will house 2,280 men of all classes. Each township is provided with an independent water supply both for drinking purposes and for works.

5. A large electric generating station has been erected on the right bank with six diesel engine alternator sets of a total capacity of 2,350 k.w. The total units generated during the year 1926-27 was 617,000 at a cost of 3.5 annas per unit including depreciation, repairs and all running expenses. This loan will increase when all plant is in full operation resulting in saving in cost as establishment and depreciation charges will remain nearly constant, whatever the quantity generated. High tension alternating current, generated at 6,600 volts, is distributed to seven convenient points on the works area on each bank of the river where transformer stations are located.

These stations break down the current to 400 volts for further distribution to groups of machines nearby. High tension current is conveyed across the river by a double submarine cable about a mile long laid in the bed of the river. The power is utilised in running hand and floating cranes, concrete block yards, mortar mills, air compressors, stone dressing shops, pumping plant, workshops, etc.; on completion of the works electrical power will be utilised from this plant for the operation of the Barrage and regulator gates.

6. Three quarries equipped with the most up-to-date mechanical appliances have been opened, each with its own power plant for compressed air and necessary pneumatic tools, workshop, store shed, dispensary, works water supply and housing accommodation for the subordinate staff and labour. The Sukkur and Kohistan quarries produce rubble stone and have supplied all the stone for building operations on the right and left banks, for the construction of guide banks and roads, lime burning, etc., and the collection of a large reserve stock at the quarries for further requirements is in progress. The special large sized stones required for ashlar work on the Barrage and regulators are obtained from the Rohri quarry.

For the removal of large blocks of stone from the solid mass in the quarry a channelling machine and a number of wire saws are in operation and these blocks, cut direct from the hill side, are transferred by cranes on to trucks of the Barrage Railway to the stone dressing shop in the left bank works area, where they are cut to required sizes and dressed by machinery ready for building into the work. The stone dressing shop is an up-to-date structure covering an area of 41,400 square feet and it will shortly be one of the largest and best equipped stone dressing shops in India.

7. Two guide banks were constructed in 1923-24, one on each side of the river, the right guide bank commencing from the end of the Sukkur Bunder downstream towards the Barrage and the left bank reaching from the Lansdowne Bridge to the Barrage site. Both banks are pitched with rubble stone. These have successfully withstood three inundation seasons and there is every reason to believe that they will continue to stand successfully with a minimum cost of upkeep.

A metalled road has been constructed along the right guide bank and a broad gauge railway track joining Rohri quarry to the workshops area is laid along the left guide bank.

8. To enable rapid and economical transport of materials, stores, plant, etc., the necessity for which has greatly increased since the commencement of construction, during the year under review, of the regulators, a fine network of broad gauge railway lines has been laid in the works area and quarries on both banks. 32.5 miles of line and sidings have been constructed and are in use and about 7.5 miles are in course of construction, making a total of 40 miles. These lines take off from the North Western Railway lines at Sukkur and Janvri stations, so that trucks can be brought from the North Western Railway and unloaded at any point as required. Up to date 10 locomotives and 548 waggons have been purchased and these have been kept fully employed. The total ton mileage handled by the railway was approximately 650,000 ton miles. A light railway two feet gauge and rolling stock are used for distributing materials on the actual site of works under construction, such as in the cofferdams, lime burning grounds, block moulding yard, etc., and as feeders to the broad gauge lines in the quarries and other works areas. The total length of this railway on both banks of the river is 17 miles. The rolling stock consists of three locos and 650 tip wagons which are kept fully employed. Loco running sheds and high service water tanks have been constructed on both banks of the river for the overhauling and cleaning of locomotives and rolling stock. Storage and high service oil fuel tanks for locomotives have been erected at suitable positions over the area, at which the locomotives, all of which burn oil fuel, can be easily replenished.

9. On each side of the river a well equipped workshop with electric power has been erected and fitted for repairs and maintenance of the plant used in construction. The one on the right bank is larger than that on the left and is provided with a small foundry for iron and brass castings. They carry out repairs to machinery employed in other Circles as well as for the Barrage works proper.

10. On each bank of the river a concrete floor measuring 600 ft. by 52 ft. has been laid down, on which large concrete blocks measuring 10 ft. by 5 ft. by 3 ft. and 5 ft. by 3 ft. by 1½ ft. for the river bed protection on the downstream side of the Barrage and the Canal beds below the regulators are moulded. Each set of plant consists of a 12 ton 60 ft. span Goliath Crane, a travelling mixer gantry with concrete mixer, a travelling ramp for 2 ft. gauge wagons and hoppers and elevators for stone, sand, lime, and cement. These block moulding yards will have to deal with 13,300 blocks 10 ft. by 5 ft. by 3 ft. each weighing 8.5 tons, and 8,000 blocks 5 ft. by 3 ft. by 1½ ft. each weighing 1.25 tons, or a total weight of 123,000 tons.

11. For loading barges with the various materials used on construction, each bank is provided with a wharf 600 ft. long having curved deep water frontages at the lowest stages of the river. The face of the wharves is formed of 40 ft. interlocked steel sheet piling driven into the bed and bank and thus each encloses an area of about 1½ acres of sloping river bank. The top of each wharf is about 4 ft. above highest flood level and carries three lines of broad gauge railway. Heavy materials such as machinery and piling, of which many thousands of tons have to be handled, can be loaded direct from trains standing on the wharves to the barges lying below by means of travelling steam cranes which also run on the wharves.

12. A fleet consisting of two suction dredgers for excavation of foundations in the river, three paddle tugs for towing barges and other craft and for conveying labour across the river, pontoons for pile drivers and pumping sets, four motor launches, heave up boats, etc., have been purchased since the work commenced and are fully employed.

13. The actual construction of the regulators for the canal heads which form the flanks of the Barrage proper was commenced in the autumn of 1926.

The cofferdams of interlocked steel sheet piling are probably the largest ever constructed. The outer wall of each cofferdam consists of a line of steel sheet piling driven into the river bed (to depths varying from 5 ft. to 25 ft. according to the level of the bed) so as to leave their tops above an early June flood level.

This piling is supported on the inside against water pressure outside, by a slope of sand carried up to or above the water level before the inside is pumped out. The cofferdam on the left bank is 1,700 ft. long, the upstream end being 200 ft. wide and the downstream end 700 feet wide (sand bank only). The cofferdam on the right bank is 1,350 ft. long and 200 ft. wide upstream and 600 ft. wide downstream. The former encloses an area of about 18 acres and the latter about 13 acres.

Inside these cofferdams the foundations for the canal regulators and their wide masonry aprons have been excavated and all masonry will be laid in the dry (after pumping out the cofferdams) before the cofferdams are removed.

The quantity of steel piling used in the cofferdams and stumps for the year under review is:—Left bank, 1,700 tons; right bank, 1,600 tons. The quantity of permanent steel piling driven below the floors and the regulators is:—Left bank, 91,300 sq. ft.; right bank, 36,567 sq. ft.

14. To meet the heavy demand for mortar, 50 8 ft. diameter electrically-driven mortar mills have been provided on both banks of the river.

Exhaustive experiments have been carried out in the production of "fat" and hydraulic lime from local lime stone, and the results have been extremely satisfactory. Continuous and intermittent hydraulic lime kilns have been built and the daily output is approximately 7,500 c.ft.

15. One tower on each bank of the river, to command all regulators, was built and the special 8 in. theodolites fixed thereon. From these towers the exact alignment of every part of the regulators can be set out and they are high enough to sight over the top of the highest point of the regulator bridges when completed. Similar but much larger towers will be built during next year at each end of the Barrage for aligning this work and they will be fitted with special 12 in. theodolites.

16. The four Canal Circles have been occupied in surveys, preparation of working designs of canals, acquisition of land for canals, construction of buildings and the excavation of main and branch canals both by mechanical and manual labour. The designs have been prepared for practically all the main canals, branches and major subsidiary channels, and excavation has been carried out during the year with 32 mechanical excavators of various types. Eight more mechanical excavators are in course of erection and four are under supply. There will thus be 44 mechanical excavators of various sizes in operation during the year 1927-28, the largest group of such excavators ever assembled anywhere in the world. The use of these mechanical dragline excavators is not merely an engineering but also an economical problem, as the existing supply of labour for agricultural purposes is interfered with to the least possible extent. Another important aspect of the utilisation of this heavy machinery is that it has prevented the formation of a labour ring, thus keeping down the labour rate. This is very important in an undertaking where labour costs must, in any case, be a large proportion of the total initial outlay. Another equally important feature of the machines is that they can be worked daily for 24 hours for 5½ days a week and also during the hot weather months (at reduced working hours) when it is almost impossible, owing to the intense heat, to do any earthwork in Sind by manual labour. Conditions on the machines during the hot weather are made tolerable by the liberal provision of electric fans. Powerful electric flood lights enable work to be done at night and the electric current for these and the fans is generated on the machines.

17. In addition some work of canal excavation has been given out on contract by manual labour at favourable rates in situations where it is not convenient to use the mechanical excavators.

18. In the North Western Circle the largest sized dragline excavators have excavated the North Western Perennial Canal with a bed width of 164 ft. and depth of 10.2 ft. in a length of 16 miles and the Central Rice Canal in half bed width of 120 ft. and depth of 11.75 ft. in a length of 10 miles. Small machines were employed on excavating the Shahdaskot and Ratodero branches *ex* the North Western Perennial Canal. The total quantity excavated in this Circle to date is about 17.33 crores cubic feet.

19. In the Western Circle, owing to the peculiar nature of the country through which the Dadu Canal and the Central Rice Canal pass, the excavation of these canals is being done partly by mechanical excavators and partly by manual labour. Large and intermediate class excavators are employed on excavating the Central Rice and Dadu Canals and small sized excavators on the tail portion of the Dadu Canal and the Warah and Johi branches. The work by manual labour is proceeding satisfactorily. One of the contractors has employed "Keens" (primitive scrapers drawn by small hill-bullocks), and this affords several months' employment for Brahui hill tribesmen who prove most industrious at this work. In view of the general shortness of labour it is hoped further to exploit this source during next cold weather. The total quantity excavated in this Circle is 18.83 crores c.ft.

20. In the Rohri Canal Circle a total length of about 17 miles of the Rohri Canal, 13 of the Khairpur Feeder East and about 18 miles of the Branch Canals has been excavated. The total quantity excavated is about 23.44 crores c.ft.

21. In the Eastern Nara Circle the excavation of the Khipro Canal *ex* the Eastern Nara in a length of 21 miles and that of the Samarjo and Nabisar branches and distributary *ex* 10th mile Khipro Canal in a total length of 26 miles were completed. To prevent wastage of water through "sangs" (depressions) embankments will have to be constructed on both sides of the Eastern Nara from Rohri right down to Farash near Dhoro Nara Station, a distance of some 203 miles. Of this a length of about 57 miles, from a point on the Nara 27 miles above the Jamrao weir to Makhi weir, has been completed. Besides this some 18 miles of embankment work is in progress between the Makhi and Farash weirs.

Incidentally the construction of these bunds improves yearly the condition of water supply of the existing canals under the Eastern Nara, in that they reduce transit losses and the discharge gained is available for use in these canals.

To facilitate inspection in this inhospitable region a path 12 ft. wide has been provided along the Nara from Rohri to Makhi weir. Both these works are being done by manual labour. The total quantity of earthwork done in this Circle is about 10.20 crores c.ft.

22. The total amount of earthwork contemplated in the project estimates on the main canal, branches, and Nara embankments is 500 crores c.ft. The quantity to be done according to the working estimates will be approximately 425 crores c.ft. and the total quantity done to the end of March, 1927, is 70 crores. The quantity done represents a column 1.5 miles high with 100 yards sides.

The total capacity of the 32 dragline excavators which have been working during the year under report is 54 tons of earthwork excavated and dumped per minute, or 0.9 per second night and day for  $5\frac{1}{2}$  days a week and 250 days in the year.

This represents the labour of 22,000 men working all the year round or 53,000 men working for five months of the year, the usual short season in Sind for this type of manual labour.

23. A rectangulation survey of the area under command of the canals of this scheme, excluding Khairpur State, is being carried out by the Survey of India

at the expense of the project. This work has as its ultimate object the standardisation of the size and shape of each survey number, each "number" being 16 acres in area.

The first season's work was commenced during the year under review and it is expected that the Survey of India will complete its part of the task—the splitting up of the commanded area into main rectangles 2.5 miles by 1.6 miles or 2,560 acres—by the year 1930.

The further subdividing of these main rectangles into smaller ones down to the 16 acres plots will be carried out by the staff under the revenue officer of this scheme.

24. During the year ending 31st March, 1927, the work of acquisition of the land for digging the canals, branches, distributaries, etc., has been continued by the special staff under the revenue officer. Since the inception of the project nearly 22,000 acres of land have been thus acquired at a cost of nearly 40 lakhs of rupees, the average cost being thus about Rs.180 per acre. Out of this an area of over 11,000 acres was acquired during the year under report at a cost of over 13 lakhs, at an average rate of Rs.112 per acre. Since these figures represent the prices that have now to be paid in Sind for land which has only a precarious and seasonal supply of water, and land will obviously be much more valuable when it has an assured and permanent supply from the Barrage canals, they afford some indication of the extreme moderation of the estimates which have so far been made of receipts which can be hoped for from sales of land.

The work of land acquisition has now become somewhat intricate owing to the fact that the channels for which land is required are often very narrow, so that a large number of S.Nos. have to be partially acquired to make up a very small acreage. During the year over 4,800 separate awards were made, and the average area taken from over 11,000 survey numbers was about one acre. The high cost of acquisition proceedings which is involved by the necessity of following a complicated legal system in such a large number of individual awards has been partly met by a reduction in the cost of establishment, and all the land acquisition officers will in future be of the Mukhtiarkar's grade, instead of as hitherto some of the Mukhtiarkar's, and some of the Deputy Collector's grade.

25. The whole progress of the work on the Lloyd Barrage and Canals Scheme is being programmed with a view to permit of irrigation being commenced by the new canals in the *abkalani* season of 1931.

26. The total expenditure incurred up to the end of March, 1927, is approximately Rs.5 crores.

*List of special tools and plant proposed to be purchased in the year 1927-28.*

*Railways.*

2 miles.	Two feet gauge track complete with steel sleepers, 22 lbs. rails, 11 lbs. sleepers.
5 "	Three miles track and two miles renewals and replacements.
8 sets.	Points and crossings.
2	Leanotes for smithy.

*Fleet.*

Lot.	Pontoons for pile drivers.
"	Pontoons for floating pumping plant.
"	Dry dock for repairs to floating craft.

*Cranes.*

6 sets.	Electrical gear for converting hand operated Scotch derrick cranes to electrical drive.
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*Pumping plant.*

Lot.	Sets of electrically driven pumping plant.
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*Pile Drivers.*

Lot.	Pile driving plant.
	<i>Water Supply plant.</i>
Lot.	Miscellaneous additions and alterations.
	<i>Mortar Mills.</i>
2 sets.	Sets of mortar mills each consisting of six pans with shafting, etc., complete.
2 sets.	Mortars with switch gear for above.
	<i>Electric Power plant.</i>
Lot.	Cables and transmission line materials.
	<i>Arch Centres and Supports.</i>
7 sets.	Arch centres and supports.

*Miscellaneous plant.*

Lot.	Miscellaneous tanks, lifting gear, buoys, etc., etc.
4	Sills and grooves for regulator gates.
12	Sills and grooves for Barrage gates.
1207 tons.	Steel sheet piling for permanent works.
Lot.	Spares for two dragline excavators (30-B).
1	30-B, Bucyrus Diesel driven machine.
Lot.	Spare parts to dragline excavators.
2	Motor lorries.
3	Dragline excavators with two motor tractors and 10 Baker Navy scrapers.
27.6 tons.	Rolled steel beams and joists.
33 tons.	Gates Stoney for regulators.
33 tons.	Rollers, boxes, cast iron grooves and other accessories.
2	30-B excavating machines.
1	Motor lorry.
50 tons.	Gates Stoney for regulators.
50 ,,	Rollers, boxes, cast iron grooves and other accessories for the gates.

*Quarry plant.*

1	Air Compressor 235 c.ft.
1	Air Compressor 100 c.ft.
1	Air Compressor 125 c.ft.
4 set.	Accessories for drill sharpeners.
Lot.	Hoses, etc.
Lot.	Drill steels.
10 tons.	Wire for wire saws.

*Stone Dressing plant.*

1	Planting machine canting arm type.
1	—do— Portland type.
20 tons.	Tool steel for above.
1	Frame saw.
6 tons.	Blades for frame saws.
7 tons.	Chilled shot.
1	Spare blade for simplex diamond saw.
1	—do— duplex —do—
Lot.	Pipes and fittings for water supply to machines.
„	Spares for 300 Ruston draglines.
„	—do— 320 Bucyrus —do—
„	—do— 20 —do—
„	—do— 50-B —do—
„	—do— 30-B —do—
„	—do— 135 Ruston —do—
1	Motor life boat.
1	Evinrude motor.
1	Paddle steamer.

**Madras. The Cauvery (Metur) Project.**—The Engineer-in-Chief of this project has furnished the following brief note which gives the present position. Further particulars may be obtained by firms interested from the Department of Overseas Trade, 35, Old Queen Street, London, S.W.1.

The Dam line has been fixed, foundations are being exposed, a bridge is being erected across the Cauvery to facilitate building operations and a labour camp is under construction and is being equipped with a filtered and sterilised water supply, drainage and electric light. Quarters and offices for the staff are nearing completion.

The type of construction sanctioned was cyclopean masonry in surki mortar. Much greater speed in construction is possible with a dam built of cement concrete poured through crutes, for which reason the engineers in charge have recommended this type of construction and the local Government is referring the question to an Advisory Board.

If the engineers' recommendation is accepted, it is probable that plant to the amount of about Rs.50 lakhs will be ordered about July next; it includes a power station of about 3,000 kilowatts, compressors and quarrying drills, rock crushers, concrete mixers and concrete placing machinery. A list of the plant recommended has been sent to Government.

On the Canal line masonry cross drainage works have been started and two large Ruston Hornsby dragline excavators have been ordered and are under despatch from England. No other imported machinery is likely to be used in the irrigated area.

## 2. HARBOUR WORKS.

**Calcutta Port Extensions. Progress of the Scheme.**—I am indebted to Mr. S. C. Stuart-Williams, Chairman of the Calcutta Port Commissioners, for the following information with regard to this important project. Additional information can be obtained on reference to the issues of "Engineering" of April 29th, May 13th and June 3rd, 1927.

In my report for the year 1924-25 I referred to the scheme of extension now being carried out by the Commissioners for the Port of Calcutta. I stated that the first stage, viz., the construction of five riverside berths in Garden Reach had been satisfactorily completed and I gave certain particulars of the commencement and progress up to the month of April, 1925, of the second stage of these extensions, namely, the construction of the first section of the King George's Dock, comprising a lock entrance 90 ft. by 700 ft., two graving docks 80 ft. in width and 590 ft. and 575 ft. in length respectively, separated by a moveable caisson, and the first portion of the wet dock area comprising about 43 acres and five berths. The whole of this work, together with much connected work to which reference is made later, is being carried out departmentally—under the administrative supervision of Mr. S. C. Stuart-Williams, Chairman, and Mr. J. McGlashan, M.Inst. C.E., Chief Engineer—by Mr. Wilfrid C. Ash, M.Inst. C.E., Deputy Chief Engineer, Construction, assisted by some thirty British and Indian engineers.

It is pleasant to be able to report that the progress made during the last two years with this important scheme has been continuous and satisfactory and that the work has not suffered from any serious set-back. It is true that on account of several adverse factors, chief of which are delay on the part of certain contractors and difficulties of supply caused by the British coal stoppage of 1926, the anticipated rate of progress has not been wholly realised, but the retardation is not very serious. It was originally hoped that the work might be completed fairly early in 1928, whereas it has now been found advisable to work to a later month, probably December, in that year.

At the time of writing (May, 1927) the enormous amount of monolithic work in the lock and dry dock and along the quay walls has been practically completed and in the lock entrance a considerable section of the floor has been completed, while the whole area of the floor has been covered with concrete. The construction of the blue brick facings of the down-stream wall of the lock is now in hand, and accelerated progress is hoped for as the floor work progresses. The important item of the construction of culverts, penstocks and grooves is well in hand and much work has already been done in the camber of one of the sliding caissons. Thirteen out of the 37 penstock valves to be comprised in the work have been fixed in position and an order placed for the fittings required for the bell-mouthed openings of the culverts. All of the five caissons, which comprise two sliding box caissons and three ship caissons, are well in hand and no delay is expected in their completion. The monoliths required in connection with ferro-concrete approach piers have been sunk and an order placed for the ferro-concrete piles for the fender jetties.

In the dock basin the greater part of the quay wall has been completed up to a level of 8 ft. below the coping and the dragline excavators are now engaged on their final cut in front of the quay. Granite for the coping and steps is arriving and no delay is expected in this direction.

Of the three import and one export sheds now being erected, all the foundation work is complete, as also the steel work of three import sheds, while that of the export sheds is well advanced. Orders have been placed for the electrical quay cranes with which each shed will be amply provided and an order is about to be placed for the electric lifts to be installed at the back of the sheds.

Certain important changes in design have been decided upon in the period under review. In the first place, the lay-out of the southern and later portion of the dock basin has undergone an important alteration by the substitution of a transverse for a longitudinal tongue, the principal reason for this change being the desire to reduce the heavy expenditure which the latter type would have involved in carrying the main arterial road of the district, namely, the Circular Garden Reach Road, across the dock system. By the change made, a very large potential saving in the future has been secured without any material loss of facilities. Again as regards the water supply, after prolonged consideration it has been decided to instal at the riverside end of the old dock system, i.e. the Kidderpore Docks, a powerful pumping plant working direct from the river, which will keep the Kidderpore Dock system well supplied and which, by reason of the difference in level between the Kidderpore and King George's Dock, a difference of some  $4\frac{1}{2}$  ft., will admit of gravity feed from the Kidderpore to the King George's Dock system and thus secure a continuous clock-wise flow of water with a minimum of pumping. This scheme has also an important ancillary advantage in that it permits of the elimination of the old Canal at present used to supply the Kidderpore Dock system with water and therefore facilitates the disposal of a valuable area of surplus land belonging to the Commissioners in this vicinity.

In addition to the execution of this great work in all its detail, the senior members of the staff engaged upon it have had also to devote a considerable amount of their time and energy to the working out of detailed designs and of preparing plans for the development of the whole area in the future. They have also during the last few months had to undertake the preparation of revised estimates—a task which has engaged a large amount of their time and attention during the year 1926. These estimates as submitted to and approved by the Commissioners in March, 1927, amount to Rs.830.63 lakhs, or some Rs.66.67 lakhs in excess of the original estimates, representing a percentage of under 9 per cent.

Consideration has also been given to many other matters connected with the Commissioners' general scheme of development. It has been decided to construct in the first instance one large four-storied warehouse with modern lift equipment and ample road and rail facilities, and work is already in hand on the first section of this building. Arrangements are also being made to



prepare and demarcate ample areas of land for development as private trade depots which will be provided with suitable road and rail facilities and for which it is hoped there will be a considerable demand as the movement of ocean-going trade to this locality is developed and accentuated. In regard to railway arrangements, while it is considered inadvisable at the present juncture to embark on the heavy expenditure which will be entailed by the construction of a large new marshalling yard and the subsidiary yards necessary to deal with all sections of the Commissioners' property, provision has been made for such *ad interim* additions and alterations as will give all requisite facilities in the near future, while for the ultimate scheme, which will provide on an ample scale for all the railway requirements of the future, the preliminary work of acquiring the additional land and its reclamation is well in hand, as also the preparation of the final plans of lay-out. Lastly, the development of roads is receiving careful attention and includes both the construction of service roads to all the Commissioners' warehouses and private depots on their land and also the construction of suitable approaches to areas which will be utilised for residential purposes.

Reference has been made above to the Commissioner's old dock system known as the Kidderpore Dock, and it is of interest to note that in connection with this dock they are carrying out a work of almost unique difficulty. The existing 60 ft. lock entrance has for some time been less than adequate for the passage of modern vessels and has been heavily taxed by ships and boat traffic for many years, so that it is in urgent need of overhaul. To make this possible and at the same time to provide an entrance more adequate for the larger type of vessel now preponderating, they are constructing a new 80 ft. lock entrance between the old 60 ft. entrance and a small dry dock—a scheme of peculiar difficulty owing to the fact that the site is entirely surrounded by water and the two structures mentioned. Nevertheless satisfactory progress has been made on this work, which is being carried out by monolithic construction, the floor wells of which are of special interest as they cover the whole width of the floor between the side wall wells. It is hoped that this latter entrance will be completed early in 1929 and that when it is brought into use there will be a marked and permanent increase in the usefulness of the old Kidderpore Dock system.

It may be stated with some confidence that the Commissioner's schemes taken as a whole represent a scientific and well-considered effort to cope with the overseas trade of Calcutta and that there is little reason to doubt that their plans make ample and suitable provision for any development likely to occur for many years. The Commissioners have paid special attention to the necessity of providing areas for private trade depots in close proximity to their dock systems and offering not only security of tenure but also exceptional facilities in the way of road and rail access. There is already evidence that the benefit of these facilities is appreciated by British traders and manufacturers and it may be assumed that any enquiries by potential tenants will receive prompt consideration from the Commissioners' staff, who will be pleased to furnish any particulars desired.

**Bombay Port Trust Capital Works.**—In their administration report for the year 1926-27 the Trustees of the port of Bombay state that :—

In view of the depression in trade and the consequent effect on the Board's revenue, capital expenditure during the year was kept down to an absolute minimum, being restricted to essential works. It aggregated Rs.21.81 lakhs, the principal works carried out being the construction and completion of a new transit shed at No. 9 berth, Alexandra Dock, the deepening of the Alexandra Dock entrance channel and the mail steamer berth, and repaving and metalling of wharves in the Alexandra Dock and the construction of a new office for the Deputy Manager and the cash department in the same dock. No new loan was raised by the Trustees during the year, the expenditure being financed from loan balances in hand.

**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 :—

*Note on the progress of the West Wharf Works and the future requirements, etc.*

The construction of six deep water berths on the west side of the harbour was commenced at the end of 1923 and good progress has been made. The quay wall for two berths, each 550 ft. long, is now completed. The dredging in front of the berths will be carried out on the arrival of a new bucket dredger from England at the end of this year. Five 2-ton electric cranes for No. 1 berth are erected and five cranes for No. 2 berth are on order. By the end of the present year, it is expected that one berth will be opened. The depth alongside these berths will be 32 ft. at low water ordinary spring tides.

The present rate of progress is one berth a year and if this rate is maintained, the six berths will be ready for occupation by the end of 1931.

Five 2-ton electric cranes will probably be ordered next year followed by five more every year until 1930. No more machinery or plant is likely to be required for construction work.

The purchase of the following plant is under consideration :—

Quadruple grab hopper self-propelling dredger of 1,000 tons hopper capacity.

One 10-ton steam crane.

Electric cable and lamps for yard lighting.

Rails and crossovers, etc., for new railway lay-out.

Machine tools for workshop (lathes, steam hammer and drilling machines).

Two 800-ton dumb barges.

British manufacturers when tendering for requirements should place themselves in touch with the Board's Consulting Engineers, Messrs. Rendel Palmer & Tritton, 12-14, Dartmouth Street, Westminster, S.W.1.

**Harbour Developments in the Madras Presidency.**—Mr R. C. Bristow, Harbour Engineer to the Madras Government, has very kindly supplied the following note on the harbour schemes at Cochin and Tuticorin.

*Note on the present position of the harbour works at Cochin and Tuticorin.*

**COCHIN.**—Ocean-going vessels at present anchor off Cochin a distance of about three miles. Loading and unloading of cargo is effected by means of cargo boats. In monsoon weather steamers lie a mile or two to the north of Cochin at a place called Malipuram where, owing to the nature of the seabed, which is an oily mud, the water is generally calm.

Cochin, however, has a wonderful natural harbour 100 square miles at least in extent, approached through an entrance about 400 yards wide. The present stage of the harbour works is limited to dredging deep water berths for 12 ocean-going vessels within this natural harbour. The approach channel through the outer bar, however, is the chief difficulty. Dredging can proceed only between December and March inclusive, the plant being engaged for the rest of the year on dredging inside the harbour.

The capital works have been in progress for about one year. The large suction dredger *Lord Willingdon*, built by Messrs. Simons & Co., Renfrew, was designed to dredge at the rate of 1,500 cubic yards of sand and mud per hour. Over the whole of her first season's work she dredged at approximately the rate of 1,600 cubic yards per hour but for considerable periods averaged 1,800 cubic yards per hour, and occasionally as much as 3,000 cubic yards per hour, when the material was soft mud and everything was going well.

Every dredging work in the open sea, however, brings its own special difficulties, and at Cochin this difficulty lies in the evolution of a satisfactory pipeline to withstand the almost constant swell which prevails. During the

first season's dredging the ball joints of the pipeline gave considerable trouble and are to be replaced by others specially designed to check and control the constant fret at the joints.

The ex-German dredger *Seetief*, re-christened *St. Andrew* on St. Andrew's Day, 1926, has also done good work on the outer bar. She is what is known as a hopper-trailer, that is to say, she drags a scoop behind her from which the spoil is pumped up into her own tanks and discharged therefrom in deep water at sea. It is expected that about  $1\frac{1}{2}$  million cubic yards of spoil will have been dredged during the first year's work, notwithstanding all the difficulties which inevitably arose with new plant dredging in untried conditions.

Inside the harbour the spoil is being discharged into a large reclamation. It is admirable material for this purpose, being heavy and solid enough to bear a person standing on it directly after the land is above water.

With the exception of the ball joints, the re-design of which is now being attended to, the plant supplied by Messrs. Simons and Co. has been proved very satisfactory. It is hoped that the works will be sufficiently advanced for steamers to come into the harbour in 1929.

**TUTICORIN.**—At Tuticorin the loading and unloading of steamers is done in the same way as at Cochin, but the vessels lie much farther from the town, the distance being six or seven miles, practically double what it is at Cochin.

The present stage of the scheme provides for six or eight vessels to lie in a turning basin or wet dock approached through a land-locked canal across the peninsula known as Hare Island. The capital works at Tuticorin have been in progress about two years, and great difficulty has been experienced in dealing with the varied classes of coral, conglomerate, and rock, which exist at different levels down to 30 ft. below low water. The practical difficulties, however, have been largely overcome during the past year when the dipper dredger *St. George* has succeeded in dredging direct without the use of a rock-breaker materials ranging from loose or "finger" coral to very hard lime stone rock which exists in a layer about 3 or 4 ft. thick at a depth of 12 ft. below low water. Below this, however, at a level of roughly 24 ft. below low water, there exists a very tenacious conglomerate in a layer 2 or 3 ft. thick, which the present vessel has not been able to dredge or break at an economical rate. Consequently it is proposed to obtain a vessel of double the power to deal with this exceptionally tenacious layer, and in view of the extra cost and local apprehension as to the effect on the finances of the Port, Government have decided to obtain the advice of an expert committee on the subject of the new plant and the estimate as a whole. It is anticipated that a committee of experts will give a verdict on the proposals before the end of 1927.

It is interesting to note that the existence of these hard materials, while making dredging difficult, facilitates and cheapens other work. For example, the various classes of rock are all suitable for dumping on the sites of the breakwaters which will protect the approach channel. They are also suitable for building into the wharf wall, which, it is hoped, will eventually be built on at least two sides of the turning basin or wet dock. The chemical composition of the loose coral is such that it may be practicable to use this material, after preparation, for the manufacture of building blocks for transit sheds, and godowns. Experiments and trials are in progress with this object. Finally a large percentage of the spoil is being deposited direct into railway wagons which tip it practically dry into a reclaimed area adjacent to the turning basin. It is hoped that vessels will be able to lie in the Turning Basin by the year 1931.

**The Port of Rangoon.**—Mr. J. A. Cherry, C.I.E., has very courteously supplied the following note on the work carried out on Port extension schemes in 1926/7 and progress anticipated during 1927/8.

Before giving a brief description of work in progress and projected in connection with the various schemes of Port development, it will be of interest first to observe the traffic returns of the Port for the last financial year, closed 31st March, 1927. The Port of Rangoon has completed another satisfactory year, though in most instances the traffic figures for the previous record year 1925/6 are not surpassed. During last year 1926/7, 1,448 vessels with an aggregate net tonnage of 3,813,564 tons entered the Port, a decrease of 65 in number and 235,735 tons in tonnage compared with the figures of 1925/6, which constituted a record. The sea-borne traffic was 4,994,324 tons, of which 1,479,873 tons were imports, 3,501,557 tons exports, and 12,894 tons transshipment, a total decrease of 370,043 tons compared with last year. The volume of seaborne traffic over the Commissioners' premises totalled 1,717,935 tons of goods during the year, an increase of 80,276 tons over the wharves and a decrease of 53,836 tons over the foreshore, i.e., a net increase of 26,440 tons compared with last year. River-borne traffic passing over the Commissioners' premises was 840,262 tons of goods against 843,507 during 1925/6, a decrease of 3,245 tons.

Considerable progress has been made in connection with the development schemes of Port facilities, which in 1925 formed the subject of a special report entitled "Proposals of Port Development, 1925," and the position with regard to these schemes, which were approved by the Commissioners at their meeting in October, 1925, is given below.

*Wharves extension and re-construction for sea-going vessels traffic.*—Work on this project was not commenced during 1926/7, but during the current year an estimate amounting to Rs.45,016 has been sanctioned for preliminary works connected with the joining up of Sule Pagoda and Latter Street wharves. The preparation is in hand of estimates for a reinforced concrete wharf 509 ft. in length, a double storey steel frame transit shed with a floor area of 119,700 square feet, electric cranes and lifts, and for the provision of roads and railway sidings. It is anticipated that during the present financial year tenders will be invited in connection with some of the foregoing items. It is unlikely that work on the eastern extension of Sule Pagoda wharf will be commenced during 1927/8.

*Lanmadaw foreshore development for inland vessels, local and railway traffic.*—Progress on this scheme is necessarily gradual as a programme of traffic re-distribution has to be worked to, of which the next two schemes form a part. Since the close of last year, estimates amounting to Rs.4,82,445, including provision for new steel frame godowns, railway sidings, roads, pontoons, steel bridges and jetties, have been sanctioned, and a tender placed locally for Rs.1,14,775 for the supply and erection of three blocks of steel frame godowns\* with an area of 33,000 square feet. These godowns, which will be completed by December, 1927, are to accommodate temporarily the Crisp Street rice depot traffic, which will be transferred before the commencement of the next rice season to permit of other development works at Crisp Street.

*Botatoung development for the Irrawaddy Flotilla Company's Mandalay Steamer traffic.*—At the new depot at Botatoung the construction of roads, drains and two blocks of steel frame godowns with necessary railway sidings has been completed, also an office and godown for the Irrawaddy Flotilla Company. The construction of three transit sheds, an open shed and six further blocks of steel frame godowns with accompanying railway sidings is in hand. Tenders amounting to Rs.3,40,261 for the supply and erection of the transit sheds and godowns were placed locally during the last financial year. Work is proceeding rapidly, and it is anticipated that the Lanmadaw traffic will be transferred in December, 1927, by which date 125,000 square feet of transit shed, open shed and godown storage accommodation will be available. Three 200 feet pontoons with double approach

\*Foundations and masonry in walls and floors are being constructed departmentally.

jetties are being provided and pile driving work in connection with the latter is well advanced. Capital expenditure on this scheme during 1926/7 amounted to Rs.3,44,848, and there is provision in the current Capital Budget Estimates for additional expenditure amounting to Rs.8,09,290.

*The construction of a new Import Salt Depot at Pazundaung.*—This depot comprising 33 godowns with a total area of 129,000 square feet giving accommodation for 40,000 tons of salt, roads, railway sidings and a jetty, is nearing completion, and it is expected that the whole of the import salt traffic will have been transferred to Pazundaung before the close of 1927. During last financial year tenders amounting to Rs.5,10,112, for the supply and erection of the godowns were placed locally. Expenditure on construction and equipment of the depot totalled Rs.3,60,843 at the close of last year and provision has been made for further expenditure during the present year amounting to Rs.8 75,000.

*Additional moorings for sea-going vessels.*—This scheme provides for the laying of two new blocks of six-berth fixed moorings, the first of which, now being laid, involves the extension eastwards by two berths of the present block of fixed moorings off Botatoung and the laying of four berths at the western end of the harbour, and will be completed during 1927/8. It was originally intended that the laying of the second new block should not be completed before 1932/3, but if mooring accommodation should still be found inadequate it is anticipated the work will be put in hand on completion of the first new block. During last year mooring plant to the value of £50,000 was purchased at home, and local expenditure amounting to Rs.1,73,011 was incurred; a further sum of Rs.4,94,000 is provided in the budget estimates for 1927/8.

*Development at Dawbong.*—Approximate estimates amounting to Rs.21,00,000 have been prepared for work in connection with the protection and revetment of 7,800 ft. of the Pegu River foreshore. It is hoped that it will be possible to commence this work before the end of 1927/8.

*Passenger Depot—Phayre Street.*—Estimates amounting to Rs.2,83,153 for the provision of alternative facilities for local and sea-going passenger traffic necessitated by the scheme for extending the eastern end of Sule Pagoda wharf have been sanctioned, and it is anticipated work in connection with the construction of this depot will be commenced before the close of the present financial year.

*Acquisition of the Military Commissariat Depot at Godwin Road.*—Negotiations have been satisfactorily terminated for the transfer of this depot to the Commissioners for Port traffic purposes, and when the Commissioners have provided a new depot, the Military department will relinquish the present one. Detailed plans and estimates are in course of preparation for a new depot occupying approximately the same area, to be built by the Commissioners on their land fronting the Strand Road and immediately west of Latter Street wharf, with direct road and rail access and landing and shipping facilities over the Commissioners' Crisp Street pontoons and jetties.

*King's Bank Reclamation Works.*—This scheme, which will be completed by December 1927, consists of the erection of a groyne 6,000 ft. in length at the entrance to the lower harbour, and the hope that it would afford considerably greater depths of water in the Monkey Point and Hastings Channels would appear to be already justified, as results of recent surveys disclose that without dredging, there is 3—4 ft. more water in these channels than during the corresponding period of last year, when dredging took place. Expenditure amounting to Rs.32,47,229 has been incurred on construction up to the close of last financial year, and provision has been made for expenditure during the current year of Rs.5,54,421.

*Commissioners' New Head Offices.*—The construction of these offices is proceeding rapidly, the erection of the outer walls and roof being well advanced, and it is expected the building will be completed well within the contract time which expires on 24th May, 1928. The building is a four storey

steel frame structure carried on foundations consisting of over 500 concrete piles, with a tower 180 ft. high at the south-west corner. Three separate contracts were made for its erection, viz., foundations Rs. 1,80,597 by Messrs. Clark & Greig Ltd., of Rangoon, steel work £21,641 by Messrs. Dorman Long & Company, of Middlesbrough, and general construction Rs.9,58,659 by Messrs. Clark & Greig Ltd. The architect is Mr. T. O. Foster, F.R.I.B.A.

In addition to the foregoing works the provision of a new dredger and a 60-ton floating crane is under consideration.

**The Vizagapatam Harbour.**—The following extracts have been taken from the annual progress report very kindly supplied by Lieut.-Col. H. Cartwright-Reid, C.B., Engineer-in-Chief:—

*Manganese Wharf.*—Bunds have been constructed around the area to be used for the Manganese Wharf and similar bunds have been constructed around the area for storage godowns and the canal in front of the godowns has been commenced.

The tender of the Hooghly Docking & Engineering Company has been accepted for the construction of a motor ferry boat which will be delivered in December, 1927.

The Madras Government have agreed to carry out, at an estimated cost of Rs.15,000, the portion of the diversion road which is outside the harbour area and have also agreed to contribute Rs.20,000 towards the cost of the remainder. They have issued orders that the Great Northern Trunk Road is to be diverted so as to run through Vizagapatam across the new diversion road over the swamp.

*Monolith Quay Wall.*—Very good progress has been made with the construction of the monolith quay wall. A contract was entered into with Messrs. Jessop & Company, Calcutta, for the construction of steel shoes; the first of these was delivered on 5th August, 1926, and the last on 27th March, 1927. The monoliths have to be sunk to a depth of 45 ft. below low water. Two-fifths of the masonry of these monoliths has been constructed and the monoliths have been sunk to depths varying to 24 ft. 580 ft. out of a total sinking of 1,730 ft. have been completed. Progress on this work is very satisfactory, and is well ahead of the programme, but a slowing-up of speed is likely to occur in sinking the monoliths to their final depths.

The material removed from the monoliths is being used for the reclamation of the area immediately behind the wharf wall, and the foundations for the transit sheds have been put in hand to enable the filling to be placed round them and avoid the expense of excavations of the foundations hereafter. Owing to the strike on the Bengal-Nagpur Railway, the deliveries of cement could not be obtained and the foundations which are built in lime were put in hand to keep the masons employed.

*Electric Power Station.*—Tenders have been called for the construction of the well for circulating water, as this must be carried out in advance of the foundations of the building. Approval to the estimate for electric power station was not received until after the end of the year.

*Oil Fuel Depot.*—The principal bund around the area to be reclaimed for oil fuel depot has been constructed and meetings with the oil companies have taken place. At these the companies have indicated that Vizagapatam may be a very much larger oil depot than was previously contemplated, and they have agreed to put forward suggestions of their larger ultimate requirements, and these will be placed before the Advisory Committee in due course.

*Dredging.*—The rock breaker and dipper dredger arrived from England on 26th May, 1926, and after undergoing satisfactory trials has been working during the year. She has lifted during the year 460,270 cubic feet, principally in the old railway bund which consisted largely of rubble stone surrounding timber piles.

The grab dredger *Mudlark* has lifted 153,350 cubic feet during the year. The motor tug *Dolphin* was delivered on the 18th December, 1926, and the water and anchor boat on the same day. The latter, on trial, was not satisfactory, and the contractors have been called upon to remedy the defects.

Two rock barges fitted to take 120 tons each of rock on deck with a 50 cwt. crane were delivered on the 29th January, 1927.

The Suction Dredger *Vizagapatam*, which was due for delivery at the end of October, 1926, was delayed owing to the coal stoppage, and after undergoing satisfactory trials in the Clyde was navigated to Vizagapatam which she reached on the 23rd January, 1927. She was prepared for dredging and commenced a cut through the bar, picking up the material into a hopper and conveying it to sea. This was continued until 15th February, 1927, when the port propeller was damaged which made it impossible to continue this system of dredging until the vessel was docked for the propeller to be repaired. Overboard discharge connections were then fitted to enable the dredger to work by pumping through a floating pipe line. Owing to the roughness of the surf on which the dredger was working the floating pipe line was damaged, and on 16th March, the pipe line deflector was carried away by the rough sea and the pipe line broken. The weather continuing rough, the bow mooring wire and the anchor cables of the dredger snapped and the ship went aground on the north side of the cut. The pipe line, after battering against the side of the ship, sank alongside. The dredging master lowered the suction frame, but this was broken in a few minutes, and the heavy swell drifted the dredger higher up the beach. The broken suction frame damaged the stern of the vessel, and it was afterwards found that both the rudders had been broken and the ship holed where it struck the broken suction frame. With the assistance of the tug *Sir Frederick Dumayne* the dredger was hauled off on 27th March, 1927, and towed to Calcutta for repairs.

This accident to the dredger will postpone the dredging work for a period of about nine months as the repairs cannot be completed before September or October, and in view of the possibility of cyclones it would not be safe to bring the dredger back to work before the end of November next.

*Finance.*—The total recorded expenditure to 1st April, 1926, was Rs.64,76,751. The accounts are not yet closed for 1926/7, but it is anticipated that the expenditure will amount to about Rs.31,86,464. The full amount of the grant could not be expended this financial year largely owing to the non-delivery of the dredger *Vizagapatam* and to the delay in obtaining sanction to proceed with officers' and subordinates' quarters, electric power station, etc.

**Port of Chittagong.**—Commander C. R. Bluett, R.I.M., Port Officer and Secretary to the Port Commissioners, Chittagong, has supplied the following note with regard to this port :—

Schemes for the improvement and development of facilities for the trade and shipping of the Port of Chittagong have been under consideration by the Port Commissioners and the Assam-Bengal Railway Company for some years. These schemes may be briefly outlined as follows :—

(1) *River Training.*—The Port of Chittagong, which is situated ten miles from the entrance to the Karnafuli River is growing in importance, and the question of increasing the depth of water over the bars to permit deeper draft vessels to use the port has become a matter for serious consideration.

Messrs. Rendel, Palmer & Tritton, the Consulting Engineers to the Port Commissioners of Chittagong, have now been asked to advise as to what training works should be carried out in the very near future to improve the river, and it is hoped that work in this connection will soon be taken in hand.

(2) *Dredging*.—The Port Commissioners possess at present one Suction Hopper Dredger which does good work in maintaining more or less constant depths on the bars, but in order to increase these depths an order has been placed with Messrs. William Simons and Company of Renfrew for a modern twin screw bow-well suction dredger with a hopper capacity of 2,000 tons. These two dredgers will, it is believed, make a very considerable difference to the bars, and when the training works are taken in hand it is confidently expected that vessels of a much greater draft than at present will be able to use the Port.

(3) *Lighting of the Approaches to the Port*.—A new light of 65,000 candle power and a visibility of 13 miles has just been installed near Norman's Point at the mouth of the Karnafuli River to replace the old light, which was only 200 candle power and had a visibility of only 10 miles.

The provision of a new modern light-vessel at the South Patches Reef, 50 miles from the mouth of the River, is also contemplated, and this will, if sanctioned, satisfy a long-felt want by ships.

(4) The Assam-Bengal Railway have in view the building of an additional river jetty for sea-going ships, and this will be taken in hand so as to be completed when the beneficial effects of the river training and dredging are felt.

### 3. HYDRO-ELECTRIC SCHEMES.

**The Punjab Hydro-Electric Scheme (known as the Uhl River project).**—Lt.-Col. B. C. Battye, R.E., has very kindly supplied the following brief report on the progress made during the year :—

The Hydro-Electric Branch of the Public Works Department was formed in the early spring of 1926. During the past year a complete new Branch has been built up, consisting of Administration, Engineering and Construction Departments and six Divisions.

Large numbers of orders have been placed for construction plant during the past nine months, most of which is now arriving at site and expected to be erected and working within the next three or four months.

This construction plant consists of a complete temporary hydro-electric installation, generating 900 kws and about 12 miles of electrical transmission and distribution, a complete telephone system, two compressor stations with several miles of compressed air piping, and a complete system of haulage and tramways connecting up the different portions of the work along the mountain sides and each side of the range through which the tunnel will be driven. Temporary communications have also been opened up and two complete hutted camps erected in addition to the permanent residential buildings required for the operating staff.

At the present moment workshops and store buildings are nearing completion, and it is hoped to have the serious driving of the tunnel started in October of this year. With the exception of the winches for the haulage-ways, the bulk of this plant has been purchased in Great Britain.

The field work now nearing completion consists (in addition to the buildings already noted) of the construction of about four miles of 2 ft. 6 in. gauge tramway along the mountain sides, and three complete haulages, averaging about 5,000 feet in length.

During the past year the Engineering Department has been preparing detailed surveys and designs for the hydraulic works and the transmission system. The detailed designs for about 400 miles of trunk and branch transmission lines are now nearing completion, and tenders will probably be called for towers, cables and insulators for this equipment in the course of the next few months. Meanwhile the surveys and preliminaries connected with the taking over of land, for the transmission lines and sub-stations are in hand.



A complete programme of construction has now been completed which, if adhered to, will enable the first stage of the scheme to be completed and ready for operation by the summer of 1930.

### **Hydro-Electric Developments in the Madras Presidency.**

—The following brief note has been forwarded by the Chief Engineer to the Government of Madras in the Public Works Department :—

During 1926, preliminary reports with estimates were prepared for three hydro-electric schemes—Pykara, Pinjikave and Papanasam—all on the Western Ghats. These were scrutinised by the Consulting Engineers to the Railway Board—Messrs. Merz & McLellan—and on their report it was decided to proceed with the Pykara Scheme if sufficient demand for power was found forthcoming. The Government appointed a Committee of enquiry for the purpose and the Committee's labours, together with the negotiations conducted by Government with the South Indian Railway and the Railway Board, showed that there was enough demand to warrant construction of the first stage of the scheme.

The Pykara Scheme is to utilise the waters of the Pykara River which takes its origin on the Nilgiris Plateau and drops down to the plains 4,000 ft. below in a series of rapids situated about 16 miles by road to the north west of Ootacamund. The scheme provides for a storage reservoir on the hills, flume, forebay, pipeline along the slope and power station below. The head utilised is nearly 3,000 ft. The first stage development is to instal about 25,000 k.w. and power will be carried over transmission lines at 110,000 volts to Coimbatore, Dindigul, Trichinopoly and Madura. The principal consumers will be the South Indian Railway, who have a programme of main line electrification from Madura to Trichinopoly and Dindigul to Podanur, and the cotton and other mills in the towns—Coimbatore and Madura.

Further investigation at Papanasam is proceeding and an economical development providing about 9,000 k.w. in the first stage with capacity for extension to more than double that figure later, seems possible at the site.

**The Ceylon Hydro-Electric Project.** — The Director of Public Works, Ceylon, has courteously supplied the following brief note with regard to the present position of this scheme :—

The hydro-electric scheme is divided into three progressive stages, the ultimate capacity of which will be 50,000 kilowatts. The carrying into effect of the first stage is all that is contemplated at the present time. This will give an output of 10,000 kilowatts. The plant to be installed consists of three sets of 6,000 kilowatts, two pipe lines 48 in. to 36 in. diameter approximately one mile in length, and duplicate transmission line 50 miles long, operating at 88,000 volts and each of 12,000 kilowatt capacity.

It has also been decided to instal in Colombo a steam plant consisting of two units of 3,000 kilowatt capacity to supply 3-phase alternating current at 11,000 volts, and also a distribution system of underground cables to supply current to consumers at 416 volts for power and 230 volts for lighting.

Messrs. Preece, Cardew and Rider, of 8, Queen Anne's Gate, Westminster, S.W.1, are the Consulting Engineers for this work.

#### **4. OTHER WORKS.**

**The Calcutta Chord Railway project and the Bally Bridge.** — The following note, giving a short history of this railway and a detailed note of the plant and machinery which is being used in the construction of the Bally Bridge, has been very kindly supplied by Mr. A. H. Johnstone, the Engineer-in-Chief :—

So far back as 1912 the congested state of the downward coal traffic was causing serious concern to the commercial community of Calcutta; and the agencies then interested in the coal trade were pressing for better railway communication between the coalfields and the docks. Among the various suggestions made at the time and considered at the Conference held in October, 1912, by a special committee, who were enquiring into the situation, were proposals to build a new line from Burdwan to Howrah, also one from Bishnupur to Shalimar, to connect these lines by a bridge over the Hooghly, and by an independent line with Kidderpore, so as to give the East Indian Railway and the Bengal-Nagpur Railway direct access to the docks.

2. The Burdwan Howrah Chord was constructed and was opened for traffic in January, 1917.

3. In 1914 the proposal to build a bridge over the Hooghly, with a direct line to the docks, was revived and reports and estimates for the following projects were prepared:—

A bridge over the Hooghly crossing the river at Panihati 6½ miles above Calcutta.

A bridge over the Hooghly crossing the river at Bally 5 miles above Calcutta.

A bridge over the Hooghly crossing the river at Belur 4 miles above Calcutta.

These projects included a direct connection with the docks, also, as an alternative, connections *via* the Eastern Bengal Railway, utilising the existing dock section of that railway and leaving the question of an independent dock connection to be decided when traffic had developed sufficiently to indicate the necessity for another route. These reports were examined by the Railway Board, by the East Indian and the Bengal-Nagpur Railways and by the Port Commissioners. After a careful consideration of all the available information a decision was made in favour of the Bally crossing. The grounds on which this decision was given were the stable condition of the river, the importance of obtaining the shortest possible route to the docks and the desirability of locating the bridge near Calcutta.

4. The final survey for a line crossing the river at Bally was prepared in 1922, but it was not until 1926 that the actual construction was sanctioned.

5. The main feature of interest in the work is the bridge over the Hooghly at Bally. It will consist of seven spans of 350 ft. girders carried on concrete piers, the foundations of which will be sunk to a depth of about 115 ft. below low water. The caissons on which the foundations will rest are of twin octagonal design, 70 ft. long by 37 ft. wide, with two dredging holes of 19 ft. diameter. The caissons are being built by local firms of Tata steel, the lower or curb portion weighing 132 tons. Outside and inside steel strakes will be added to suit the depth of water in each case, the deepest being 48 ft. Above the strakes, which will be filled with concrete, the steining will be built in cement concrete with steel shuttering.

6. The sinking will be done by means of 100 cubic feet Bells dredgers worked by 15 ton electric cranes. Two of the cranes are of the overhead gantry type fitted on steel stagings carried on steel barges braced together, and two of the derrick pattern with 90 ft. jibs, fitted on steel pontoons 80 ft. by 66 ft. The gantry cranes were originally procured for the Hardinge Bridge and the latter have recently been supplied by Messrs. Butters and Company, of Glasgow. They have a lifting speed of 80 ft. per minute and a slewing speed of 500 ft. per minute. The same firm have also supplied a 15 ton floating steam crane, which will be used for general purpose throughout the work.

7. The power on the west bank is derived from an aerial line which is tapped off the main transmission line running from the East Indian Railway Power House at Lillooah to Bandel. The power is at 10,000 volts, three phase, 50 cycles and is controlled by an aerial switch complete with Lightning

Arrestors supplied by Messrs. Metropolitan-Vickers Electrical Company Ltd., Calcutta. The aerial line is terminated in a short length of cable supplied by Messrs. The British Insulated Cables Ltd., Calcutta. The substation equipment consists of two 400-k.v.a. oil immersed self-cooled transformers supplied by Messrs. The English Electric Company Ltd. These are controlled on the high tension side by two truck type switches of the English Electric Company's manufacture. The low tension switchboard is also by Messrs. The English Electric Company Ltd., and consists of two incoming and four feeder panels. The low tension voltage at the substation will be 440 volts and distribution is at this pressure to all circuits.

8. The power on the east bank is derived from the mains of the Calcutta Electric Supply Corporation, who have laid an underground cable into the substation from their substation at Barnagore. The power in this case is 6,000 volts, three phase, 50 cycles. The equipment of the substation is exactly the same as that of the west substation. Each substation has a 90 k.v.a. condenser installed, made by the British Insulated Cables, with the object of keeping up the power factor to an average of .9.

9. An interesting feature of the equipment of the two substations is that all equipment in either substation is interchangeable with the other. The transformers are arranged to take power at 10,000 volts connected in star and 6,000 volts when connected in delta and to supply either 440 or 220 volts by means of a series of parallel connections. Voltage regulation is arranged by + 5 per cent. taps on the high tension side. The truck type switchgear is provided with two sets of potential transformers for 6,000 or 10,000 volts and the low tension switchgear is large enough to carry full load at 220 volts. The object of this is that after the construction of the bridge is completed the whole of the equipment can be used in the carriage and wagon workshops of the East Indian Railway at Lillooah where the standard high tension voltage is 10,000 volts and the standard low tension voltage is 220 volts.

10. Power for lights and fans for the bungalows and the offices is derived from two 10-k.v.a. single phase 440-230 volt transformers supplied by Messrs. Metropolitan Vickers Electrical Company Ltd., with + 5 per cent. taps. The fans are mostly of Messrs. Crompton's and Metropolitan-Vickers' manufacture.

11. The river craft consists of three steam tugs, four motor launches, two 1,000 ton, ten 100 ton and seven 50 ton barges, all of which have been supplied by local firms.

12. An electrically driven workshop equipped with the usual machines has been erected on the west bank and a small subsidiary shop is in course of construction on the east side of the river.

In addition to the plant mentioned above there are a large number of concrete mixers, air compressors, stone crushers, sinking pumps and numerous other machines on the work, all of which have recently been imported from British firms.

13. The strike in England delayed the supply of the plant, but most of it has now been received and at the present moment piers No. 1 and No. 8 are in process of construction.

14. The girders, which will weigh about 2,000 tons per span without roadways, are now being designed by Messrs. Rendel, Palmer & Tritton, the consulting engineers. They will be designed to the new heavy mineral loading, and although the local Government have not yet definitely decided to pay the cost of roadways and footways, the main girders will be built strong enough to carry them at any future date.

15. The approaches to the bridge will consist of over half a mile of viaduct on each side with high earth embankments running down to the main line junctions with the East Indian and Eastern Bengal Railways. At the present moment a final decision has not been come to as the design to which the

viaducts should be built, as owing to the high increase in loading recently introduced by the Railway Board it is thought that reinforced concrete arches or steel girders may prove more suitable than the brick arches provided for in the project estimate.

16. The work should be in full swing next cold weather and it is anticipated that it will be completed early in 1930.

**Bombay Back Bay Reclamation Scheme.**—Any account of the large works in progress in India during 1926 would not be complete without a reference to the Back Bay Project, the enquiry into which attracted such attention in engineering circles towards the end of 1926. In July, 1926, the Government of India appointed a Committee of Enquiry, under the Chairmanship of Sir Grimwood Mears, firstly to enquire into the history of the inception and conduct of the Back Bay Reclamation Scheme, and secondly to make recommendations as regards future operations. It is not practicable in the limited space available to deal with the Committee's report which, together with the forecast of future operations, can be seen at the Department of Overseas Trade. Very little additional plant remains to be purchased, and the present position is largely one of professional interest for British engineers.

**The Howrah Bridge.**—The Howrah Bridge Act, 1926, was brought into force on April 1st, 1927, and on April 11th the Calcutta Port Commissioners held their first statutory meeting as Commissioners under the Act for the new Howrah Bridge. The proceedings were summarised by the Chairman in the following brief note:—

“ Having regard to the sources of revenue authorised under Sections 8 and 11 of the 1926 Act, and of the estimates of receipts expected to accrue under these sections, the Commissioners consider that after making necessary provision for the working expenditure of the new bridge in regard to staff, the maintenance of ferry steamers, dredging and the care of the structure, the amount which will remain available from these total receipts to meet interest and sinking fund charges on the new structure will not admit of any type other than a floating bridge to be constructed under the authority of this Act. The Commissioners therefore decided to address Government accordingly and to say that in these circumstances, they were proceeding with the arrangements necessary for the construction of a floating bridge.

The Commissioners also decided provisionally to adopt the proposal that the new bridge should be located at a new site upstream from the present bridge at a distance of some 270 ft., that if possible there should be one undivided roadway 80 ft. in width with footpaths on either side 15 ft. in width each and also provision for a double line of tramways provided satisfactory terms could be arranged with the Calcutta Tramways Company; also that the abutments should be constructed on a foundation of monoliths.

The Commissioners also unanimously agreed that arrangements should now be made for the preparation of detailed plans and estimates of the most suitable type of structure by a competent firm of consulting engineers and that for this purpose negotiations should be instituted with the firm of Rendel, Palmer & Tritton, consulting engineers to the Secretary of State for India.

The Commissioners also decided that it would be advisable the same firm should be responsible for the design not only of the bridge structure itself but

also of the abutments, leaving only the approach roads for departmental action. Also that the Commissioners' Chief Engineer, Mr. McGlashan, should be allowed when on leave to offer the firm the benefit of his local knowledge and experience."

Hopes that a cantilever bridge may even yet be decided upon were revived by a speech made by H. E. the Governor of Bengal on July 12th, 1927, in which he said that—

"I should have been pleased if those responsible were able, after further consideration, to recommend a permanent and solid structure, as was suggested by the Committee presided over by Sir Rajendra Nath Mookerjee as the most suitable and, I believe, ultimately the most economical bridge that could be erected—of the cantilever type."

It is understood that the only way in which the admitted advantages of a cantilever bridge can be reconsidered is by the submission of proposals, officially or unofficially, in the Legislative Council for the amendment of the taxation clauses of the Act providing for additional revenue. It is known that H. E. the Governor would welcome a reconsideration of the whole matter, and therefore there is still a remote chance that Calcutta may still see the construction of a permanent and dignified structure worthy of the second city of the Empire.

**The Grand Trunk Canal.** — This question was remitted in April, 1927, to a special Committee appointed by the Governor of Bengal in Council to examine the anticipated revenue from the Grand Trunk Canal project in all its bearings, including the canal route and the harbours, and to report on the estimates of revenue and any matter relevant to a consideration thereof. The Committee will also scrutinise the proposals made in the report on the project so far as they relate to the acquisition of land and the revenue which is expected to be realised from the use or subsequent disposal of such land.

The whole project is, therefore, likely to remain in abeyance for a further considerable time.

## CHAPTER VI.

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, 1926, TO MARCH 31ST, 1927.\*

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 immense 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 remained fairly steady so far as quantities are concerned, the aggregate being reduced from 51½ million lbs. in 1925/6 to 49½ million lbs. in 1926/7. The heavy fall in prices during the period is reflected in the reduction of the total value from 7½ crores of rupees of 6½ crores of rupees. The reductions took place in grey 11's to 20's (roughly three and a half million lbs.), in grey 31's to 40's (three quarters of a million lbs.), and in coloured 31's to 40's (one and a quarter million lbs.). There was a considerably increased import of grey counts above 40's and of mercerised spinnings.

The following table gives the imports of grey yarns arranged according to counts:—

Counts.				1925/6.	1926/7.
				lbs.	lbs.
Nos.	1 to 10	...	...	79,741	105,860
„	11 to 20	...	...	4,223,718	677,476
„	21 to 30	...	...	583,447	430,723
„	31 to 40	...	...	21,680,470	20,964,273
Above 40	...	...	...	6,168,291	7,425,172
Twofolds	...	...	...	5,221,864	6,151,161
Total Imports				37,957,531	35,754,665

The next table sets forth similar details of the imports of bleached, coloured and mercerised yarns:—

Description.				1925/6.	1926/7.
				lbs.	lbs.
Bleached yarns	...	...	...	3,751,328	4,061,521
Coloured—					
Nos.	1 to 20	...	...	468,796	200,080
„	21 to 30	...	...	535,150	509,188
„	31 to 40	...	...	4,613,808	3,457,101
Above 40	...	...	...	516,547	742,928
Twofolds	...	...	...	972,787	458,921
Mercerised yarns	...	...	...	2,845,477	4,169,075
Unspecified descriptions	...	...	...	26,662	59,279
Grand total of all kinds of twist and yarn				51,688,086	49,412,758

\* For a supplementary review of trade to September 30th, 1927, see Appendix IV., p. 254.

It is satisfactory to note that the share of the United Kingdom in the total trade rose from 16 to 20 million lbs., while that of Japan fell from 33½ to 26½ million lbs.

The following tables gives the details :—

Country of origin.	1925-26.		1926-27.	
	lbs.	Rs. (lakhs)	lbs.	Rs. (lakhs)
United Kingdom ... ..	15,979,865	3,14	20,104,356	3,08
Netherlands ... ..	473,075	9	486,435	9
Switzerland ... ..	898,013	16	691,130	10
Italy ... ..	409,645	7	313,612	4
China (including Hongkong)	56,000	0,6	945,032	8
Japan ... ..	33,525,380	4,25	26,609,033	3,20
Other countries ... ..	346,108	5	263,160	3
<b>Total Imports ... ..</b>	<b>51,688,086</b>	<b>7,76</b>	<b>49,412,758</b>	<b>6,62</b>

The production of the Indian mills compared with the imports is clearly shown in the following statement :—

	Imports in lbs. (1,000).	Indian Mills. Production in lbs. (1,000).
Annual average for the 5 years 1909-10		
to 1913-14 ... ..	41,794	646,757
1923-24 ... ..	44,574	617,328
1924-25 ... ..	55,907	719,390
1925-26 ... ..	51,688	686,427
1926-27 ... ..	49,413	807,116

The subjoined table compares by counts the quantities of imported cotton twist and yarn with the quantities produced in Indian Mills :—

	1913-14 (pre-war year).		1923-24.		1924-25		1925-26.		1926-27.	
	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	6,857	411,910	7,170	469,810	4,772	444,748	1,068	515,681
" 21 to 25 ... ..	896	123,995	473	124,601	477	154,672	543	142,759	483	168,345
" 26 to 30 ... ..	3,686	42,999	993	57,377	934	69,140	575	71,029	470	79,966
" 31 to 40 ... ..	23,657	19,712	19,807	19,667	27,687	19,368	26,294	19,738	24,405	27,657
Above No. 40 ... ..	7,859	2,699	7,739	3,261	7,659	5,822	6,685	5,834	7,562	11,531
Grey and coloured two folds (doubles) ... ..	—	—	4,033	—	5,833	—	6,195	—	7,146	—
Unspecified descriptions and waste	6,819	679	4,673	513	6,147	578	6,624	2,319	8,291	3,936
<b>Total ... ..</b>	<b>44,171</b>	<b>682,777</b>	<b>44,575</b>	<b>617,329</b>	<b>55,907</b>	<b>719,390</b>	<b>51,688</b>	<b>686,427</b>	<b>49,425</b>	<b>807,116</b>



It will be remarked that in spite of the depressed conditions prevailing in the Bombay mill industry, the output of yarns in all-India increased by nearly 121 million lbs. to over 807 million lbs. The Bombay Millowners' Association in their Report for 1926 state that the average monthly stocks of yarn during the year were 41,500 bales, as compared with 44,083 bales in 1925. It should, however, be remembered that the average number of working spindles per day in 1926 was 2,860,076 as compared with 3,181,650 in 1925. The Association state that "following on the reduction in stocks caused by the stoppage of the mills in the last three months of 1925, the heavy accumulation of stocks during the year was of considerable anxiety to the Committee, although happily the position on the whole was not so dismal as in 1925. The advisability of adopting short time was considered in all its bearings at the general meeting of members held on 29th September, 1926, but although there appeared to be a general consensus of opinion in favour of curtailment of production, it was found impossible to devise a generally acceptable scheme for organised action." They add that "the position in the yarn market continued unsatisfactory throughout the year, except for a short period when in the middle of July there was a small demand from exporters for China, and there were hopes of good business being done. These hopes were not realised, and prices continued to decline with very poor off-take of stocks. The prices of 10's and 20's yarns, which were at the close of 1925  $10\frac{3}{4}$  and  $12\frac{3}{4}$  annas per lb., were at the close of 1926, 7 annas and  $8\frac{3}{4}$  annas a lb., showing over the year a decline of about 4 annas, or nearly 33 per cent. But even this decline did not improve the situation. Stocks reached their highest point in April, since when there has been more or less a decline, which, however, is in great part due to the gradual stoppage of about one-sixth of the total spindles in Bombay."

In Table A, page 241, will be found a statement published by the Indian Tariff Board showing the production, imports and exports of yarn during the period 1899-1900 to 1925-1926. Table B, page 242, contains a statement also compiled by the Indian Tariff Board, which shows the progress made by the cotton mill industry in India between 1883/4 and 1924/5.

*Piece Goods.*—The following table shows the quantitative imports of the three main classes of piece goods for 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
1923-24 ... ..	704·0	415·3	347·5
1924-25 ... ..	845·5	548·9	407·0
1925-26 ... ..	709·1	465·1	365·8
1926-27 ... ..	748·4	570·9	447·4

This should be studied in conjunction with the next statement, which 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
*1923-24 ... ..	15,376,473	10,296,306	11,789,829
*1924-25 ... ..	18,992,655	13,487,904	13,343,973
†1925-26 ... ..	16,415,418	11,994,909	11,940,876
†1926-27 ... ..	14,712,768	13,220,371	12,916,839

\*At exchange of 1/4

†At exchange of 1/6

The lower prices which ruled during the past year resulted in a noteworthy increase in the yardage, but it will be observed that the total yardage imported is still only 55 per cent. of that imported in 1913-14. The declared values per yard over the same series of years gives the clue to the present position.

Cotton piece goods.	1913-14.	1923-24.	1924-25.	1925-26.	1926-27.
	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.
Grey (unbleached)	0 2 8	0 5 3	0 5 5	0 4 11	0 4 2
White (bleached)	0 2 11	0 6 0	0 5 11	0 5 6	0 4 11
Coloured, printed or dyed ...	0 3 5	0 8 2	0 7 10	0 6 11	0 6 2

It has been repeatedly stated that the falling-off in the imports of cotton piece goods is roughly in inverse ratio to the increase in price. The effects of the fall in prices last year are reflected in the increased yardage imported. With a price index in Manchester on April 8th, 1927, of 133 for American yarn and 138 for cloth, it may be confidently expected that the imports during the present fiscal year will show a very marked increase in yardage of all styles.

## VARIETIES OF PIECE GOODS IMPORTED.

	(pre-war year) 1913-14.	1924-5.	1925-6.	1926-7.
Grey (unbleached).	Million yds.	Million yds.	Million yds.	Million yds.
Dhutis, saris and scarves ...	806·1	489·9	430·1	471·6
Jaconets, madapollams, mulls, etc. ...	150·4	89·4	57·0	72·6
Longcloth and shirtings ...	545·4	206·7	171·3	168·8
Sheetings ...	·2	39·4	30·4	18·3
Drills and jeans ...	21·3	17·3	19·4	14·9
Other sorts ...	10·8	2·8	·9	2·2
<b>Total ...</b>	<b>1,534·2</b>	<b>845·5</b>	<b>709·1</b>	<b>748·4</b>

	(pre-war year) 1913-14.	1924-5.	1925-6.	1926-7.
White (bleached).	Million yds.	Million yds.	Million yds.	Million yds.
Dhutis, saris and scarves ...	104·3	68·9	72·6	114·0
Jaconets, madapollams, mulls, etc. ...	307·9	194·9	186·8	234·8
Longcloth and shirtings ...	115·3	122·7	93·8	97·4
Nainsooks ...	204·7	105·4	77·0	65·9
Drills and jeans ...	5·7	6·4	6·1	5·1
Checks, spots and stripes ...	16·1	11·0	7·0	12·3
Twills ...	8·3	13·3	12·2	11·8
Other sorts ...	31·0	26·3	9·6	29·7
<b>Total ...</b>	<b>793·3</b>	<b>548·9</b>	<b>465·1</b>	<b>571·0</b>

Coloured Printed or Dyed.	(pre-war year) 1913-24	1924-5.	1925-6.	1926-7.
	Million yds.	Million yds.	Million yds.	Million yds.
Dhutis, saris and scarves ...	115·2	46·0	29·9	35·5
Cambrics ...	113·6	44·5	34·7	43·2
Shirtings ...	152·6	69·3	72·5	90·8
Prints and chintz ...	209·7	59·5	56·1	50·5
Drills and jeans ...	30·0	25·4	32·4	44·9
Checks, spots and stripes ...	19·7	15·5	10·7	17·0
Twills ...	31·4	22·2	20·4	29·0
Other sorts ...	159·6	124·6	109·1	136·5
<b>Total ...</b>	<b>831·8</b>	<b>407·0</b>	<b>365·8</b>	<b>447·4</b>

The falling away in grey shirtings, the imports of which are only 31 per cent. of the 1913-14 figures is most striking, but the considerable purchases of British shirtings in the early months of

1927 should show an improvement in next year's returns. Bleached nainsooks are still only 32 per cent. of the pre-war imports due to the substitution of cheaper cloths owing to the price level being beyond the reach of consumers.

Perhaps the most alarming reduction is in the imports of prints and chintz, which have shrunk to only a quarter of the pre-war figure. This is largely to be accounted for by changes in fashion. Although purchases during the past few months have been on a much broader scale, it is to be feared that we must face a permanent reduction in the trade in low-quality prints, which was formerly such a feature of the markets in Northern India.

### *Sources of Imports.*

#### *(i) Grey Goods.*

Countries of Consignment.	1925-6.		1926-7.	
	Yds.	Rs. (lakhs).	Yds.	Rs. (lakhs).
United Kingdom ...	561,391,190	17,08	588,781,540	15,24
China (including Hong-Kong) ...	2,264,223	7	1,790,000	4
Japan ...	142,609,046	4,61	154,865,422	4,23
United States ...	2,460,384	10	2,690,128	9
Total Imports (all sources) ...	709,085,401	21,89	748,410,976	19,62

It is satisfactory to note that Lancashire maintained her position during a most difficult year. The effects of the heavy purchases of grey dhooties and shirtings which were made during the first two months of 1927 are not fully apparent in the above figures, and a much better showing will be made in next year's report.

#### *(2) Bleached Goods.*

Countries of Consignment.	1925-6.		1926-7.	
	Yds.	Rs. (lakhs).	Yds.	Rs. (lakhs).
United Kingdom ...	446,265,725	15,09	550,284,568	16,67
Netherlands ...	6,327,910	30	5,955,971	25
Switzerland ...	5,803,737	32	8,643,416	45
Japan ...	4,674,567	16	2,881,728	9
Other countries ...	2,040,185	12	3,185,854	16
Total Imports ...	465,112,124	15,99	570,951,537	17,62

The British share of the trade is well maintained at 95 per cent. Imports from the Netherlands of white shirtings show a marked decline, while there has been a considerable increase in the arrivals from Switzerland of white jaconets, mulls and nainsooks, which are mostly embroidered and bleached in Switzerland on British grey cloth.

(3) *Coloured, Printed or Dyed.*—This heading is made up as follows :—

Description.	1925-6.		1926-7.	
	Yds.	Rs. (lakhs).	Yds.	Rs. (lakhs).
Printed goods ... ..	166,877,006	6,55	176,854,152	6,13
Dyed goods ... ..	106,870,740	4,88	156,984,887	6,17
Woven coloured goods ...	92,088,029	4,49	113,603,188	4,92
Total Imports ...	365,835,775	15,92	447,442,227	17,22

The decline in the print trade has been more than made up by increased imports of dyed goods. The provenance of the imports was as follows :—

Countries of Consignment.	1925-6.		1926-7.	
	Yds.	Rs. (lakhs).	Yds.	Rs. (lakhs).
United Kingdom ... ..	267,404,871	11,91	318,300,188	12,58
Germany ... ..	1,757,597	14	3,022,526	20
Netherlands ... ..	10,100,751	63	13,697,487	75
Belgium ... ..	949,614	10	2,171,294	19
Switzerland ... ..	1,547,375	13	3,155,209	23
Italy ... ..	9,807,059	58	15,550,975	70
Straits Settlements ...	3,083,845	22	3,297,968	20
Japan ... ..	69,542,141	2,11	85,821,800	2,25
Total Imports (all sources) ... ..	365,835,775	15,92	447,442,227	17,22

The share of the United Kingdom remained steady at 74 per cent., that of Japan at 13 per cent., and Italy increased her portion from 3½ to 4 per cent. The increased imports from Germany and adjacent countries are noteworthy.

(4) *Fents of all Descriptions.*

Countries of Consignment.	1925-6.		1926-7.	
	Yds.	Rs. (lakhs).	Yds.	Rs. (lakhs).
United Kingdom ... ..	11,645,772	43	9,507,913	35
United States ... ..	11,883,691	27	11,442,782	29
Other countries ... ..	150,683	—	188,933	1
Total Imports ...	23,680,146	70	21,139,628	65

American competition in fents is becoming very acute. This is to some extent due to the American attitude towards fents, which have hitherto been regarded in the United States of America as a waste product to be sold for what they will fetch. American

shippers have therefore sold their fents in India at prices much below British quotations. It is to be hoped that the large firms of bleachers, dyers and printers in the United Kingdom will recognise this in the future when selling their large stocks of fents to exporters.

*Shares of the Principal Competitors* in the total quantities of piece goods imported :—

Countries of Consignment.	1913-14.	1924-25.	1925-26.	1926-27.
United Kingdom ...	97.1	88.5	82.3	82.0
Japan ... ..	0.3	8.5	13.9	13.6
Holland ... ..	0.8	0.6	1.1	1.1
Italy ... ..	0.7	0.5	0.6	0.8
Switzerland ...	0.2	0.4	0.4	0.6
Other Countries ...	0.9	1.5	1.7	1.9
Total ... ..	100.0	100.0	100.0	100.0

The relative position of the United Kingdom vis-à-vis her principal competitor Japan remains practically unchanged, but it will be remarked that competition from the Continent shows a tendency to increase.

*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. It will be noted that, in spite of the acute depression in Bombay and Ahmedabad, the total yardage produced in all-India rose from 1,954 millions in 1925-6 to 2,259 million in 1926-7. The increase of 305 million yards was principally made up of increased production of the following types of cloth :—

Grey Dhooties, an increase of 69 million yards.

Grey Shirtings and Longcloth, an increase of 59 million yards.

Coloured Piece goods, an increase of 141 million yards.

Ninety-nine million yards of Khaddar cloth were woven during the year. The total weight of cloth of all kinds rose from 465 to 539 millions pounds.

Description.	Twelve months, April to March.			
		1924-25.	1925-26.	1926-27.
Grey and Bleached piecegoods—				
Chadars ...	{ pounds	21,645,841	22,787,297	24,137,331
	{ yards	61,613,927	62,075,591	65,555,014
Dhutis ...	{ pounds	96,507,057	110,134,379	123,121,505
	{ yards	458,403,936	516,394,318	585,705,264
Drills and jeans	{ pounds	18,520,699	18,106,061	20,177,031
	{ yards	77,191,047	74,150,144	79,703,504
Cambrics and lawns	{ pounds	1,144,509	580,764	664,147
	{ yards	5,395,238	3,168,432	3,385,935
Printers ...	{ pounds	7,759,658	6,003,983	4,856,262
	{ yards	32,776,886	25,871,997	20,899,248
Shirtings and longcloths	{ pounds	118,058,747	120,019,866	134,771,543
	{ yards	525,524,427	521,125,944	580,536,303
Tcloth, domestics and sheetings	{ pounds	17,462,522	17,370,593	23,680,244
	{ yards	77,741,758	74,073,333	93,314,603
Tent-cloth ...	{ pounds	4,156,226	3,990,717	3,166,727
	{ yards	9,893,789	9,004,906	6,732,119
Khadi, Dungri or Khaddar	{ pounds	29,434,466	30,444,405	35,810,049
	{ yards	87,152,562	87,406,216	98,670,894
Other sorts ...	{ pounds	10,575,504	9,826,309	11,326,965
	{ yards	46,674,718	41,034,924	42,734,703
Total ...	{ pounds	325,265,229	339,265,174	381,711,804
	{ yards	1,382,368,288	1,414,305,805	1,577,237,587
Coloured piecegoods	{ pounds	125,563,183	116,695,300	145,320,359
	{ yards	588,030,950	540,156,845	681,477,373
Grey and coloured goods, other than piecegoods	{ pounds	2,952,221	3,726,511	4,151,302
	{ yards	610,985	955,804	1,006,548
Hosiery ...	{ pounds	673,221	872,861	1,118,190
	{ dozens	276,853	316,546	391,813
Miscellaneous ...	{ pounds	3,949,303	3,772,129	4,289,022
Cotton goods mixed with silk or wool	{ pounds	272,006	707,712	2,313,760
Grand Total ...	{ pounds	458,839,645	465,039,687	538,904,437
	{ yards	1,970,399,238	1,954,462,650	2,258,714,960
	{ dozens	887,838	1,272,350	1,398,361

The Committee of the Bombay Millowners' Association in their review of the year 1926 state :—

“ The situation in the cloth market was perhaps only a little less gloomy than that of the yarn market, for there were at least two periods when there was a fair enquiry for cloths, though the rates were far from satisfactory. In the month of February there was a fair demand which, however, did not continue, and from March onwards stocks began to rise. It was not until September and October that the market again began to move, but unfortunately the decline in prices of American cotton afterwards arrested all further progress. The price of Standard Longcloth which was Rs.1—1—6 per lb. in the beginning of the year remained fairly steady till about April, though

the off-take was not satisfactory except for the month of February as stated above. With the decline in cotton prices in April the hesitancy to purchase cloths became more marked, and it was difficult to move stocks in spite of reduction in rates, Standard Longcloths being then nominally quoted at Rs.1—0—6. By the middle of October prices had further declined to about 15 annas, in sympathy with cotton which continually declined, when large sales were made at  $14\frac{1}{2}$  annas per pound on the Moorat occasion. The fall in prices did not, however, stop here, for with the continuance of the fall in cotton values on the one hand and imports of cheap Japanese goods on the other, it was difficult to sell cloth. The year closed with Standard Long-cloth at  $13\frac{1}{2}$  annas per lb. at which unremunerative rate considerable sales were effected."

The average monthly stocks of Indian piece goods in Bombay during the year were 116,917 bales, as compared with 140,833 bales in 1925.

It must not be supposed, however, that conditions in Bombay are necessarily a criterion for the whole of India. The Indian Tariff Board have shown in their recent report on the Indian Cotton Industry that the present depression has been and is much more acutely felt in Bombay than in other centres, that mills which have spinning departments only have been affected to a greater extent than mills which have both spinning and weaving departments, and that the demand for protection has not been as earnestly pressed from other centres as from Bombay and Ahmedabad. In 1924-5, Bombay accounted for 28·8 per cent. of the number of mills working in all-India, 42·3 per cent. of the number of spindles and 47 per cent. of the number of looms. Of the Indian Mill production of yarn in millions of lbs., Bombay produced 45·5 per cent. and of the mill production of cloth in millions of lbs., Bombay accounted for 47·9 per cent.

Lancashire manufacturers and shippers would do well to study carefully the report of the Indian Tariff Board, which is a mine of information with regard to the facts of the Indian industry. The principal conclusions and recommendations are summarised on page 82, and it will suffice here to quote the following brief summary of the industry's development. The Committee state that :—

"The most striking feature which stands out from a survey of the cotton mill industry in India from the beginning of the present century to the commencement of the period of the present depression is its expansion in every direction, but more especially in weaving as compared with spinning. The expansion of spinning has been the result of the expansion of weaving rather than the reverse. While spindles increased by 50 per cent. in the 22 years surveyed, looms increased by 223 per cent. At the commencement of the period, the Indian mill production of cloth was only a little over one-fifth of the net imports, and about half of the production of the hand loom industry. At the end of the period, it was 77 per cent. greater than the one and 50 per cent. greater than the other. In 1899-1900 Indian mills supplied 9 per cent. of Indian requirements of cloth against 64 per cent. met by imports, and 27 per cent. by the hand loom industry. In 1921-1922 the percentages were 42, 26 and 32. This is on the assumption that the exports of Indian piecegoods were all of mill manufacture—an assumption which is not entirely warranted owing to the large exports of hand woven goods from Madras, but an allowance for these will only slightly affect the percentages. Other features hardly



less important are the loss of the export trade in yarn, the gradually decreasing dominance of Bombay in the home industry, which entirely disappeared in regard to grey goods, and the increasing share of Japan in the import trade."

### *Conditions in the Large Import Markets.*

*Calcutta.*—A leading authority in the piece goods trade states :—

"The first three months of 1926 were marked by great activity. In April, on account of the communal riots, business came to a standstill, and a good deal of the enquiry from up-country was diverted to Bombay and Karachi. When the Calcutta bazaar re-opened it took some time to regain its position as the principal supplier of some mofussil markets. In May a certain amount of activity was witnessed, but the further communal riots depressed the market, and stocks started accumulating and bazaar prices declined.

In addition to the above the coal stoppage in England and the decline in American cotton interfered with the resumption of normal trading. As a result of the unhealthy state of the market the Members of the Marwari Chamber of Commerce resolved in July, 1926, not to indent for any goods for shipment ahead for a period of four months, but continued to buy goods which were on the spot. This eased the position towards the end of the year, and forward dealing were resumed, but very cautiously.

The beginning of 1927 was marked with a good deal of activity, and a large business was done for shipment ahead. The demand also for ready goods has been good, and so far consumption exceeded arrivals, with the result that stocks are now on the light side, but as arrivals during May, June and July are likely to be heavy, some accumulation is expected.

Dealers have made fair profits on the goods that have arrived so far this year, and as the Manchester prices are very firm, prospects are encouraging. The dealers, however, on account of the losses they have sustained for practically four years running are still nervous, and are inclined to be over cautions in their forward operations.

The following is a rough comparison of the level of bazaar prices based on a few standard qualities :—

Pre-war 1913-1914.	Highest reached during the interval.	Present.
100	400-450	170

*Bombay.*—A well-informed Bombay importer has supplied the following survey of conditions and prospects at that port :—

"The fiscal year 1926/7 has been a very depressing one for Bombay from a commercial point of view. All classes of business have suffered to a varying degree, but undoubtedly the hardest hit have been those connected with textiles, and in particular cotton piecegoods. This City has never really recovered from the slump of 1921, for although 1924/5 showed distinctly more promise, it encouraged buyers to commit themselves to an extent which, as later events have shown, has been largely responsible for the very precarious position in which many firms and individuals now find themselves. Demand in 1925/6 was below normal, and in the year under review this state of affairs has been accentuated. As compared with 1921 stocks in the Port Trust godowns have not been unduly heavy, and had enquiry materialised to an extent that might reasonably have been expected, they would not have been considered cumbersome, but the absence of buyers, coupled with a fall in values, has had an almost disastrous effect on many. At the commencement of the period the total stocks approximated 33,600 packages, whilst at the end the figure was under 30,000. During the intervening months the number had fluctuated, the peak being reached at the end of January with

40,300. The trouble lay not in the total so much as in the fact that these stocks have not been turned over as they should have been, and a very large proportion of them are dearly bought when compared with current replacement costs. It is not difficult to appreciate this when it is remembered that American cotton was quoted over 9½d. per lb. in Liverpool at the beginning of April, 1926, whilst the same grade could be purchased at under 6½d. early in December. By the end of March, 1927, 7½d. was the ruling rate, and this price has since advanced to the present quotation of 8¼d.

Apart from the financial stringency in the bazaar, the money market generally, although easier than is customary for some months, became very tight towards the last quarter of the year, and the difficulties of financing stocks were increased considerably with a 7 per cent. Bank Rate. Exchange, however, has been extremely steady, and the fixation of the rupee on the lines suggested by the Currency Commission restored the confidence of importers.

In reviewing piecegoods in more detail it is possible to clearly differentiate. Grey goods of Lancashire make have had an uphill fight throughout, and generally speaking have failed to hold their own. Rates ruling have indicated a weak tendency, and the business done has been confined almost entirely to replacements of a very few of the well established marks. White goods have also experienced a poor year. Demand for bleached styles having been proportionately less than for dyed, printed and fancy varieties and prices have ruled easy. The three last named have been in moderate retail request, and holders of these classes have probably not suffered to the same extent as those concerned in either Greys, Whites or Dhooties. Continental goods continue to make headway, particularly Italian makes, although the recent appreciation of the lira has had a somewhat quietening effect. France has had a very large share of the woollen business, much to the disadvantage of Bradford, whose prices have appeared high as compared with French quotations. The woollen business during the past season has, however, been on a much reduced scale owing to a sufficiency of stocks, and the volume of new business booked and at present in production is below normal.

Many weak piecegoods dealers have already been weeded out, and more will follow. This should be to the ultimate good of the trade generally. American cotton and Lancashire prices are firm. Stocks in Bombay are not excessive. Dealers are making small margins on present arrivals, and further are only replacing with extreme caution. Weighing up the situation from all points it can safely be said that prospects are brighter now than they have been for many months. It will still be some time before we can expect a resumption of fair average trading, but it will follow, always providing that we have no further set-backs."

*Karachi.*—The following report was sent to me in May by an experienced Karachi correspondent :—

"Throughout the year 1926 a consistently good demand was maintained for piecegoods in the Karachi market. Chief among the causes to which this may be attributed were firstly the comparatively low stocks held by the market at the close of the preceding year both at the Port and up-country, and secondly, the prosperous state of the agricultural classes in the Punjab and a better demand from consuming centres.

Up-country markets, generally, showed a healthy consumptive demand and clearances throughout the year were very brisk.

The following figures, showing importations for the last few years, give some idea of the increase in trade to this port :—

1926	April —	March	1927.	Total	Pkgs.	177,500
1925	"	"	1926.	"	"	127,100
1924	"	"	1925.	"	"	160,300
1923	"	"	1924.	"	"	89,800
1922	"	"	1923.	"	"	95,600

Considering the long endured coal stoppage at home the shipments during the year may be said to have been exceptionally good.

A noteworthy fact of the year under review is that the consistent drop in cotton—which was one of the features of the year—did not have the effect of penalising dealers too severely, as they all along made special efforts to let their goods get into consumption with the least possible delay.

Despite this decline in the raw article practically no failures occurred among piecegoods buyers.

Early in September the floods that occurred after very heavy rains, caused serious damage to goods in the hands of the importers and also to a smaller extent to those in dealers' shops. With the opening of the new year 1927, further brisk demand was evinced all round and clearances for January to March by far surpassed all previous records. In view of the present undecided state of the market at Home, however, buyers are acting cautiously and show little inclination to commit themselves for the far forward shipments quoted.

During the above period foreign competition from Japan was more than ever felt by home shippers in the heavier Grey Shirting styles, and in comparison with previous years, Manchester qualities in this style were barely represented in the market.

Italian Houses also made fair headway with low printed qualities, for the most part suggestive in design of old Manchester Standards, and also in Sundry Cloths (comprising principally Art Silk Fancies, and to a lesser degree Flannels and Woollens)."

Another correspondent adds under date of May 20th, 1927 :—

*Stocks.*—" I estimate these at about 40,000 packages, and there are probably about 30,000 to arrive. This is more than adequate for the moment, but it is expected that the market will have no difficulty in effecting consumption of these goods, as very little business indeed has been done for shipment after May."

*Prospects.*—" If Manchester remains steady the stocks here will be exhausted in about three months. The general opinion is that buying for forward shipment will be resumed in July, and that the outlook is favourable. This year the dealers have undoubtedly made profits."

*The Punjab.*—" Stocks are not heavy, and the prospects are regarded as being good."

*Madras.*—An authority writes :—

" April, 1925, to March, 1926, was a year of falling prices both for Egyptian and American cotton goods, and each time when bottom seemed to be reached a fresh fall occurred. Dealers and importers were continually selling at a loss to compete with cheaper goods to arrive. Money was lost all round, and importations of piecegoods and yarns were about 10 per cent. less in quantity than during the previous period 1924/25.

Thus 1926/27 opened badly. Prices for cotton and cloth were some 60 to 70 per cent. over pre-war rates, and price tendency was downwards so neither importers nor dealers felt happy with their stocks, and in this market small dealers were continually under-cutting each other to clear their stocks lest worse should befall. In the early months of the year cotton gradually declined and reached 9½d., which seemed reasonably safe, and a fair business was done May/July, which left the Madras market well supplied. About September, however, the shadow of a huge crop hung over the market, and American cotton fell almost to pre-war price, i.e., from 10d. in August to 6½d. in December. With fair stocks available dealers, who in a falling market will never believe that the bottom has been reached, bought very hesitatingly notwithstanding the low rate of cotton which the grower assured us was less than the cost of production. Now that cotton is back to 8½d

they are regretting the chance missed. Judging from the Manchester papers, however, a good volume of business was put through for Madras, and also for the Northern Indian ports between October and December/January. It was probably on own account by the larger importing houses who looked well ahead. The present position is therefore a healthy one with moderate stocks and high replacing costs which should enable both importers and local dealers to make profits.

Import of yarns to Madras in 1926/27 were in quantity some 20 per cent. higher than 1925/26 though values were lower. Piecegoods were in much the same position, for there also quantities have increased by about 20 per cent.

This is the present position to-day, but regarding the future everything will depend on the next American crop. Till August, when something more definite will be known about the acreage, there is not likely to be anything but hand to mouth buying by dealers and importers, and unless the new crop runs large the chances seem to be that we shall have a steady piecegoods market at about present prices."

*Delhi.*—A banker writes as follows :—

"The year opened with fairly good buyers in the market, although the prices realised were hardly remunerative. Sales have continued satisfactory throughout the year, and dealers are now very cautious buyers.

Cotton prices towards the end of the year rendered forward business extremely difficult, and had a depressing effect on the market. The result of the year has been unsatisfactory from the importers' point of view, and we hear that a number of dealers have, in view of the continued losses in indented goods, resolved to stop forward buying altogether, and to fill their requirements locally or by buying ready from Calcutta, Bombay or Karachi, according to their requirements.

An outstanding feature of the market has been the steady increase in the demand for local and Italian made cotton goods and for French Woollen shirtings. This last named article has rather adversely affected the Yorkshire trade with this country."

*Amritsar.*—A banking correspondent writes as follows (June 7th, 1927):—

"During 1926 White Goods such as White Shirtings, Mulls, Brocades, Italians, Satins, etc., suffered a depreciation of about 30 per cent. Since the beginning of 1927 a further depreciation of about 5 per cent. has taken place.

Business in woollen goods has been done on a smaller scale than usual owing to competition from the Continent. The principal dealers in metals and hardware in this market have their own offices in Karachi, through which port the goods are imported, and no real data concerning this business is therefore available to us here.

The chief articles imported as sundries were cotton and artificial silk embroideries, laces, etc., and importers of those articles have had to face a depreciation in values amounting to about 20 per cent.

Other articles imported consisted of Berlin wool, artificial silk yarn, shawl borders, etc., which show a depreciation during the period under review of 10 per cent. to 20 per cent.

Recently home and local prices of most varieties of piecegoods have been out of touch, and little fresh business has been done. Consequently clearances have been good, and stocks are running down to a satisfactory level."

*Cawnpore.*—I am informed that, although Cawnpore is gradually losing its importance as a distributing centre in favour of Delhi and Amritsar, business during the past year has been fairly well maintained. Owing to the fall in cotton, dealers made losses

on their earlier purchases, and consequently were rather shy at booking forward business towards the end of the year, thereby missing the Manchester market. Stocks in the market are moderate, and the outlook is quite good.

*General Forecast (June, 1927).*—From the above reports, all of which have been received from reliable authorities, it will be observed that a spirit of optimism prevails with regard to the future. Stocks of imported goods throughout the country are light, dealers are making profits on the purchases made in December-January-February last and, in many cases, the goods are being cleared from the docks straight into consumption. The present firmness in Manchester prices prevents the possibility of their being under-sold by more recently bought goods, and it is expected that there will be heavy purchases made in July-August for the usual November-December-January shipment, unless a further rise in the Manchester market places Home quotations above Indian limits, in which case India will defer making any purchases until the latest date it is possible to secure January-March shipment.

The general factors are all favourable. The political horizon is clearer than it has been for very many years, and although considerable communal tension exists, the dangerous periods of the year have passed without serious rioting. The fixing of the exchange at 1s. 6d. gives confidence to operators and eliminates that uncertainty, which has been such a marked feature since the war.

The first official monsoon forecast was issued on June 7th, and predicts that the monsoon rainfall is likely to be normal, or in excess in the peninsula and north-west India and normal in north-east India. This is as favourable a forecast as is ever issued by the Meteorological Department, and it may safely be anticipated that the rainfall this year will be adequate, and that, for the fifth year in succession, India will be blessed with abundant harvests and consequent prosperity to the cultivators.

As I have repeatedly emphasised in previous reports, there is a considerable reserve of purchasing power in the country, resulting from a series of generally prosperous years, which would be translated into heavy purchases of the necessities of life when prices reach a workable level, and there is confidence in their stability. The heavy buying of piece goods in December-January-February last was only checked by the rise of Manchester prices. Similarly, the considerable volume of enquiry for India during May largely failed to materialise owing to the increased rates for yarn fixed by the Cotton Yarn Association. There seems to be little doubt that with the price index of cloth at about 140 to 150, Lancashire prices are well within the reach of buyers in India, and a large trade should result when operators feel sufficient confidence in the future of rates. The fact that importers in every market in India have made profits on their purchases made early this year will do more

to stimulate demand than almost any other factor, and I am distinctly hopeful that before this report is published there will have been a very large volume of business booked in every branch of the trade for November-December shipment.

**Raw Cotton.** — The following statement, taken from the Indian Trade Journal, compares the estimate of the total outturn 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 the proportion of foreign cotton used is not likely to have been large during these two years. Import figures have not, therefore, been taken into consideration for the purposes of the comparison set forth below. A conventional estimate has 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.	
	1926. Thousand bales (400 lbs.)	1925. Thousand bales (400 lbs.)
Exports to United Kingdom ... ..	153	216
„ to Continent (Europe, excluding United Kingdom) ... ..	1,034	1,245
„ to Far East ... ..	2,550	2,490
„ other countries ... ..	38	47
<b>Total</b> ... ..	<b>3,775</b>	<b>3,998</b>
<b>Home consumption—</b>		
Mills† ... ..	1,983	2,175
Extra-factory or local‡ ... ..	750	750
<b>Total</b> ... ..	<b>2,733</b>	<b>2,925</b>
Approximate crop ... ..	6,508	6,923
Estimated (in forecast) ... ..	6,250	6,088
Excess (+) or deficit (-) neglecting carry-over ... ..	+258	+835

The next statement shows the stocks of cotton held by Indian mills on 1st August, 1926, and on 1st February, 1927 (in bales regardless of weight), and is published by the Bombay Mill-owners' Association :—

\*Stocks of cotton in Bombay were 504,000 bales on 31st August, 1925. and 387,000 bales on 31st August, 1926.

†The figure of mill consumption is that compiled by the Indian Central Cotton Committee, Bombay, on the basis of returns made under the Indian Cotton Cess Act.

‡Conventional estimates.

	Bombay City and Island.		All-India.	
	1-8-26.	1-2-27.	1-8-26.	1-2-27.
Cotton Mill Stocks (in actual bales regardless of weight)—				
(a) American (linters and waste not included) ... ..	6,405	14,646	8,106	25,318
(b) East India ... ..	177,556	99,650	606,827	436,041
(c) Egyptian ... ..	1,392	1,557	2,918	2,439
(d) Sundries ... ..	3,017	4,111	12,335	9,666
Total ... ..	188,370	119,964	630,186	473,464

Figures from the cotton census taken at the instance of the International Federation of Master Cotton Spinners' and Manufacturers' Association.

The Bombay Millowners' Association, in their Annual Report for 1926, state that, except for a short period in July when the price of raw cotton on the New York market reached 18 cents per lb., the Bombay market has consistently been costlier, and this has been reflected by the smaller purchases made by exporters. Actual consumers of Indian cotton have also found it profitable to cover their requirements to a considerable extent with low grade Americans which have been sold at very tempting prices. Indian mills are reported to have made very large purchases of these cottons.

This tendency is shown in the following table of the imports of raw cotton into India during the past two years :—

Countries of consignment.	1925-6.		1926-7.	
	Tons.	Rs. (lakhs).	Tons.	Rs. (lakhs).
United Kingdom ... ..	206	3	5,003	45
Persia ... ..	1,132	14	1,136	12
Egypt ... ..	73	2	262	3
Kenya Colony ... ..	15,696	3,37	12,681	2,12
Tanganyika ... ..	227	5	780	13
United States ... ..	103	2	25,039	2,11
Total Imports (all sources) ...	17,543	3,64	45,676	5,03

The imports from the United Kingdom represent American cotton shipped from Liverpool, while those from Kenya Colony are, in the main, cottons of the Egyptian type grown in Uganda, and are largely re-exported to Europe. It will be noted that the imports of American cotton aggregate over 2½ crores of rupees in value.

The reduction in the margin between the price levels of American and Indian cotton until it was entirely eliminated last year has a most important bearing on the capacity of Indian mills to com-

pete with Lancashire products. I would refer readers to an interesting paper read by the Indian Trade Commissioner in London before the East India Association on February 14th, 1927, in which he develops this question and gives some most useful figures. Mr. Lindsay sums up the situation in the following terms:—

“The depression from which the Indian mills are suffering to-day is due to two important factors—firstly, the margin between the prices of Indian and American cottons is very narrow; and, secondly, as the American cotton prices have fallen the finer goods have, naturally, also fallen in price, and are again coming within the purchasing power of India's middle classes.”

**Cotton Sewing Thread.**—The imports were as follows:—

Countries of origin.	1925-6.		1926-7.	
	lbs.	Rs. (lakhs).	lbs.	Rs. (lakhs).
United Kingdom ... ..	1,713,459	75	1,711,226	66
Other countries ... ..	440,568	9	346,145	8
<b>Total Imports.</b> ... ..	<b>2,154,027</b>	<b>84</b>	<b>2,057,371</b>	<b>74</b>

Competition from Austria and Germany has increased steadily since the war in the cheaper types of sewing cottons, and the British share has fallen to 83 per cent.

**Artificial Silk. — Yarns.**—The imports of artificial silk yarns are increasing at a rapid rate as the import statistics clearly show:

Principal countries of consignment.	1925-6.		1926-7.	
	lbs.	Rs. (lakhs).	lbs.	Rs. (lakhs).
United Kingdom ... ..	760,957	24	654,617	14
Germany ... ..	157,364	5	232,079	4
Netherlands ... ..	129,790	4	358,287	7
Belgium ... ..	120,436	3	57,989	1
Italy ... ..	1,309,257	34	3,843,179	64
Other countries ... ..	193,186	5	629,946	12
<b>Total Imports</b> ... ..	<b>2,670,990</b>	<b>75</b>	<b>5,776,097</b>	<b>1,02</b>

The phenomenal increase in the imports from Italy coinciding with a reduction in the imports of British yarn is most disturbing. One of the leading importers states, however, that the current year will give a more correct indication of the actual position inasmuch as the large stocks of Continental yarn which were lying unsold have now been disposed of. Moreover, the Indian cotton mills have lately become consumers in rapidly increasing quantities of artificial silk yarns of the better qualities in which the United Kingdom specialises, for use as warps in mixture cloths.

Hitherto, most of the yarns imported have been used by the handloom weavers in northern India and Madras, who are usually



indifferent to quality, and whose main desideratum is low price. This accounts for the large consumption of cheap Italian and other Continental yarns. Indian millowners, however, are now taking a keen interest in the production of cotton and artificial silk mixtures, and as they are much more particular with regard to quality, it is expected that the share of the British product will tend to increase. Moreover, the rapid increase in the number of British factories producing silk yarns during the past year should shortly tend to increased exports.

### Piecegoods of Cotton and Artificial Silk.—

Principal countries of consignment.	1925-26.		1926-27.	
	yds.	Rs. (lakhs).	yds.	Rs. (lakhs).
United Kingdom ... ..	6,512,918	58	15,978,929	1,17
Germany ... ..	554,286	7	2,487,541	27
Belgium ... ..	319,139	3	979,974	8
Switzerland ... ..	2,317,383	25	6,697,960	59
Italy ... ..	4,978,133	37	13,900,507	81
Other countries ... ..	680,143	7	1,933,363	17
Total ... ..	15,362,002	1,37	41,978,274	3,09

The British share of the yardage imported has fallen from 42 to 38 per cent., while the Italian contribution rose slightly from 32 to 33 per cent.

There would appear to be two distinct classes of consumers of artificial silk piecegoods in India. The great majority have limited means, and do not trouble much about quality. They are attracted by lustre and bright colours and by the relatively low price of the Continental products. The remainder, who, unfortunately, are much less numerous, take quality into consideration and are willing and able to pay the higher rates charged. The greater proportion of the goods imported are sold on price and price alone, which accounts for the increasing imports from Italy and Switzerland which are, generally speaking, sold at a much lower price than the British products.

There appears to be no reason why British manufacturers should not be able to obtain a much larger share of the business if only they can bring down their prices. The British product is acknowledged to be superior, but this fact is not fully realised by the average Indian buyer. The trade is so new that he neither knows nor cares in which country the material is manufactured, but if it is cheap and made up in attractive designs and colours, he will buy. Some of the small shopkeepers assert that they frequently have Continental artificial silk cloths brought back to them after a few days' wear, with the complaint that the colours are not fast in water. This, of course, militates against the

development of the trade. A systematic and energetic propaganda in favour of British artificial silk goods of quality would do much to allay this prejudice.

The trade is likely to be a rapidly expanding one, and will help to redress the balance caused by reduced imports of the coarser cotton goods. It is to be hoped that British manufacturers and shippers will realise the significance of this, and that they will leave no stone unturned in their efforts to secure a much larger share of the trade.

Exhaustive reports on the market have been made by H.M. Trade Commissioners at Calcutta and Bombay, which are available to bonafide British firms on application to the Department of Overseas Trade.

**Flax Manufactures.**— The main types imported were as follows :—

Description.	1925-26.	1926-27.
	Rs. (lakhs).	Rs. (lakhs).
Twist and yarn ... ..	1	—
Canvas ... ..	16	17
Piecegoods... ..	4	4
Sewing thread ... ..	3	2
Other sorts, including bags and sacks ...	8	8
<b>Total Imports</b> ... ..	<b>32</b>	<b>31</b>

Details of the origin of the imports in 1926-7 are not yet available. In 1925-6 the United Kingdom supplied 97 per cent. of the whole trade, the balance consisting of Rs.32,000 of flax canvas from Italy and Rs.33,000 of miscellaneous flax manufactures from Japan.

**Jute Manufactures.**— There was a considerable decline in the imports under this heading during the period under review. The figures are as follows :—

Countries of consignment.	1925-26.	1926-27.
	Rs. (lakhs).	Rs. (lakhs.)
United Kingdom ... ..	13	10
Ceylon ... ..	17	14
Other countries ... ..	20	16
<b>Total</b> ... ..	<b>50</b>	<b>40</b>

The United Kingdom in 1925-6 supplied 30 per cent. of the gunny cloth imported, but serious competition was met with from Japan, Belgium, Germany and Italy. The considerable imports of gunny bags are mainly drawn from Ceylon, and consist largely of secondhand cornsacks re-exported from Australia and transhipped at Colombo. Imports of canvas are almost entirely drawn from the United Kingdom.

**Silk Manufactures.**— The total imports of raw silk and silk manufactures aggregates over 4 crores in value. The imports of the various types were as follows :—

Description.	1925-26. Rs. (lakhs).	1926-27. Rs. (lakhs).
Raw silk ... ..	94	114
Silk yarns, noils and warps ... ..	35	63
Goods of silk mixed with other materials	25	31
Silk piecegoods ... ..	212	243
Sewing thread ... ..	2	2
Other kinds ... ..	6	6
<b>Total Imports ... ..</b>	<b>374</b>	<b>459</b>

Of the yarns, noils, warps, etc., Italy contributed 33 per cent., China 23 per cent., and Switzerland 20 per cent. Silk mixtures were obtained from Japan (36 per cent.), Germany (24 per cent.), the United Kingdom (10 per cent.), France (10 per cent.), and Italy (8 per cent.). Silk piecegoods are almost entirely drawn from China and Japan.

The United Kingdom supplied 57 per cent. of the small quantity of sewing silk imported, the principal competitor being Japan. Bombay is the principal silk mart, and Rangoon also takes considerable quantities.

**Woollen Manufactures.**—The various types imported were as follows :—

Description.	1925-26. Rs. (lakhs).	1926-27. Rs. (lakhs).
Yarns and knitting wool... ..	37	28
Blankets ... ..	12	11
Braids ... ..	0·7	0·4
Carpets and rugs ... ..	30	39
Hosiery ... ..	21	19
Piecegoods... ..	292	277
Shawls ... ..	28	37
Other sorts ... ..	3	3
<b>Total Imports ... ..</b>	<b>423·7</b>	<b>414·4</b>

Bombay is the principal port of entry for woollen manufactures, and distributes throughout the Punjab, United Provinces and North-Western India. Karachi is the entrepot for Afghanistan, Baluchistan, Punjab and the North-West Frontier Province. Large quantities also enter Rangoon in transit to Yünnan and the Shan States. The Calcutta market is also of increasing importance.

**Woollen Piece Goods.**—After a period of steady expansion, the imports last year received a slight setback. The subjoined table gives their origin :—

Principal countries of consignment.	1925-26.		1926-27.	
	yds.	Rs. (lakhs).	yds.	Rs. (lakhs).
United Kingdom ... ..	5,281,622	150	5,982,568	142
Germany ... ..	978,363	24	1,392,356	30
Netherlands ... ..	154,742	6	172,748	6
Belgium ... ..	1,252,621	22	726,863	14
France ... ..	1,902,389	34	2,237,823	37
Italy ... ..	28,53,900	34	3,575,139	35
Japan ... ..	2,061,368	20	1,230,361	10
Other countries ... ..	90,551	2	107,163	3
<b>Total Imports</b> ... ..	<b>14,575,556</b>	<b>2,92</b>	<b>15,425,021</b>	<b>2,77</b>

The fall in prices is clearly shown in the reduction of the average value per yard from Rs.2 in 1925-26 to Rs.1.12 in 1926-27. The total quantities imported are still far below the pre-war average, which was 22,420,000 yards valued at 207 lakhs of rupees. The post-war rise in the price of woollen goods has resulted in a substitution of the cheaper Italian, French and German cloths for the higher grade British qualities. A comparison of the quantities and values shipped by each country clearly shows this and explains the relative decline of the British share.

*Woollen Shawls.*—The shawl trade increases steadily each year, although it is still well below the pre-war average of 1,668,000 shawls valued at Rs.41½ lakhs. The latest figures are as follows :—

Countries of consignment.	1925-26.		1926-27.	
	Number.	Rs. (lakhs).	Number.	Rs. (lakhs).
United Kingdom ... ..	171,098	8	172,805	7
Germany ... ..	234,301	15	360,754	18
Other countries ... ..	164,817	5	445,932	12
<b>Total Imports</b> ... ..	<b>570,216</b>	<b>28</b>	<b>979,491</b>	<b>37</b>

The British shipments to India have remained stationary during the past three years, while Germany is rapidly regaining her pre-war predominance in this line owing to the greater demand for the cheaper qualities. The competition from other countries is mainly that of Italy.

*Carpets and rugs.*—The total trade is steadily expanding.

Principal countries of consignment.	1925-26.	1926-27.
	Rs. (lakhs).	Rs. (lakhs).
United Kingdom ... ..	13.5	11
Italy ... ..	11.5	22
Persia ... ..	2	3
Other countries ... ..	3	3
<b>Total Imports</b> ... ..	<b>30</b>	<b>39</b>

Italian competition is almost entirely in the cheap printed tapestry rugs which are imported in large numbers into Bombay and Karachi.

**Machinery and Millwork.**— The steady decline in the imports of machinery, which has been such a notable feature of the past five years, continues, and the total trade was reduced by  $1\frac{1}{2}$  crores of rupees due to further reductions in the imports of textile machinery and a falling-off in the imports of boilers. The acute depression in the Bombay and Ahmedabad cotton industry continues, and the general engineering industries of India were far from busy during the year. It would appear, however, that the low water mark has probably been reached, and I look forward to an improvement in the coming year. The following table shows the origin of the imports during the past two years :—

Countries of consignment.	1925-26. Rs. (lakhs).	1926-27. Rs. (lakhs).
United Kingdom	11,87	10,66
Germany	86	95
Belgium	30	25
United States	1,41	1,39
Other countries	44	38
Total	14,88	13,63

The next table shows the relative importance of the three principal suppliers before the war and during the past two years :—

Countries of consignment.	1913-14.	1925-26.	1926-27.
	Per cent.	Per cent.	Per cent.
United Kingdom	90	79.4	77.9
United States	3	9.6	10.2
Germany	6	6.0	7.0
Other countries	1	5.0	4.6
	100.0	100.0	100.0

The reduction of the British share is mainly due to diminished imports of textile machinery and boilers, in the supply of which the United Kingdom has hitherto enjoyed almost a monopoly. American and German competition in industrial plant of all kinds is becoming more insistent, and the establishment by foreign competitors of branches and agencies in India is bound to give a stimulus to their sales. There will always be a demand from Indian sources for cheap plant where low first cost rather than quality and efficiency is the desideratum. This will probably be more and more supplied by our competitors. The British machinery manufacturer, however, enjoys a very high reputation in the market, his selling and technical organisation in the country is second to none, and I look forward to his being able to maintain his position in the

future when trade improves and Indian purchases of industrial plant of all kinds recover from the recent depression.

The following brief analysis of the principal types of machinery imported will be of interest :—

#### TEXTILE MACHINERY.

	1924-25. Rs. (lakhs).	1925-26. Rs. (lakhs).	1926-27. Rs. (lakhs).
Cotton spinning machinery ...	1,51	1,21	80
„ weaving machinery ...	69	64	60
„ bleaching and dyeing machinery ...	8	4	3
„ printing machinery ...	(a)	(a)	(a)
Other sorts ...	39	46	27
Total ...	2,67	2,35	1,70

(a) Less than 1 lakh.

Lancashire textile machinists still retain over 95 per cent. of the trade. American and German competition is only met with in certain specialities such as patent winders, etc.

*Woollen Manufacturing Machinery.* — The few important woollen mills in India brought their plans up to date at the close of the war, and there have been no new concerns floated during the past two years. More machinery is, however, being laid down to enable them to cater more completely for Indian Government requirements, and this probably accounts for the increased imports during the past year. The figures of total imports were :—

1924-25.	1925-26.	1926-27.
Rs. 6 lakhs.	Rs. 2 lakhs.	Rs. 4 lakhs.

*Jute Manufacturing Machinery.*—The imports during the past three years have been as follows :—

	1924-25.	1925-26.	1926-27.
Rs. lakhs	93	82	65

There has been a steady fall in the imports since 1921-2. The Calcutta mills enjoyed a period of unprecedented prosperity during and immediately after the war, and brought their plants up to a perfect state of equipment by 1921-2. Since that time, no new mills have been floated, and the state of the industry has not warranted a large outlay on new plant. The trade is almost entirely in British hands. In 1925-6 the U.S.A. supplied about £7,000 of specialities out of a total import of over £600,000. The two British firms of jute machinery manufacturers, who erected works in India at the end of the war, have closed them down.

*Electrical Machinery.*—The total imports were as follows :—

Countries of consignment.	1924-25. Rs. (lakhs).	1925-26. Rs. (lakhs).	1926-27. Rs. (lakhs).
United Kingdom ... ..	1,77	1,84	1,86
Germany ... ..	4	9	11
U.S.A. ... ..	15	20	23
Other countries ... ..	6	9	10
Total ... ..	2,02	2,22	2,30

It is satisfactory that British manufacturers have been able to hold their own against such formidable competitors as the German and American groups, all of which have active branches in the country. Competition, however, has been so keen that orders for large power plants are regularly taken at prices which show little if any profit, and there would appear to be little prospect of any amelioration so long as foreign competition is so keen. I would once again refer to the splendid service given by the branches and agencies in India of the leading British electrical concerns, which has been directly responsible for so large a proportion of the trade remaining in British hands, and presents an example which certain other British makers of machinery would do well to follow.

The following were the main types of electrical plant imported during the year :—

	1925-26. Rs. (lakhs).	1926-27. Rs. (lakhs).
Control and switchgear ... ..	36	32
Generators, alternators and dynamos ... ..	42	49
Motors ... ..	35	29
Transformers ... ..	18	23
Turbo-generating sets ... ..	28	8
Other sorts ... ..	63	86
	2,22	2,27

The demand in India for electrical machinery is likely to increase during the next few years owing to the increased utilisation of electrical energy as the country develops, and also to the important schemes of railway electrification which are either in progress or projected.

*Boilers.*—The imports were as follows :—

Countries of consignment.	1924-25. Rs. (lakhs).	1925-26. Rs. (lakhs).	1926-27. Rs. (lakhs).
United Kingdom ... ..	69·63	87·22	59·03
Germany ... ..	0·93	6·24	1·48
Other countries ... ..	1·63	4·52	2·25
Total ... ..	72·19	97·98	62·76

The industrial depression of the last five years has been clearly reflected in the reduced imports of boilers. It is satisfactory, however, to note that British makers still retain their predominant position. They are so strongly represented that they will probably be the first to gain from a revival in demand.

*Prime Movers (other than Electrical).*—The total imports were classified as follows :—

	1925-26. Rupees.	1926-27. Rupees.
<i>Locomotives—excluding those for</i>		
<i>Railways—</i>		
Oil engines ... ..	3,42,591	1,96,122
Oil engines (parts of) ... ..	39,260	54,522
Steam engines ... ..	22,87,161	27,87,974
Steam engines (parts of) ... ..	6,47,095	7,23,278
Others ... ..	4,48,773	1,27,273
<i>Other than Locomotives.</i>		
Gas engines ... ..	5,26,972	2,09,550
Gas engines (parts of) ... ..	98,961	1,01,309
Oil engines ... ..	95,63,809	96,29,418
Oil engines (parts of) ... ..	15,07,941	15,78,801
Steam engines ... ..	41,42,368	27,51,017
Steam engines (parts of) ... ..	13,35,522	15,60,929
Others ... ..	2,91,491	1,04,822
<b>Total ... ..</b>	<b>2,12,31,944</b>	<b>1,98,25,015</b>

Particulars of the origin of the imports in 1926-7 are not yet available, but it is safe to say that British makers control from 85 to 90 per cent. of the trade. One of the most noteworthy features of Indian development of late years has been the enormously increased use of oil engines which are largely displacing steam and gas engines. Slight competition from Germany, the United States and Italy is met with in oil engines, but in steam and gas engines the British makers control the market. The strength of the British position is due firstly to the inherent excellence of the machines, and secondly to the admirable system of representation by branches or technical agents.

*Agricultural Machinery.*—The trade has remained practically stationary during the year, as the following figures show :—

	1924-25. Rupees.	1925-26. Rupees.	1926-27. Rupees.
Agricultural tractors and parts ... ..	3,96,305	4,26,675	3,35,604
Ploughs and parts ... ..	83,521	1,72,045	3,00,297
Other sorts ... ..	3,49,906	5,92,527	4,88,599
<b>Total Imports ... ..</b>	<b>8,29,732</b>	<b>11,91,247</b>	<b>11,24,500</b>



In 1925-6, seventy-six per cent. of the tractors and sixty per cent. of the ploughs were obtained from the United States. The International Harvester Company of America have been very active for some years. In miscellaneous agricultural implements the United Kingdom supplied eighty-five per cent.

The Indian market for agricultural machinery and implements has hitherto been most disappointing. British makers during the last twenty years have spent considerable sums and great effort in designing and manufacturing implements suited to Indian conditions. In most cases, when the implements were found to be suitable, they were copied by local producers at a fraction of the price. Space does not permit of a full treatment of the question here, but British makers who may be interested would do well to consult the Department of Overseas Trade, who are well acquainted with the position. The only solution of the problem would appear to be the extension of the activities of Government Agricultural Departments in the stocking and distribution of improved implements. To effect this, greatly increased grants of funds will have to be made to them, and a considerable increase of staff will be entailed. It is hoped that the recommendations of the Indian Agricultural Commission, which is now sitting, will expedite a solution of this problem, which is one of the most pressing agricultural questions of the day.

#### *Mining Machinery.*

Countries of consignment.	1924-25. Rs. (lakhs).	1925-26. Rs. (lakhs).	1926-27. Rs. (lakhs).
United Kingdom ... ..	82	51	37
Germany ... ..	(a)	7	16
Belgium ... ..	—	21	15
U.S.A. ... ..	40	44	30
Other countries ... ..	3	1	(a)
Total ... ..	1,25	1,24	98

(a) Less than 1 lakh.

The falling-off in the imports of British mining machinery is noteworthy. During 1925-6 the great bulk of the mining machinery entered India through Rangoon and Karachi, which points to extensions in plant for the oil-fields, in which American competition is very keen.

*Metal Working Machinery (including Machine Tools).*—The trade fell slightly during the year.

	1924-25.	1925-26.	1926-27.
Rupees ... ..	36,76,134	44,00,338	37,48,096

This heading consists mainly of machine tools. In 1925-6 the United Kingdom supplied 74 per cent., the United States 14 per cent., and Germany 8 per cent.

*Oil Crushing and Refining Machinery.*—The following are the latest figures :—

Country of origin.	1924-25. Rs. (lakhs).	1925-26. Rs. (lakhs).	1926-27. Rs. (lakhs).
United Kingdom ... ..	11	11	22
Germany ... ..	7	5	6
U.S.A. ... ..	11	5	3
Other countries ... ..	1	(a)	2
Total ... ..	30	21	33

(a) Less than 1 lakh.

Calcutta is the principal port of entry. Burma is also a valuable market.

*Paper Mill Machinery.*—There has been a slight improvement in this trade, probably owing to the depression in the paper industry being removed by the protective tariff on certain types of paper. The figures are :—

	1924-25.	1925-26.	1926-27.
Rupees ... ..	7,21,170	3,36,029	6,69,485

Details of the imports are not yet available, but in 1925-6 the United Kingdom supplied 87 per cent., and only a very small quantity was received from Germany. If the capital is secured for the large new paper mill in the Punjab, we may expect to see a large increase in British imports next year.

*Refrigerating Machinery.*—The trade shows a steady increase—

	1924-25.	1925-26.	1926-27.
Rupees ... ..	7,19,864	8,31,507	11,70,738

In 1925-6 the United Kingdom only supplied 29 per cent. and the United States 60 per cent. American competition is steadily increasing owing to improved representation, and British manufacturers would do well to overhaul their methods in view of the decline in their trade.

*Rice and Flour Mill Machinery.*—After a setback in 1925-6, the trade improved slightly last year.

Countries of consignment.	1924-25. Rs. (lakhs).	1925-26. Rs. (lakhs).	1926-27. Rs. (lakhs).
United Kingdom ... ..	14	8	11
Germany ... ..	6	10	12
U.S.A. ... ..	5	5	4
Other countries ... ..	3	1	1
Total ... ..	28	24	28

Germany is doing a considerable business in equipping small rice milling plants for Burmese owners in the Irrawaddy delta. There have not been any large European rice mills constructed during the period. Owing to irregular supplies of Indian wheat, Indian flour mills have not been working to full capacity and little money has been spent in renewals or extensions.

*Saw Mills and Woodworking Machinery.*

Countries of consignment.	1924-25. Rs. (lakhs).	1925-26. Rs. (lakhs).	1926-27. Rs. (lakhs).
United Kingdom ... ..	11	6	7
Other countries ... ..	3	2	2
Total ... ..	14	8	9

There is certain competition from Germany and Sweden in woodworking machinery and from the United States in saw milling plants, but the leading British firms are well-represented by resident experts attached to influential agents.

*Sewing and Knitting Machines (including parts).*—This remarkable trade shows steady expansion in spite of trade depression. The total imports including parts and accessories were:—

	1924-25.	1925-26.	1926-27.
Rupees ... ..	68,68,987	79,92,019	87,65,147

The market is mainly catered for by the Singer Sewing Machine Company, whose efficient and widespread organisation of agencies, controlled by the Company's trained staff, continues to expand. Practically all the machines imported by this company are drawn from their Clydebank factory, and constitute an important British export. German competition increases year by year, and in 1925-6 accounted for 14 per cent. of the total imports.

*Sugar Machinery.*

Countries of consignment.	1924-25. Rs. (lakhs).	1925-26. Rs. (lakhs).	1926-27. Rs. (lakhs).
United Kingdom ... ..	15	12	5.5
Other countries ... ..	1	4	.5
Total ... ..	16	16	6.0

The Indian sugar industry passed through a difficult year owing to large crops in Cuba, Europe, and Java, resulting in Java sugars being imported at very low prices. The trade in sugar plant consequently suffered.

*Tea Machinery.*—There has been a sharp reduction since the boom year of 1924-5, but the demand from the Gardens has been well maintained, and the plant used is exclusively British. The figures are as follows—

	1924-25.	1925-26.	1926-27.
Rupees ...	46,45,959	38,58,503	26,28,099

*Typewriters.*—This trade shows continuous expansion :—

Year.	Number of Machines.	Value (Rupees).
1924-25 ...	7,445	13,16,661
1925-26 ...	10,947	16,06,962
1926-27 ...	13,790	22,06,090

Until the past year or so, this trade has been practically an American monopoly owing to the efficient and widespread organisation of the principal American Company. In 1925-6 only 607 typewriters valued at Rs.86,000 were imported from the United Kingdom as compared with 9,990 valued at Rs.14,80,241 from the United States of America. The manufacturers of the "Bar-Lock" and the "Imperial" machines of British make are now represented in India, and are rapidly increasing their sales and extending their organisation with a view to securing a fair share of the market. The machines are cheap and good, and a service system is being rapidly built up.

*Other Sorts of Machinery.*—This comprehensive heading includes all types of machinery and plant not otherwise classified in the customs returns. The total values were as follows :—

	1924-25.	1925-26.	1926-27.
Rupees ...	2,24,56,306	2,25,40,399	2,36,35,366

In 1925-6 the United Kingdom supplied 76 per cent., the United States nearly 11 per cent., and Germany 6 per cent. with lesser proportions from Sweden, Belgium and Japan.

*Iron and Steel.*—As might be expected in a year which included the prolonged coal stoppage in the United Kingdom, the total quantity of iron and steel imported into India fell from 884,000 tons to 845,000 tons. Fortunately the British rollers of galvanised sheets were able to carry on during the strike, otherwise the diminution would have been much greater. The principal reductions were in beams, channels, girders and bridgework (27,000 tons), galvanised sheets (8,000 tons), tinned plates (7,000 tons), and plain sheets (30,000 tons).

The Committee of the Calcutta Import Trade Association in their report for 1926 state that—

" Rates for British manufactured material remained steady during the first five months of the year, but these quotations were rupees thirteen per ton lower than for the same period the previous year. Imports of British material during this period were heavier than the previous year, due to importers bringing out unusually heavy stocks in anticipation of the general strike which was threatened to commence on May 1st.

The strike occurred and makers were forced to shut down; practically no shipments of British sectional material were made during the remainder of the year.

Continental manufactured material rates rose steadily during the year, the highest point being reached in November—the increase amounting to rupees twelve per ton.

The Tata Iron & Steel Company have, largely in consequence of the stoppage in England, been able to obtain better rates and a bigger market, and their output has been well booked up.

Contrary to expectations, galvanised sheet makers were able to carry on during the coal strike, and imports to this country show an increase of 45 per cent. on 1925 and an increase of 100 per cent. on 1924.

There was undoubtedly considerable over-buying, and consequently the market has suffered badly, practically throughout the whole year. Makers quotations dropped steadily during the first four months of the year, but then rose steadily for the remainder of the year, the difference between April and November rates amounting to Rs.15/- per ton.

The Calcutta market was seriously disorganised by communal rioting in April and May, the effects of which were felt for a considerable time afterwards.

Conditions at the jetties have been more or less satisfactory during the year. Although during the riot period the Port Commissioners allowed certain concessions, importers suffered heavy wharf rent charges; the removal of material having been made considerably more difficult by the absence of labour experienced in handling 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 the United States.		From Other Countries.		Total.
	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)
1913-14 ...	609	59·8	200	19·6	173	17·0	22	2·2	14	1·4	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	113	15·9	17	2·3	712
1921-22 ...	280	45·7	60	9·8	160	26·1	84	13·7	29	4·7	613
1922-23 ...	359	48·1	90	12·1	229	30·7	38	5·1	30	4·0	746
1923-24 ...	429	56·7	61	8·0	217	28·7	18	2·4	31	4·2	756
1924-25 ...	439	50·5	88	10·1	273	31·4	17	2·0	52	6·0	869
1925-26 ...	489	55·3	69	7·8	229	25·9	23	2·6	74	8·4	884
1926-27 ...	406	48·1	79	9·3	257	30·4	29	3·4	74	8·8	845

It is remarkable that the United Kingdom has obtained 48 per cent. of the trade in face of such adverse conditions. It will be convenient to show the principal headings under which competition was encountered during the past year.

Description.	From the U.K.	From U.S.A.	From Belgium.	From Germany.	Total Imports.
	Tons.	Tons.	Tons.	Tons.	Tons.
Iron bars and channels ...	1,569	*	7,664	34	10,457
Iron or steel beams, girders, pillars and bridgework ...	23,952	631	31,586	2,748	71,577
Nuts and bolts ...	2,478	329	4,621	2,766	11,330
Hoops and strips ...	13,684	255	12,404	4,658	35,351
Nails, rivets and washers (other than wire nails) ...	6,552	*	4,088	1,912	17,322
Cast pipes and fittings ...	6,194	*	*	*	9,080
Galvanised sheets and plates	249,024	12,088	*	*	274,819
Tinned plates ...	11,592	10,623	*	*	22,244
Plates not galvanised or tinned ...	16,510	804	31,234	9,045	61,967
Wrought tubes, pipes and fittings ...	12,202	1,895	4,494	9,735	29,942
Wire nails ...	392	*	9,810	3,276	14,498
Wire rope ...	2,716	85	*	*	3,027
Steel bars (other than cast steel) ...	8,187	*	88,790	27,393	151,096

\*Not separately distinguished.

American competition is not serious except in tinned plates. American shipments of galvanised sheets are steadily expanding, and I am informed that the United States Steel Products Co. Ltd. are supplying a large percentage of the Burma demand for 30 gauge sheets due to the even galvanising and bright finish of the American sheets. It is stated that while the British suppliers charge on a basis of four cases per ton, the American manufacturer allows for underweight, but does not charge for overweight. American sheets, however, do not at present compete in the Calcutta market.

In addition to the competitors noted in the above table, Sweden and Norway supplied considerable quantities of nails, rivets and washers, and Luxemburg shipped over 16,000 tons of steel bars.

The whole steel position and the probable results of the recent differential duty on certain kinds of British steel is dealt with at length in Chapter III., where the recent report of the Indian Tariff Board is analysed in detail.

The following brief comments under each heading analyse the position in 1926-27 as compared with the figures for the previous year :—

**Bars (other than Cast Steel).**— This valuable trade rose from 126,000 tons to 151,000 tons and from Rs.134 lakhs to Rs.149 lakhs. The Belgian share rose from 77,000 tons valued at Rs.78 lakhs to 89,000 tons valued at Rs.84 lakhs, that of Luxemburg also advanced from Rs.8 to Rs.15

lakhs and that of Germany from Rs.14 to Rs.26 lakhs. On the other hand imports from the United Kingdom fell from 14,000 tons valued at Rs.21 lakhs to 8,000 tons valued at Rs.13 lakhs.

**Beams, Channels, Pillars, Girders and Bridgework.**—The total trade was reduced from 98,000 tons to 72,000 tons and the value from Rs.122 lakhs to Rs.89 lakhs. The British share fell from Rs.54 lakhs to Rs.40½ lakhs, that of Belgium from Rs.45 lakhs to Rs.32½ lakhs, France from Rs.15 lakhs to Rs.9½ lakhs. The German share was also reduced from Rs.5 lakhs to Rs. 2½ lakhs.

**Bolts and Nuts.**— Notwithstanding an increase in the total trade from Rs.27½ lakhs to Rs.32½ lakhs, the British share fell from Rs. 12 to Rs.10 lakhs. Imports from Germany however advanced slightly from Rs.8 to Rs. 8½ lakhs, those from Belgium from Rs. 4 to Rs.9 lakhs, and those from U.S.A. remained steady at about Rs. 1½ lakhs.

**Hoops and Strips.**— A fall took place in the total imports from 39,000 tons valued at Rs.67 lakhs to 35,000 tons valued at Rs.53 lakhs. The British share fell heavily from 22,000 tons to 14,000 tons, and in values from Rs.42 to Rs.24 lakhs. On the other hand shipments from Belgium increased from 7,000 tons to 12,000 tons, the values from Rs.10 to Rs.16 lakhs.

**Nails, Rivets and Washers (other than Wire Nails).**— The total trade increased from 15,000 tons valued at Rs.46 lakhs to 17,000 tons valued at Rs.52 lakhs. The British share advanced slightly from Rs.16½ lakhs to Rs.19½ lakhs, Belgian shipments rose from Rs.5½ to Rs.9 lakhs and those from Norway from Rs.6 to Rs.9 lakhs. On the other hand imports from Sweden fell from Rs.10½ to Rs.7½ lakhs, and those from Germany from Rs.5 to Rs.4½ lakhs.

**Cast Pipes and Fittings.**— The total imports fell from 11,708 tons valued at Rs.27 lakhs to 9,080 tons valued at Rs.23 lakhs. The British share shrank from 9,564 tons valued at Rs.23 lakhs to 6,194 tons valued at Rs.17 lakhs. The share of other countries advanced from Rs.4 to Rs.6 lakhs.

**Galvanised Sheets and Plates.**—After a steady expansion for some years the period under review showed a decline from 283,000 tons valued at Rs7.5 crores to 275,000 tons valued at Rs.7.2 crores. In view of the coal strike it is extraordinary that shipments from the United Kingdom were only reduced from 272,000 tons to 249,000 tons, and the values from Rs.7.15 crores to Rs.6.45 crores. Shipments from the U.S.A. advanced from 8,000 to 12,000 tons and from Rs.30 to Rs.40 lakhs.

**Tinned Plates.**—Owing to the activities of the Tin Plate Co. of India Ltd., the total imports were still further reduced from 29,758 tons valued at Rs.105 lakhs to 22,244 tons valued at Rs.77 lakhs. The British share fell from 18,096 tons of a value of Rs.65 lakhs to 11,592 tons of a value of Rs.40 lakhs. On the other hand American shipments declined from 11,231 tons (Rs.39 lakhs) to 10,623 tons (Rs.37 lakhs). It will be seen that imports last year were about equally divided between South Wales and the United States.

**Sheets and Plates (not Galvanised or Tinned).**— There was a marked fall in the total trade from 91,667 tons (Rs.135 lakhs) to 61,967 tons (Rs.84½ lakhs). The British share fell from Rs.50 lakhs to Rs.28 lakhs, that of Belgium from Rs.55 to Rs.38 lakhs, Germany from Rs.16 to Rs.11 lakhs and "unspecified countries" from Rs.12 to Rs.5 lakhs.

**Wrought Tubes, Pipes and Fittings.**— The total imports advanced from 25,270 tons (Rs.84 lakhs) to 30,000 tons (Rs.91 lakhs). The British share remained steady in quantity just over 12,000 tons, but the values fell from Rs.49 to Rs.45 lakhs. Imports from Germany, however,



rose from 6,708 tons (Rs.19 laks) to 9,735 tons (Rs.25 laks), while those from Belgium advanced from 4,094 tons (Rs.10½ lakhs) to 4,494 tons (Rs.11 lakhs). Imports from U.S.A. totalled Rs.5½ lakhs.

**Wire Nails.**—The imports nearly doubled from 7,706 tons valued at Rs.13 lakhs to 14,498 tons valued at Rs.25 lakhs. Of the last figure Rs.17 lakhs was supplied by Belgium, Rs.6 lakhs by Germany and only Rs.57,668 (say £4,000) by the United Kingdom.

**Wire Rope.**—The total trade rose in quantity from 2,647 tons to 3,027 tons, but fell in value from Rs.20 to Rs.19½ lakhs. British shipments advanced in quantity from 2,478 tons to 2,716 tons, but shrank in value from Rs.19 lakhs to Rs.17½ lakhs. 85 tons (Rs.1 lakh) were sent by the U.S.A. and 226 tons (Rs.78,000) by Other Countries—mainly Germany.

**Aluminium.**—The imports of aluminium in its various forms continue to advance with the extension of the Indian hollow-ware manufacturing industry.

	1925-26.		1926-27.	
	Cwt.	Rs. (lakhs).	Cwt.	Rs. (lakhs).
<i>Unwrought.</i>				
Ingots, blocks, bars ...	3,238	2	5,470	4
<i>Wrought.</i>				
Circles ... ..	72,101	74	79,869	76
Sheets ... ..	3,901	4	4,634	4
Other manufactures ...	7,836	13	7,249	11
Total Imports ...	87,076	93	97,222	95

Particulars relating to the provenance of imports are not yet available for 1926-27, but in the previous year 73 per cent. of the unwrought aluminium was obtained from Switzerland with lesser values from the United Kingdom and Italy. Of the circles, the United States shipped 31 per cent., the United Kingdom 27 per cent., Germany 22 per cent., and lesser values were obtained from France, Belgium and Italy. Sheets were drawn from the United States (55 per cent.) and the United Kingdom (33 per cent.). The imports of "other manufactures" comprise mainly wire and utensils, and were obtained principally from Germany, Switzerland and Belgium. Competition from the United States and Germany is entirely based on price. The Northern Aluminium Company of America operate their own sales organisation in India, while German shippers usually supply against indents from dealers. The British Aluminium Company is strongly represented and controls one of the largest utensil factories in India. Continual price-cutting has recently reduced rates to a very low level, which can leave very little margin of profit.

**Brass, Bronze and similar Alloys.**—*Mixed or Yellow Metal for Sheathing.*—This valuable trade showed a further expansion during the year.

Countries of consignment.	1925-26.		1926-27.	
	Cwt.	Rs. (lakhs).	Cwt.	Rs. (lakhs).
United Kingdom ... ..	198,971	103	120,853	60
Germany ... ..	141,274	70	241,202	114
Other countries ... ..	4,751	3	64,801	30
Total ... ..	344,996	176	426,856	204

The British share has been steadily falling for some years, as she has been unable to compete in price with her German, and, latterly also, her Japanese competitors. A prominent importer states that the British goods lead in quality, and will always be first in demand when their price is reasonably near that of their foreign competitors. The question of gauge is very important. Yellow metal is worked up into various utensils by hand, and therefore the thinner gauges are most in demand. A normal specification in yellow metal sheets demands an average of 28 lbs. per sheet (48 in. by 48 in.), and a premium is charged for a preponderance of lighter sheets. In the same way, circles are expected to be of normal average gauge, and in addition a premium is demanded for sizes under 12 in. in diameter. It is stated that foreign manufacturers are generally more lenient than British, and their readiness to meet the demand for the thinner gauges of sheets and the small sizes of circles without the usual increase of price has greatly increased their share of the business. As a case in point, Japanese circles have latterly been competing keenly, and the makers are reported to have expressed their readiness to give any size of circle required by buyers, whereas I am informed that British makers will rarely quote for less than 9 in. or 10 in. circles.

**Other Manufactures (Wrought).**—The imports were as follows :—

	1925-26.	1926-27.
	Rupees.	Rupees.
Rods ... ..	3,06,585	3,69,237
Sheets ... ..	63,6,381	4,61,957
Tubes ... ..	1,35,523	1,20,129
Wire ... ..	5,72,403	4,24,977
Other sorts ... ..	61,48,613	31,64,970

**Copper (Wrought).** — The imports of wrought copper during the past two years have been made up as follows :—

	1925-26.	1926-27.
	Rs. (lakhs).	Rs. (lakhs).
Braziers ... ..	—	—
Sheets ... ..	1,26	1,09
Rods ... ..	7	4
Tubes ... ..	3	4
Wire (excluding telegraph and telephone wire) ...	4	4
Other manufactures ...	10	6

The subjoined table gives the provenance of the imports :—

Countries of consignment.	1925-26.		1926-27.	
	Cwt.	Rs. (lakhs).	Cwt.	Rs. (lakhs).
United Kingdom ... ..	43,873	25	33,771	19
Germany ... ..	149,764	85	164,740	77
United States ... ..	29,257	17	775	1
Other countries ... ..	41,958	23	58,440	30
Total ... ..	264,852	1,50	257,726	1,27

Foreign competition is keenest from Germany and Japan. American copper is imported principally in ingot form. It is understood that in copper sheets the question of gauge is not of great importance. The all-important factor is that of price, and an importer quotes the following prices in the Calcutta market :— British sheets £70 10s., German sheets £69 10s., French sheets £68 10s. The French sheets are stated to be harder than the British or German makers, and therefore not so much in demand.

**German Silver (including Nickel Silver).**—The trade has sustained a slight setback during the year. The imports were :—

	1924-25.	1925-26.	1926-27.
Rupees ... ..	14,47,920	21,71,744	14,35,895

In 1925-26, the last year for which details are available, Germany shipped Rs.9 lakhs worth, Italy Rs.4½ lakhs, Austria Rs.4 lakhs, and the United Kingdom Rs.2½ lakhs.

**Railway Plant and Rolling Stock.**—India's purchases of railway plant show a further material decrease both on account of State-operated lines and also on account of the company-worked railways. This is mainly due to an enormous reduction in the imports of wagons, partly in consequence of the very considerable surplus of wagons available on the Indian railways, and partly of the fact that local wagon builders secured the major share of the few orders for certain types given out during the year.

**State-operated Lines.**—The imports of Government Stores from the India Store Department, London, on account of the State Railways were as follows :—

Countries of consignment.	1924-25. Rs. (lakhs).	1925-26. Rs. (lakhs).	1926-27. Rs. (lakhs).
United Kingdom ... ..	1,00	2,26	1,71
Germany ... ..	11	17	15
Belgium ... ..	12	47	67
U.S.A. ... ..	2	1	3
Australia ... ..	—	11	6
Other countries ... ..	4	12	21
Total ... ..	1,29	3,14	2,83

The figures for the past two years have, of course, been swollen by the taking-over by the State of the East Indian Railway and the Great Indian Peninsula Railway in 1925. The reduction in the British share to 60 per cent. is very striking. Of course, the coal stoppage is primarily responsible for this decline, but for some years now the Director-General of the India Store Department has been purchasing in the cheapest market, irrespective of origin, and the British share has steadily declined. The probable introduction next year of the Rupee tender in India will have a revolutionary effect on this business, as it will definitely transfer the great bulk of the purchases for Indian State Railways from London to India. I, therefore, recommend all British suppliers of railway plant to study carefully the statement of the new position which will be found in Chapter IV.

*Company-worked Lines.*—The reduction in the total imports is affected by the transfer to the State of the two lines mentioned above. The figures are as follows:—

Countries of consignment.	1924-25. Rs. (lakhs).	1925-26. Rs. (lakhs).	1926-27. Rs. (lakhs).
United Kingdom ... ..	5,12	4,24	2,00
Germany ... ..	7	18	28
Belgium ... ..	11	28	39
United States ... ..	17	15	21
Australia ... ..	—	8	24
Other countries ... ..	24	6	14
<b>Total ... ..</b>	<b>5,71</b>	<b>4,99</b>	<b>3,26</b>

Here again, the reduction in the British share to 61 per cent. proves that the London Offices of the company-worked railways have followed the example of the India Store Department in purchasing abroad in those cases where lower prices were obtainable. Owing to the general strike and the prolonged coal stoppage, the past year was a quite exceptional one, and it is to be expected that the British share will recover to some extent next year.

*Motor Vehicles. — Motor Cars.*—The total number of cars imported was as follows:—

Year.	From U.K.	From U.S.A.	From Canada.	From France.	From Italy.	Total (all sources).
1913-14 (pre-war)	1,669	868	—	111	7	2,880
1922-23 ... ..	449	1,386	1,846	61	131	4,323
1923-24 ... ..	1,005	2,865	3,290	153	370	7,984
1924-25 ... ..	1,682	3,106	3,956	215	235	9,380
1925-26 ... ..	2,399	4,143	4,775	367	860	12,757
1926-27 ... ..	2,546	4,029	4,477	607	1,416	13,197

It will be noted with satisfaction that the increase in the import of British cars continues, but at a reduced rate. This is probably due to the fact that certain shipments were held up in anticipation of the reduction of the import duty on March 1st. The most noteworthy feature of the returns is the remarkable advance made by Italian cars due to the introduction of new Fiat models at extraordinarily low prices.

The two outstanding events of the year have been the reduction in the import duty from 30 to 20 per cent. *ad valorem* and the movement towards a Central Road Board.

The reduction of the import duty was long overdue, and coupled with the reduction in the duty on tyres to 15 per cent., should give a considerable fillip to the imports of cars in general, and of British cars in particular. The British product, owing to its higher price, has suffered disproportionately from the high duty, and will be greatly benefited by the reduction. The Finance Member, in his budget speech, stated that "the reduction is in accordance with the views of the Taxation Enquiry Committee, which rightly drew attention to the importance of encouraging the development of motor transport in India. Neither the Government, nor, I think, the House would feel perturbed if the Provincial Governments seized the opportunity of this reduction of the import duty to impose provincial taxation on the users of motor cars for the improvement and development of their systems of road communication."

For some time a small body of enthusiasts in Bombay have been carrying on a movement for better roads in India by a programme of propaganda in order to educate public opinion on the subject and to enlist the sympathy of members of the Central Legislature. An Indian Roads and Transport Development Association has been formed with branch committees in the several provinces, funds have been raised or guaranteed from the interests vitally concerned and considerable progress has been made.

On February 9th, 1927, a resolution was adopted in the Council of State that :—

"This Council recommends to the Governor-General in Council to appoint a Committee including Members of both Houses of the Central Legislature, to examine the desirability of developing the road system of India, the means by which such development could be most suitably financed and to consider the formation of a Central Road Board for the purpose of advising in regard to, and co-ordinating the policy in respect of, road development in India."

The Government of India are in sympathy with this proposal, and the Committee will probably be constituted during the coming summer, will tour India during the cold weather, and will probably present their recommendations to Government in time for them to be considered during the February-March Session of the Legislature next year when, it is hoped, a Central Road Board will be set up.

The Indian market for motor cars presents many difficulties to the British manufacturer, and not least of these are the questions of representation and marketing. The Department of Overseas Trade will be glad to give advice on these important questions.

The following statement shows the number of motor vehicles registered in British India up to 31st March, 1927 :—

Provinces.	Motor cars, including taxi-cabs.	Motor cycles including Scooters and Auto-wheels.	Heavy motor vehicles (lorries, buses, etc.)	Total.
Bengal, including Calcutta ...	19,938	3,574	2,144	25,656
Bombay City ... ..	10,079	868	787	11,734
Bombay Presidency, excluding Bombay City and Sind ... ..	6,189	688	161	7,038
Madras City ... ..	8,306	2,207	992	11,505
Madras Presidency, excluding Madras City ... ..	4,219	1,548	2,592	8,359
United Provinces ... ..	5,969	2,160	1,597	9,726
Punjab ... ..	8,207	3,100	298	11,605
Burma ... ..	9,888	2,699	2,098	14,685
Bihar and Orissa ... ..	4,429	895	751	6,075
Delhi ... ..	2,907	792	359	4,058
Central Provinces ... ..	3,105	837	790	4,732
Sind ... ..	2,087	812	131	3,030
North-West Frontier Province ... ..	1,737	1,136	568	3,441
Ajmer-Merwara ... ..	199	79	28	306
Assam (a) ... ..	1,508	270	500	2,278

(a) Figures relate to motor vehicles registered during the year ended 31st December, 1926.

*Motor Cycles.*—A further encouraging advance is to be recorded in this trade, although the total imports are still far below what they should be into a country like India. This trade should also be stimulated by improved roads. The total imports were :—

Countries of consignment.	1925-26.		1926-27.	
	Number.	Rupees.	Number.	Rupees.
United Kingdom ... ..	1,458	8,82,309	1,665	9,76,004
United States ... ..	113	79,406	75	44,514
Other countries ... ..	58	24,634	63	26,365
Total ... ..	1,629	9,86,349	1,803	10,46,883

It is highly satisfactory to note that British manufacturers have strengthened their hold on the market at the expense of their American competitors.

*Motor Omnibuses, Vans and Lorries.*—The extension of motor omnibus services, not only in the large towns, such as Calcutta and Bombay, but also through the Mofussil, continues, and the imports show a further considerable expansion.

The vehicles were imported as follows :—

	1925-26. Number.	1926-27. Number.
Vehicles imported with bodies ...	626	998
Chassis ... ..	4,214	5,345

Facilities exist in the large towns for the building of bodies, and it is likely that the demand for chassis only will increase in future.

The provenance of the imports was as follows :—

Countries of consignment.	1925-26.		1926-27.	
	Number.	Rs. (lakhs).	Number.	Rs. (lakhs).
United Kingdom ... ..	338	14	341	19
Canada ... ..	2,378	30	3,529	48
United States ... ..	2,014	41	2,322	49
Other countries ... ..	110	3	151	3
Total ... ..	4,840	88	6,343	1,19

The development in the use of British 'buses is disappointing. British models of large 'buses have been selected by the Tramway Companies in the large towns, such as Calcutta, Bombay and Rangoon, but the Indian services, which are springing up all over the country, usually connecting villages with the nearest railway station, consider low first cost, and are attracted by American and Canadian types, which have a shorter life, but which are cheap and can be scrapped after a couple of years, thus avoiding the necessity for an elaborate repair and maintenance organisation.

British manufacturers desiring further information on this subject should consult the Indian Section of the Department of Overseas Trade, where detailed reports are available concerning the types in demand, etc., etc.

*Cycles (other than Motor Cycles and Parts thereof) and Accessories.*—There has been an extraordinary boom in the cycle trade during the past three years, but there are signs that the trade has been overdone, and we may expect some falling-off next year. The values imported last year were three times those of the last pre-war year. The figures were :—

Number of cycles imported entire or in sections ... ..	1924-25. 62,003	1925-26. 96,649	1926-27. 115,528
Values of parts of cycles and accessories (excluding rubber tyres) ... ..	Rs. (lakhs). 36	Rs. (lakhs). 47	Rs. (lakhs). 47
Of which from			
United Kingdom ... ..	65	87	92
Germany ... ..	11	13	13
Other countries ... ..	1	1	2
Total ... ..	77	1,01	1,07

Deducting the value of parts and accessories, we arrive at an average landed value per machine of Rs.52/-, say, £3 18s. Thanks to low prices, efficient representation on the spot, and many years experience of the market, British makers have been able to increase their share to nearly 90 per cent. of the total. Foreign competition is almost entirely in parts and accessories. The principal markets in order of importance are Calcutta, Bombay, Karachi, Madras and Rangoon.

**Provisions.**— There has been a further advance by almost a crore of rupees in the imports of provisions and oilman's stores, but this is mainly owing to the inclusion under this heading of vegetable ghee, which is being separately classified from April 1st, 1927. The subjoined table shows the source of the imports of provisions during the past two years :—

Countries of consignment.	1925-26.	1926-27.
	Rs. (lakhs).	Rs. (lakhs).
United Kingdom ... ..	1,71	2,03
Netherlands ... ..	1,12	1,65
Portugal ... ..	6	4
Straits Settlements ... ..	46	55
China (including Kongkong) ... ..	14	15
United States ... ..	34	44
Australia ... ..	22	13
Other countries ... ..	60	51
Total ... ..	4,65	5,50

In order to arrive at the true state of affairs, the Netherlands should be largely eliminated from this table and also about 50 per cent. of the share of "other countries," as these two headings account for most of the vegetable ghee. Imports from the Straits Settlements and China are mainly non-competitive. If, therefore, due allowances are made, it will be found that the United Kingdom supplies about 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.	1925-26.	1926-27.
	cwt.	cwt.	cwt.
Farinaceous and patent foods ... ..	255,900	351,697	450,850
Canned and bottled provisions ... ..	86,100	385,695	537,076
Biscuits and cakes ... ..	72,900	40,113	51,341
Milk (condensed and preserved) ... ..	103,300	135,888	182,846
Jams and Jellies ... ..	17,400	14,875	14,756
Bacon and hams ... ..	14,500	15,207	15,195
Cocoa and chocolate ... ..	4,600	4,294	4,936
Cheese ... ..	11,700	10,013	11,258

Detailed information with regard to the provenance of the imports under each heading for 1926-27 are not yet available, but in the previous year the Straits Settlements and China supplied more than half of the farinaceous foods imported, mainly in the form of sago and sago flour. The United States supplied nearly 60 per cent. of the canned fruits and 43 per cent. of the canned fish. Condensed and preserved milk was drawn from the Netherlands, the United Kingdom, Australia and Norway. The United Kingdom supplied 90 per cent. of the biscuits and cakes imported, while the imports of jams and jellies were divided between the United Kingdom (55 per cent.) and Australia (43 per cent.). The United Kingdom shipped practically the whole of the bacon and hams, but only 44 per cent. of the cocoa and chocolate, severe competition being met with from Holland in cocoa and Switzerland in chocolate. Two-thirds of the imports of cheese are drawn from Holland. Competition from the United States is keen in bottled fruits, Alaska salmon and other tinned fish, Quaker Oats and other types of tinned goods. American shippers of bottled provisions score from the tasteful and attractive make-up of their goods. Dutch competition is mainly experienced in cheese, the Dutch cheese with its hard spherical casing standing the climate better than the British. Dutch competition in cocoa is of recent growth, but is steadily increasing.

**Vegetable Ghee.**—Vegetable fat or vegetable product, as it is generally declared in the bills of entry, is rapidly increasing in popularity, and the imports now assume considerable proportions. Detailed figures will be available next year. The article is imported chiefly from the Netherlands and Belgium, and to a less extent from the United Kingdom, Germany and France. The principal imports are through Bombay and Karachi.

**Liquors (Ale, Beer and Porter).**—The following table gives the imports, both quantities and values, during the past two years:—

Countries of consignment.	1925-26.		1926-27.	
	Gallons.	Rs. (lakhs).	Gallons.	Rs. (lakhs).
United Kingdom ... ..	2,139,179	51	2,380,356	54
Germany ... ..	1,062,031	27	1,090,826	30
Netherlands ... ..	162,915	4	164,575	4
Japan ... ..	100,546	2	150,242	3
Other countries ... ..	33,674	1	34,049	1
<b>Total Imports ... ..</b>	<b>3,498,345</b>	<b>85</b>	<b>3,820,048</b>	<b>92</b>

The United Kingdom supplies practically the whole of the beer imported in cask, which in 1925-26 amounted to 1,250,280 gallons valued at Rs.23 lakhs. The United Kingdom also provides virtually the whole of the stout imported. It is in bottled beers where German competition is so keen. In 1925-26 the total imports of bottled beer were 2,069,663 gallons valued at Rs.55 lakhs, and of this the United Kingdom supplied 731,105 gallons (Rs.21 lakhs) and Germany 1,050,399 gallons (Rs.27 lakhs), while Holland and Japan sent small quantities. British brewers have not yet been able to produce a light beer of the lager type which will compete with the German both in price and suitability to the climate.

*Spirits.*—The following table shows the quantities and values of the principal kinds of spirit imported into India :—

Description.	1925-26.		1926-27.	
	Gallons.	Rs. (lakhs).	Gallons.	Rs. (lakhs).
Brandy ... ..	418,572	45	469,224	51
Gin ... ..	94,860	9	108,103	10
Liqueurs ... ..	17,683	3	18,524	3
Rum ... ..	111,263	2	115,444	2
Whisky ... ..	567,826	96	542,826	90
Spirit present in drugs ... ..	125,994	33	131,744	37
,, perfumed ... ..	19,882	14	17,348	14
,, denatured ... ..	482,901	7	654,135	10
,, other sorts ... ..	70,921	10	78,143	13

The next table shows the countries of consignment of all spirits :—

Countries of consignment.	1925-26.		1926-27.	
	Gallons.	Rs. (lakhs).	Gallons.	Rs. (lakhs).
United Kingdom ... ..	736,897	1,35	745,190	1,36
Germany ... ..	80,675	7	90,727	8
France ... ..	393,773	51	429,973	55
Java ... ..	602,891	8	759,384	11
United States ... ..	49,193	13	45,177	14
Other countries ... ..	46,473	5	65,040	6
<b>Total ... ..</b>	<b>1,909,902</b>	<b>2,19</b>	<b>2,135,491</b>	<b>2,30</b>

Brandy is almost entirely obtained from France, with very small quantities from Germany and the United Kingdom. Gin is drawn from the United Kingdom, with about 10 per cent from Holland. Whisky is practically a British monopoly, but Germany sends small quantities of low-priced whisky for the bazaar trade. Of the spirit present in drugs, medicines and chemicals, the United Kingdom sent 46 per cent., the United States of America 36 per cent., and France 12 per cent. Imports of perfumed spirit are obtained from the United Kingdom (46 per cent.), France (36 per cent), and Germany (14 per cent.). Java supplies practically the whole of the denatured spirit, which is denatured at the Indian Custom Houses immediately on arrival and before clearance.

*Wines.*—The imports of wines increased from 274,455 gallons valued at Rs.29 lakhs in 1925-26 to 295,720 gallons valued Rs.31 lakhs in 1926-27. In 1925-26 the bulk of the sparkling wines were obtained from France with lesser quantities from the United Kingdom and Belgium. The United Kingdom sent 76 per cent. of the port, while France, the United Kingdom, Germany and Italy supplied still wines of other kinds. The United Kingdom figures represent, of course, British re-exports from French, Portuguese and Spanish sources.

*Paper and Pasteboard.*—This valuable trade aggregated £2,312,000 in value during the past year. The subjoined table shows the percentage shares of the principal countries in the total imports :—

	1913-14 (pre-war).	1924-25.	1925-26.	1926-27.
	Per cent.	Per cent.	Per cent.	Per cent.
United Kingdom ... ..	56.2	42.9	41.5	35.5
Norway ... ..	5.1	9.0	9.0	10.1
United States ... ..	.8	3.1	4.7	4.8
Sweden ... ..	3.2	4.4	7.2	7.1
Netherlands ... ..	2.5	7.4	9.0	7.8
Japan ... ..	1.0	1.0	1.6	1.6
Germany ... ..	17.3	21.2	12.1	16.2
Austria ... ..	8.3	4.0	6.3	7.6
Hungary ... ..				
Other countries ... ..	5.6	6.9	8.6	9.3
Total ... ..	100	100	100	100

*Packing Paper.*—There was a further expansion in this trade, as the following figures show :—

Countries of consignment.	1925-26.		1926-27.	
	cwt.	Rs. (lakhs).	cwt.	Rs. (lakhs).
United Kingdom ... ..	23,696	6	22,868	6
Sweden ... ..	48,427	9	55,855	10
Norway ... ..	12,608	2	10,986	2
Germany ... ..	49,780	10	65,501	13
Netherlands ... ..	12,068	2	16,999	3
Other countries ... ..	29,527	6	35,316	6
<b>Total ... ..</b>	<b>176,106</b>	<b>35</b>	<b>207,525</b>	<b>40</b>

The imports are largely of Kraft papers, both genuine and imitation, and a cheaper type of red brown wrapping known as Nature Brown. Lightweight coloured newsprint and tissue papers are also used as wrapping paper. On account of their natural resources the Scandinavian mills are placed in a very favourable position, and the imports from Germany consist largely of Scandinavian papers exported through Hamburg.

*Printing Paper.*—Notwithstanding the protective tariff of one anna per pound on all printing papers containing less than 65 per cent. of mechanical wood pulp, but excluding chrome, marble, flint, poster and stereo, the import trade shows a further advance :—

Countries of consignment.	1925-26.		1926-27.	
	cwts.	Rs. (lakhs).	cwts.	Rs. (lakhs)
United Kingdom ... ..	129,695	30	86,385	19
Sweden ... ..	29,214	4	28,855	4
Norway ... ..	122,196	19	156,941	23
Germany ... ..	73,210	13	133,488	21
Netherlands ... ..	37,315	7	34,696	6
Belgium ... ..	11,617	3	17,065	4
Austria ... ..	60,822	9	96,920	14
Other countries ... ..	36,297	5	51,558	8
<b>Total ... ..</b>	<b>500,366</b>	<b>90</b>	<b>605,908</b>	<b>99</b>

The large imports of newsprint are mainly derived from Scandinavia and Austria where large supplies of wood pulp are available. There is severe competition from Holland in "Free Printing Papers" based entirely on the lower price. While the Dutch qualities as a rule are not as good as the British, they will serve their purpose, and although the British paper might give a better printing result, Indian printers almost invariably prefer cheapness and place their orders abroad.

*Writing Paper and Envelopes.*—Although there is now a specific protective duty of one anna per pound on writing paper of

all sorts, including ruled or printed forms and account and manuscript books and the binding thereof, the total trade showed an increase of Rs.7 lakhs over the previous year.

Countries of consignment.	1925-26.		1926-27.	
	cwts.	Rs. (lakhs).	cwts.	Rs. (lakhs).
United Kingdom ... ..	82,043	31	74,588	30
Sweden ... ..	4,630	1	7,962	2
Norway ... ..	10,211	3	20,642	5
Germany ... ..	21,080	6	26,726	7
Netherlands ... ..	12,781	3	19,602	4
Other countries ... ..	24,898	7	41,525	10
Total ... ..	155,643	51	191,045	58

The United Kingdom enjoys a much larger share of this trade, but the British trade is being invaded by cheaper productions of lower quality. I am informed that in the past the Scottish mills exported to India a considerable tonnage of writing papers made from esparto grass, but owing to the post-war rise in prices, consumers have been forced to use the cheaper "Free Cream Laid" papers, in which there is keen Continental competition. As regards envelopes, competition is keenest in the cheap cream and tinted Manilla varieties, the basis of which is a species of wrapping paper.

#### Miscellaneous.

	1924-25. Rs. (lakhs).	1925-26. Rs. (lakhs).	1926-27. Rs. (lakhs).
Old newspapers in bales and bags ...	37	35	38
Other kinds of paper ... ..	21	22	24
Paper manufactures ... ..	21	18	16

Until recent years the United Kingdom monopolised the trade in old newspapers, but during the past three years the United States of America has been shipping considerable quantities, and in 1925-26 supplied nearly 30 per cent. of the total. As a result of the protection afforded to Indian paper mills, conditions in the local industry have considerably improved, and shares have shown a marked appreciation over the rates ruling last year.

**Chemicals and Chemical Preparations (excluding Chemical Manures and Medicines).** — The total imports of chemicals and chemical preparations during the last three years have been as follows :—

	Rs. (lakhs).
1924-5 ... ..	209
1925-6 ... ..	203
1926-7 ... ..	245

Details with regard to the provenance of the imports last year are not yet available. The following table shows the position of the principal countries during the two previous years :—

Principal countries of consignment:	1924-25.	1925-26.
	Rs. (lakhs).	Rs. (lakhs).
United Kingdom ... ..	131	124
Norway ... ..	4	4
Germany ... ..	39	42
Netherlands ... ..	4	4
Belgium ... ..	2	3
Italy ... ..	11	6
Japan ... ..	2	3
United States ... ..	4	6
<b>Total Imports (all sources) ...</b>	<b>209</b>	<b>203</b>

The next table gives the percentage share of the principal countries of consignment over a period of years :—

	1913-14 (pre-war)	1924-25.	1925-26.	1926-27.
	Per cent.	Per cent.	Per cent.	Per cent.
United Kingdom ... ..	74.7	62.7	61.2	57.9
Germany ... ..	12.4	18.7	20.6	21.5
United States ... ..	.3	1.9	2.9	2.8
Italy ... ..	5.2	5.0	3.1	5.7
Kenya Colony ... ..	—	1.4	1.4	1.4
Norway ... ..	.5	1.9	1.8	1.7
Japan ... ..	1.5	1.0	1.3	1.4
Other countries ... ..	5.4	7.4	7.7	7.5
<b>Total ... ..</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

The German proportion is increasing at a very rapid rate, and the activities of Indian branches of the large German combines, such as the Havero Trading Company, which represents the "I. G.," are having a marked effect. This subject is dealt with at greater length in Chapter II.

**Dyeing and Tanning Substances.**—*Dyes obtained from Coal Tar. Alizarines.*—The imports were derived as follows :—

Countries of consignment.	1925-26.		1926-27.	
	lbs.	Rs. (lakhs).	lbs.	Rs. (lakhs).
United Kingdom ... ..	585,289	4	741,872	4
Germany ... ..	649,544	5	2,991,139	19
Netherlands ... ..	329,274	3	999,816	7
Belgium ... ..	239,396	1	153,887	1
<b>Total Imports (all sources) ...</b>	<b>1,854,498</b>	<b>14</b>	<b>5,044,663</b>	<b>32</b>

The expansion in the imports from Germany is noteworthy, and to these should be added the bulk of the imports from Holland and Belgium, as they represent mainly dyes in transit from Germany.

*Anilines.*

Countries of consignment.	1925-26.		1926-27.	
	lbs.	Rs. (lakhs).	lbs.	Rs. (lakhs).
United Kingdom ... ..	470,295	7	443,291	7
Germany ... ..	4,862,499	77	5,982,236	84
Netherlands ... ..	497,286	9	410,714	8
Belgium ... ..	231,933	4	359,007	7
Switzerland ... ..	577,850	11	403,943	7
United States ... ..	1,571,110	16	1,951,513	19
Other countries ... ..	244,208	5	386,550	6
<b>Total Imports...</b>	<b>8,455,181</b>	<b>1,29</b>	<b>9,937,254</b>	<b>1,38</b>

Taking into account the quantities of German dyes shipped through Dutch and Belgian ports, we find that Germany controls nearly 80 per cent. of the trade, the United States 12 per cent., the United Kingdom and Switzerland about 5 per cent. each. The competition of the United States in the commoner types of dyes, such as Sulphur black and congou red, is becoming increasingly felt even by the Germans on account of the very low export prices which American producers are in a position to charge on account of their protected home market. This question is dealt with in detail in Chapter II.

**Soap.** — This valuable trade continues to show expansion. The various types imported were as follows :—

Description.	1925-26.		1926-27.	
	Cwt.	Rs. (lakhs).	Cwt.	Rs. (lakhs).
Household and laundry soap	338,473	99	340,308	100
Toilet soap ... ..	35,649	38	43,032	46
Other sorts ... ..	32,533	9	19,135	6
<b>Total Imports</b> ... ..	<b>406,655</b>	<b>1,46</b>	<b>402,475</b>	<b>1,52</b>
<i>of which from—</i>				
United Kingdom ... ..	390,828	1,36	378,738	1,37
Other countries ... ..	15,827	10	23,737	15
<b>Total</b> ... ..	<b>406,655</b>	<b>1,46</b>	<b>402,475</b>	<b>1,52</b>

So far as household and laundry soaps are concerned, British makers are *hors concours*, thanks to the excellence of their productions and to their efficient selling organisation. The imports of

household soap from Australia are increasing and exceeded a lakh in value in 1925-26. In toilet soaps, however, there is increasing competition from the United States (14 per cent. in 1925-26), Germany and Austria also send small quantities. The American productions are of world-wide repute, are most attractively made-up, are extensively advertised, and are actively pushed by travellers and agents. Foreign manufacturers appear to be more ready to meet special market requirements in the matter of shape, weight and make-up than some of their British competitors.

**Paints and Painters' Materials—*Paints and Colours.***—After remaining constant at about a crore for some years the total imports rose to Rs.111 lakhs during the year under review.

The position is as follows :—

Countries of consignment.	1925-26.		1926-27.	
	Cwt.	Rs. (lakhs).	Cwt.	Rs. (lakhs).
United Kingdom ... ..	248,887	77	256,631	78
Germany ... ..	34,847	7	45,769	9
Japan ... ..	12,466	4	12,394	4
United States ... ..	8,145	4	10,073	5
Other countries ... ..	54,331	10	62,460	15
<b>Total Imports ... ..</b>	<b>358,676</b>	<b>1,02</b>	<b>387,327</b>	<b>1,11</b>

German competition is increasing in the cheap lower-grade paints for bazaar use, while the United States supplies fair quantities of directly competitive goods. Imports from Japan almost entirely consist of red lead. British makers, however, are strongly represented, possess established marks, and are holding their own, both in the higher grades for use by railways, public bodies and industry, and in the cheap and meretricious bazaar varieties.

**Painters' Materials.**—These comprise :—

Description.	1925-26.		1926-27.	
	Cwt.	Rs. (lakhs).	Cwt.	Rs. (lakhs).
Genuine turpentine ... ..	2,986	2	7,087	4
Turpentine substitute ... ..	4,241	1	4,182	1
Varnish ... ..	29,775	20	32,911	21
Other kinds ... ..	Not recorded	5	Not recorded	7
<b>Total ... ..</b>	<b>—</b>	<b>28</b>	<b>—</b>	<b>33</b>

Genuine turpentine is almost exclusively supplied by the United Kingdom. The Straits Settlements and the United States supply small quantities of turpentine substitute. The important varnish trade is divided between the United Kingdom (86 per



cent.), Germany (5 per cent.) and the United States (6 per cent.). Varnishes are now being manufactured in India by one or two British manufacturers, who have opened branch works, and this competition may be increasingly felt in the future.

**Drugs and Medicines (excluding Chemicals and Narcotics).**

—The principal items which are enumerated under this comprehensive heading are :—

Description.	1925-26.	1926-27.
	Rs. (lakhs).	Rs. (lakhs).
Camphor ... ..	21	28
Cassia lignea ... ..	10	17
Codliver Oil ... ..	2	1
Preparations of opium and morphia ... ..	0.5	1
Proprietary and patent medicines ... ..	24	27
Quinine salts ... ..	31	26
Other sorts ... ..	95.5	107
<b>Total imports of all kinds ... ..</b>	<b>1,84</b>	<b>2,07</b>

Japan supplies the bulk of the camphor, although imports from Germany have latterly been increasing. Cassia lignea is obtained entirely from China. Codliver oil is drawn from the United Kingdom, and a small quantity from Holland. The United Kingdom also supplies most of the preparations of opium and morphia. The valuable trade in proprietary and patent medicines is divided between the United Kingdom (51 per cent.), the United States of America (12½ per cent.), Germany (13 per cent.), France (9 per cent.), and lesser quantities from Holland and Italy. Of the quinine salts, the United Kingdom supplies 66 per cent., Germany 17 per cent. and Java 10 per cent. Of the total trade in drugs and medicines in 1925-26 the United Kingdom sent 46 per cent., Japan 14 per cent., Germany 11 per cent., the United States 7 per cent. and China (including Hongkong) 8 per cent.

British manufacturers suffer from the lack of a Pure Food and Drugs Act in India, as their competitors are able to compete with drugs which do not come up to the standard of the British Pharmacopœa, and for which there is no standard of quality.

**Apparel (excluding Hosiery, Boots and Shoes).**—The following table shows the imports under each main heading :—

Article.	1925-26.	1926-27.
	Rs. (lakhs).	Rs. (lakhs.)
Apparel (including drapery, uniforms and accoutrements) ... ..	79	82
Gold and silver thread ... ..	25	29
Hats, caps, bonnets and Hatters' ware	30	33
Lametta... ..	5	6
Second-hand Clothing ... ..	24	25
Waterproofed clothing ... ..	3	3
<b>Total imports of all kinds ... ..</b>	<b>1,66</b>	<b>1,78</b>

In 1925-26 the United Kingdom shipped 64 per cent. of the apparel, the other competitors being Japan, Germany, Italy and the United States of America. Gold and silver thread is virtually a French monopoly, although imports from Germany show a tendency to grow. Hats, caps, etc., are drawn from the United Kingdom (44 per cent.), Italy (32 per cent.), Germany (7 per cent.) and Japan (7 per cent). Lametta is derived from Germany and France with a small quantity from Austria. The trade in second-hand clothing is an important one, mainly centred in Bombay and Karachi. The United Kingdom supplies nearly 70 per cent. and the United States of America sends the rest. The relatively small imports of waterproofed clothing are drawn from the United Kingdom.

The provenance of the total imports was as follows :—

Countries of consignment.	1925-26.	1926-27.
	Rs. (lakhs).	Rs. (lakhs).
United Kingdom ... ..	83	86
Germany ... ..	16	21
France ... ..	21	24
Italy ... ..	13	16
Japan ... ..	11	13
United States ... ..	11	11
Other countries ... ..	11	7
<b>Total</b> ... ..	<b>1,66</b>	<b>1,78</b>

**Hosiery — Cotton.**—This is an important trade which shows steady progress, and is made up as follows :—

	1925-26.	1926-27.
	Rs. (lakhs.)	Rs. (lakhs.)
Stockings and socks... ..	25	24
Underwear ... ..	1,09	1,18
Other sorts ... ..	6	5
<b>Total</b> ... ..	<b>1,40</b>	<b>1,47</b>
<i>of which from :—</i>		
United Kingdom ... ..	3	3
Japan ... ..	1,11	1,18
United States ... ..	6	5
Other countries ... ..	20	21

Most of the imports are non-competitive, from a British manufacturer's point of view, as they do not usually produce such low-quality articles as the bulk of the Japanese socks, singlets, etc., which are bought in the bazaars. The imports from "other countries" consist mainly of high and medium grade stockings and socks from the United States of America and cheap underwear from Germany.

**Woollen.**—The imports of woollen hosiery are considerable and tend to increase :—

	1924-25.	1925-26.	1926-27.
Rupees ... ..	13,28,610	21,07,708	18,47,398

In 1925-26 the United Kingdom sent 92 per cent. of the total, only insignificant values being obtained from Germany and Japan.

**Haberdashery and Millinery.**—The principal headings comprise :—

Article.	1925-26. Rs. (lakhs).	1926-27. Rs. (lakhs).
Laces and embroidery ... ..	38	42
Towels not in the piece ... ..	14	8
Other sorts ... ..	58	63

The provenance of the imports was as follows :

Principal countries of consignment.	1925-26. Rs. (lakhs).	1926-27. Rs. (lakhs).
United Kingdom ... ..	29	27
Germany ... ..	21	36
France ... ..	3	4
Switzerland ... ..	18	17
Italy ... ..	7	6
Japan ... ..	24	15
Other countries ... ..	8	8
	1,10	1,13

The trade in lace and embroidery is divided between Switzerland and Germany. The United Kingdom in 1925-26 supplied 10 per cent. and Japan 10 per cent. Towels not in the piece consist of very low grade face towels, and are drawn as to 9 per cent. from Japan. The United Kingdom sent 7 per cent. of better quality towels. The large heading of "other sorts" was contributed by the United Kingdom (43 per cent.), Germany (17 per cent.), Switzerland (12 per cent.), Japan (12 per cent.) and Italy (5 per cent.).

**Boots and Shoes.**—As a result of falling prices, the demand for imported boots and shoes has expanded of late years until it is now within measurable distance of pre-war figures, as the following table clearly shows :—

	Pre-war average.	War average.	1924-25.	1925-26.	1926-27.
Pairs (in 1,000)...	2,323	1,170	918	1,357	1,915
Rupees (in 1,000)	56,73	41,31	29,26	40,40	57,13

The average price per pair of shoes imported last year was Rs.2'98 (say 4s. 6d.).

The provenance of the imports was as follows :—

Countries of consignment.	1925-26.		1926-27.	
	Pairs.	Rs. (lakhs).	Pairs.	Rs. (lakhs).
United Kingdom ... ..	711,732	27	711,928	29
Japan ... ..	104,834	1	74,557	1
United States ... ..	187,917	5	573,939	14
Other countries ... ..	352,785	7	554,759	13
Total ... ..	1,357,268	40	1,915,183	57

The United Kingdom supplies approximately 90 per cent. of the imports of leather boots and shoes, the competition being entirely in shoes of other materials. The sharp advance last year in the arrivals from "other countries" is noteworthy. Details are not yet available, but in 1925-26 other countries included Austria, Japan and the Straits Settlements. Czechoslovakia is now a very keen competitor.

**Leather.**—The imports of unmanufactured leather were as follows :—

Description.	1925-26. Rs. (lakhs).	1926-27. Rs. (lakhs).
Hides, tanned or dressed ... ..	3	3
Skins, tanned or dressed ... ..	5	3
Unwrought ... ..	6	10
Leather cloth (including artificial leather)	4	4
	<u>18</u>	<u>20</u>

The United Kingdom and Ceylon continue to supply the tanned or dressed hides. The United Kingdom sent 53 per cent. of the unwrought leather and the United States 39 per cent. Tanned or dressed skins are obtained from the United Kingdom (57 per cent.) and the United States of America (31 per cent.). Leather cloth is drawn as to 82 per cent. from the United Kingdom and a small quantity from the United States. The principal business is in manufactured leather goods :—

Description.	1925-26. Rs. (lakhs).	1926-27. Rs. (lakhs).
Bags and trunks ... ..	1	1
Pickers ... ..	9	9
Picking bands and straps ... ..	7	9
Roller skins ... ..	9	8
Saddlery and harness ... ..	2	2
Other sorts ... ..	9	11

The imports of industrial leathers for the cotton and jute mills is essentially a British trade, although small shipments of picking bands and straps have lately been received from Holland, Ger-

many and France, and of pickers from Holland. Other sorts include fancy leather articles from the United States, Austria and Germany.

The following table shows the countries of consignment of the total imports of leather and leather goods.

Principal countries of consignment.	1925-26. Rs. (lakhs).	1926-27. Rs. (lakhs).
United Kingdom ... ..	42	43
Germany ... ..	2	2
Ceylon ... ..	1	1
United States ... ..	6	10
Other countries ... ..	3	4
	<hr/> 54	<hr/> 60

#### Belting for Machinery.—Cotton Belting.

Countries of origin.	1925-26. Rs. (lakhs.)	1926-27. Rs. (lakhs.)
United Kingdom ... ..	15	14
Other countries ... ..	1	1
	<hr/> 16	<hr/> 15

Germany and the United States sent small quantities.

#### Leather Belting.

Countries of origin.	1925-26. Rs. (lakhs).	1926-27. Rs. (lakhs).
United Kingdom ... ..	24	22
United States ... ..	7	9
Other countries ... ..	3	2
	<hr/> 34	<hr/> 33

The United States is making an effort to increase her share of this trade, which is largely centred in Bombay. Favourable terms are granted by the American Makers to their Agents, and stocks are maintained in the country. The imports from other countries were from Germany and Japan.

#### Of Other Materials (including Coir).

Countries of origin.	1925-26. Rs. (lakhs).	1926-27. Rs. (lakhs).
United Kingdom ... ..	24	26
Germany ... ..	6	5
Other countries ... ..	3	3
	<hr/> 33	<hr/> 34

**Bobbins.**— The depression in the Bombay cotton industry and relatively quiet trade in the Calcutta jute industry is accountable for the slight falling-off in the imports of bobbins.

Origin.	1924-25. Rs. (lakhs).	1925-26. Rs. (lakhs).	1926-27. Rs. (lakhs).
United Kingdom ... ..	37	33	31
Other countries ... ..	6	5	4
Total ... ..	43	38	35

Germany has taken the place of Japan, as the leading competitor, imports from the former in 1925-26 amounting to Rs.2½ lakhs, and from the latter country to Rs.1½ lakhs. Efforts to manufacture bobbins in India have, so far, not met with much success.

**Books and Printed Matter.**—The total imports were :—

	1924-25.	1925-26.	1926-27.
Rupees ... ..	64,46,661	56,87,578	56,60,183

In 1925-26 the United Kingdom supplied 86 per cent., the United States of America 7 per cent. and Germany 2 per cent. British publishing Houses are well represented, and maintain their position.

**Stationery (excluding Paper).**—The total trade fell by Rs.6 lakhs, the reduction being almost entirely borne by British suppliers.

Countries of consignment.	1924-25. Rs. (lakhs).	1925-26. Rs. (lakhs).	1926-27. Rs. (lakhs).
United Kingdom ... ..	51	51	45
Germany ... ..	18	24	25
Japan ... ..	5	5	4
United States ... ..	5	4	4
Other countries ... ..	2	4	4
Total ... ..	81	88	82

Importers of British goods find it almost impossible to compete in price with the cheap German and other Continental pencils, pens, etc., etc., which are flooding the bazaars. In the high-grade trade, British goods have a strong hold, but even here American manufacturers, by dint of advertising and canvassing by travellers, are creating a market for such specialities as fountain pens, Ever-sharp pencils, etc., etc. British firms who specialise in office stationery and requisites are meeting with success largely as a result of opening their own branches in the country or else of employing regular travellers.

**Tobacco.**—While other kinds of tobacco have remained fairly stationary, there has been an extraordinary increase in the imports of cigarettes during the past two years, a sign of the general prosperity of the country.

Description.	1924-25. lbs.	1925-26. lbs.	1926-27. lbs.
Unmanufactured tobacco	7,081,831	4,906,909	5,703,449
Cigars	32,930	39,727	33,002
Cigarettes	2,748,046	3,411,975	4,174,711
Tobacco for pipes and cigarettes	281,940	276,050	256,570
Other sorts	26,062	36,830	37,422
<b>Total imports</b>	<b>10,170,809</b>	<b>8,671,491</b>	<b>10,205,154</b>

The provenance of the imports of cigarettes was as follows :—

Countries of consignment.	1924-25. Rs. (lakhs).	1925-26. Rs. (lakhs).	1926-27. Rs. (lakhs).
United Kingdom	120·1	157	193
Aden and Dependencies	·5	·3	·3
Egypt	·7	·9	·9
United States	·3	·2	·2
Other countries	·2	·4	·2
<b>Total</b>	<b>121·8</b>	<b>158·8</b>	<b>194·6</b>

When to these figures is added the production of the cigarette making factories in India the immensity of the market will be realised.

**Rubber Manufactures — Rubber Tyres.—Pneumatic Motor Covers.**—The total number of tyres imported rose from 261,082 to 310,551, but owing to lower prices the values were reduced from Rs.123 lakhs to Rs.118 lakhs. The provenance of the imports was as follows :—

Countries of consignment.	1925-26. Rs. (lakhs).	1926-27. Rs. (lakhs).
United Kingdom	46	42
Germany	7	5
France	17	26
Italy	17	5
Canada	12	12
United States	23	28
Other countries	1	(a)
<b>Total</b>	<b>1,23</b>	<b>1,18</b>

(a) Less than 1 lakh.

The admirable organisation of the Dunlop Company puts them in a strong position, but competition is very keen, and French, American, Continental, and other British groups are all actively pushing their productions. All the principal competitors work on the same list price, but there are constant rumours of price-cutting

by sub-agents in the country districts. Service is the keynote in the tyre trade, and a great deal remains to be done in this respect by British manufacturers.

The reduction of the import duty from 30 to 15 per cent. should give a fillip to the trade, and a considerable increase is confidently expected during the next few years.

*Pneumatic Motor Cycle Covers.*

	1925-26.	1926-27.
	Rs. (lakhs).	Rs. (lakhs).
United Kingdom ... ..	1.4	1.3
United States ... ..	.2	.1
Other countries ... ..	.1	.4
Total ... ..	1.7	1.8

The predominance of British machines gives British tyre makers a strong hold.

*Pneumatic Cycle Covers.*

	1925-26.	1926-27.
	Rs. (lakhs).	Rs. (lakhs).
United Kingdom ... ..	8.7	7.1
Germany ... ..	1.7	.5
France ... ..	3.4	5.8
Other countries ... ..	1.0	.6
Total ... ..	14.8	14.0

Competition from France is still keen in pedal cycle covers.

*Solid Rubber Tyres for Motor Vehicles.*

	1925-26.	1926-27.
	Rs. (lakhs).	Rs. (lakhs).
United Kingdom ... ..	5.5	7.0
Germany ... ..	2.0	.8
United States ... ..	4.4	3.5
Other countries ... ..	1.6	.3
Total ... ..	13.5	11.6

*Tubes.*

	1925-26.	1926-27.
	Rs. (lakhs).	Rs. (lakhs).
Pneumatic motor tubes ... ..	27	24
„ motor cycle tubes ... ..	.5	.5
„ cycle tubes ... ..	8.3	9.4

*Other manufactures of Rubber (except apparel and boots and shoes).*—The total imports amounted to :—

	1924-25.	1925-26.	1926-27.
Rupees ... ..	25,63,127	27,99,616	31,28,436

This heading includes mechanical rubbers of all kinds, brake fittings, hose, etc., etc. British manufacturers are well represented and secure 56 per cent. of the trade. Competition is met from the United States (21 per cent.) and Germany (11 per cent.).



**Instruments, Apparatus, Appliances and Parts Thereof.**  
 —This comprehensive classification is made up as follows :—

Description.	1925-26. Rs. (lakhs).	1926-27. Rs. (lakhs).
Electrical apparatus, etc. ... ..	2,25	2,52
Musical instruments ... ..	23	27
Optical instruments ... ..	8	8
<i>Photographic :—</i>		
Cinematograph films ... ..	21	23
Photographic other than cinematograph films ... ..	17	23
Scientific instruments ... ..	23	22
Surgical instruments ... ..	17	21
Wireless apparatus ... ..	5	4
Other kinds ... ..	14	21
<b>Total imports ... ..</b>	<b>3,53</b>	<b>4,01</b>

*Musical instruments* are about equally divided between the United Kingdom and Germany with smaller quantities from the United States of America and Switzerland.

*Optical instruments* are principally obtained from Germany, but the United States of America and Japan have a considerable trade in spectacle lenses and frames. The United Kingdom only sends about 15 per cent.

*Cinematograph Films.*—In 1925/6, the United Kingdom supplied 34 per cent., the United States of America 45 per cent., Germany 8 per cent. and Italy 5 per cent. The British share does not give the true position, as it includes many American films shipped from London. Nevertheless, British films are increasing in number and popularity.

*Photographic instruments.*—The United Kingdom furnishes 46 per cent. of this trade, the United States of America 34 per cent. and Germany about 9 per cent. American and German competition is increasing, and the Kodak Company give excellent service on the spot.

*Scientific instruments (including cinematograph films.)*—The United Kingdom supplies two-thirds of the trade, Germany 20 per cent. and the United States of America 8 per cent.

*Surgical instruments.*—Great Britain still sends 60 per cent. of the surgical instruments, but the German share has risen to over 25 per cent. and the United States of America supplies 12 per cent. British makers are actively represented by their own resident employees, but German instruments are frequently bought where price is the main desideratum.

*Wireless Apparatus.*—The Indian Broadcasting Company commenced broadcasting from their Bombay station on July 23rd, 1927, and the Calcutta station will be opened in August, 1927. This should give a great impetus to the imports of wireless receiving sets. British manufacturers who may be interested should apply to the Department of Overseas Trade for a list of the licensed importers of wireless apparatus.

The imports during the past two years were as follows :—

Origin.	1925-26.		1926-27.	
	Rs. (lakhs).		Rs. (lakhs).	
United Kingdom	...	4.6	...	4.3
United States	...	.9	...	.4
Other countries	...	.5	...	.3
<b>Total</b>	...	<b>6.0</b>	...	<b>5.0</b>

Other countries include Germany and France.

*Electrical Apparatus* is the most important item in this group. The following statement gives the value and origin of the several classes of electrical apparatus imported during the last two years :—

Description of Electrical Apparatus.	1925-26.		1926-27.	
	Rs. (lakhs).		Rs. (lakhs).	
Electric fans and parts thereof	...	28	...	32
Electric wires and cables	...	77	...	81
Telegraph and telephone instruments	...	8	...	5
Electric lamps and parts thereof	...	28	...	39
Batteries	...	9	...	10
Carbons, electric	...	1	...	1
Accumulators	...	12	...	17
Electric lighting accessories and fittings including switches	...	16	...	15
Meters	...	6	...	6
Electric-medical apparatus (including X-ray apparatus)	...	3	...	2
Switchboards (other than telegraph and telephone)	...	3	...	4
Unenumerated	...	34	...	40
<b>Total imports of all kinds</b>	...	<b>2,25</b>	...	<b>2,52</b>

The provenance of the total imports was as follows :—

Principal countries of consignments	1925-26.		1926-27.	
	Rs. (lakhs).		Rs. (lakhs).	
United Kingdom	...	1,52	...	1,69
Germany	...	22	...	22
Netherlands	...	8	...	10
Italy	...	7	...	7
Japan	...	3	...	2
United States	...	23	...	33
Other countries	...	10	...	9
<b>Total imports</b>	...	<b>2,25</b>	...	<b>2,52</b>

The marked increase in shipments from the United States of America is due to larger imports of American lamps, cables and batteries. German competition is mainly in miscellaneous accessories and fittings, wires and cables and lamps. Holland supplies a very large share of the electric glow lamps imported. It is satisfactory to note that the British share still remains at over two-thirds of the whole.

**Earthenware and Porcelain.**—This classification includes :—

Article.	1925-26. Rs. (lakhs).	1926-27. Rs. (lakhs).
<i>Earthenware :—</i>		
Pipes of earthenware ... ..	3	1
Sanitary ware ... ..	5	7
Other kinds ... ..	42	46
<i>Porcelain :—</i>		
Electrical ... ..	3	1
Other kinds ... ..	24	28
<b>Total imports</b> ... ..	<b>77</b>	<b>83</b>
<i>Of which from :—</i>		
The United Kingdom ... ..	29	30
Japan ... ..	35	33
Other countries ... ..	13	20

Earthenware pipes are almost exclusively drawn from the United Kingdom, which also supplies 98 per cent. of the sanitary ware. The large heading of "other kinds" of earthenware, which includes crockery, tableware, etc., was in 1925-26 contributed to by the United Kingdom (44 per cent.), Japan (33 per cent.), Germany (8 per cent.). It should be noted, however, that most of the imports from Holland and Belgium were probably German goods shipped from Rotterdam and Antwerp. The true German share is probably about 14 per cent. The imports from Japan are practically non-competitive so far as the United Kingdom is concerned.

The imports of electrical porcelain in 1925-26 were almost all obtained from Belgium (probably of German manufacture), and mostly imported through Rangoon into Burma. Other kinds of porcelain were supplied by Japan (80 per cent.), the United Kingdom (10 per cent.) and Germany (6 per cent.). The principal ports of entry in order of importance are Bombay, Rangoon, Calcutta and Karachi.

**Glass and Glassware.**—The following table shows the types of glass and glassware imported :—

Description.	1925-26. Rs. (lakhs).	1926-27. Rs. (lakhs).
Bangles ... ..	1,01	85
Beads and false pearls ... ..	36	31
Bottles and phials ... ..	38	39
Funnels, globes and glass parts of lamps ... ..	15	19
Scientific glassware ... ..	3	2
Sheet and plate glass ... ..	28	32
Tableware ... ..	10	9
Other glassware ... ..	28	36
<b>Total imports</b> ... ..	<b>2,59</b>	<b>2,53</b>

<i>Of which from :—</i>						
United Kingdom	...	...	...	...	26	26
Germany	...	...	...	...	40	52
Belgium	...	...	...	...	23	27
Austria	...	...	...	...	3	4
Czechoslovakia	...	...	...	...	83	63
Italy	...	...	...	...	8	6
Japan	...	...	...	...	67	66
Other countries	...	...	...	...	9	9

Glass bangles are practically a monopoly of Czechoslovakia and Japan. Beads and false pearls are drawn from the same sources, with lesser quantities from Italy and Germany. The United Kingdom is not concerned with these two items.

Soda water bottles are approximately divided between the United Kingdom and Germany, the latter country rapidly increasing her share. Other kinds of bottles are drawn from Japan (42 per cent.), Germany (30 per cent.) and the United Kingdom (19 per cent.). There is scope for greater activity in India by the British bottle-manufacturing concerns. Germany supplies 50 per cent. of the funnels, globes and glass parts of lamps, the United States of America 20 per cent., Japan 17 per cent., and the United Kingdom a trivial 2 per cent. (only £2,380 worth). In scientific glassware, Germany supplied 44 per cent., Japan 27 per cent., the United Kingdom 24 per cent. The imports of sheet and plate glass are mainly supplied by Belgium 66 per cent. and the United Kingdom 31 per cent. British makers ship the better qualities, and the Belgian shippers supply the large bazaar demand for cheap window glass. Tableware is drawn from Japan (63 per cent.), Germany (14 per cent.), Belgium (10 per cent.) and the United Kingdom (9 per cent.).

**Building and Engineering Materials** (*other than Iron, Steel and Wood*).—Notwithstanding the steady fall in the imports of cement, the total trade advanced during the year under review. The principal items in the classification are the following :—

Description.	1925-26.	1926-27.
	Rs. (lakhs).	Rs. (lakhs).
Asphalt	13	24
Bricks (other than firebricks)	—	1
Firebricks	3	3
Cement—		
Portland	62	56
Other kinds	3	2
Tiles	24	25
Other kinds	14	13
Total Imports	1,19	1,24

Detailed figures of the imports of asphalt are not available for the past year, but in 1925-26 the United States supplied 61 per cent., Holland 28 per cent. and the United Kingdom 11 per cent. There were no imports from Trinidad during that year. The

market for asphalt is likely to increase considerably with the improvement and extension of roads throughout the country. Fire-bricks are almost entirely imported from the United Kingdom. Tiles are supplied by Italy (34 per cent.), the United Kingdom (31 per cent.), Belgium (18 per cent.) and France (7 per cent.).

*Cement.*—The imports of cement were obtained from the following sources :—

Countries of consignment.	1925-26.		1926-27.	
	Tons.	Rs. (lakhs).	Tons.	Rs. (lakhs).
United Kingdom ... ..	94,584	57	76,342	44
Germany ... ..	3,398	2	9,199	5
Japan ... ..	5,720	2	9,309	4
Other countries ... ..	6,676	4	10,186	5
Total ... ..	110,378	65	105,036	58

There is likely to be a steady decline in the imports of cement in view of the increased production in India. Local cement works can produce cement fully equal to the British standard specification, and the Indian product is being increasingly used in the large schemes of public works.

*Hardware (excluding Cutlery and Electro-plated ware).*—There was a reduction of nearly Rs. 13 lakhs in the local trade, but last year's aggregate of Rs.507 lakhs is well above the pre-war annual average of Rs.317 lakhs. The principal reductions were in metal lamps and miscellaneous types.

The figures are as follows :—

Articles.	1925-26. Rs. (lakhs).	1926-27. Rs. (lakhs).
Agricultural implements ... ..	16	17
Buckets of tinned or galvanised iron ... ..	2	1
Builders' hardware ... ..	31	34
Domestic hardware, other than enamelled ironware ... ..	10	10
Enamelled ironware... ..	41	40
Gas mantles ... ..	7	6
Implements and tools (other than agricultural implements and machine tools) ... ..	71	79
Lamps, metal ... ..	91	84
"    glass ... ..	1	1
Parts of lamps other than glass ... ..	6	7
Safes and strong boxes of metal ... ..	3	3
Stoves ... ..	11	9
Other sorts ... ..	2,30	2,16
Total Imports ... ..	5,20	5,07

Of which from :—					
The United Kingdom	...	...	...	1,98	1,85
Sweden	...	...	...	17	15
Germany	...	...	...	1,43	1,58
Austria	...	...	...	13	13
Japan	...	...	...	37	29
United States	...	...	...	81	72
Other countries	...	...	...	31	35
<b>Total</b>	...	...	...	<b>5,20</b>	<b>5,07</b>

The next table of percentage shares shows the position of the leading suppliers over a period of years :—

	1913-14 (pre-war year). Per cent.	1923-24. Per cent.	1924-25. Per cent.	1925-26. Per cent.	1926-27. Per cent.
United Kingdom	57	47	40	38	36
Germany ...	18	21	27	27	31
United States ...	10	16	16	16	14
Japan ...	1	6	5	7	6
Other countries	14	10	12	12	13
<b>Total ...</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

The reasons for the steady decline in the British share and the remarkable progress made by Germany require more detailed treatment than can be given here, and will be found in Chapter II. The following notes give the statistical position in each section of the trade.

*Agricultural Implements.*—The total value of the trade, which does not exceed £120,000, proves that the Indian cultivator does not use imported implements to any extent and obtains his simple tools from the local village blacksmith. The agricultural implements which come under this heading are mostly hoes (known locally as Kodalties or Mamooties), forks, etc., etc., used by the tea gardens of Assam and Southern India. In 1925-26, the last year for which particulars are available, the United Kingdom supplied 88 per cent. and the United States 9 per cent. Now that the Agricultural Implements Co. Ltd., of Jamshedpur, has been taken over by the Tata Iron and Steel Co. Ltd., it is possible that their competition will be more severely felt. They turn out picks, kodalties, powrahs, hammer heads, etc., etc., of fair quality.

*Galvanised Iron or Tinned Buckets.*—Owing to the local manufacture of buckets from imported sheets, this trade is reduced to a very small total, and the imports are almost all into Rangoon. The United Kingdom has 92 per cent. of the trade.

*Builders' Hardware, such as Locks, Hinges, Door Bolts, etc.*—The imports are drawn from the United Kingdom (23 per cent.),

Germany (46 per cent.), the United States of America (14 per cent.), Sweden (13 per cent.). The bazaars are full of cheap Continental productions usually below the British article in quality, but so far below it in price that dealers cannot afford to pay the premium required for the better quality.

*Domestic Hardware.*—A very similar state of affairs is to be found in this trade. In 1925-26 the United Kingdom shipped 40 per cent., Germany 35 per cent., and lesser values were obtained from the United States, Japan, Sweden and Austria.

*Enamelled Ironware.*—There has been a considerable advance in this trade of late years. In 1925-26, Japan sent 60 per cent., Germany 18 per cent., the United Kingdom 9 per cent., Czechoslovakia 6 per cent. and Austria 4 per cent. The Japanese are rapidly overhauling the Continent in this trade. The principal markets are Burma, Bengal and Bombay.

*Gas Mantles.*—Last year Germany sent 57 per cent., the United States of America 20 per cent. and the United Kingdom 18 per cent. Bombay, Rangoon and Calcutta are the principal markets.

*Metal Lamps.*—In pre-war days, Birmingham makers enjoyed a valuable trade in hurricane lamps and house lamps of all kinds. They have, however, been driven off the market by the cheap German and American lamps, and only supply a very small trade in the higher grade types. In 1925-26 Germany had 50 per cent. of the total trade, the United States 36 per cent., Austria 8 per cent., and the United Kingdom a paltry 2½ per cent!

*Safes and Strong Boxes of Metal.*—There has been a steady reduction for some years now in the imports of safes and metal strong boxes owing to the increasing output of safes of fairly good quality in Bombay and the production of serviceable metal despatch boxes and small safes at Multan in the Punjab. Moreover, the British share of the import trade has fallen during recent years. In 1925-26 the United Kingdom supplied 37 per cent., Austria 25 per cent., Germany 22 per cent. and Italy 7 per cent. Bankers' safes and strong rooms and the higher grades of safes are still supplied by well-known British houses, but the cheap safe for the bazaar is usually of German or Austrian make. The Burma market for safes has developed rapidly of late years.

*Stoves.*—The Indian market for stoves has increased of recent years. The imports are mainly through Bombay and Karachi, and are distributed throughout North-West India, which has a cold winter. The Swedish types hold the market. In 1925-26 Sweden supplied 72 per cent., the United Kingdom 11 per cent. and Germany 9 per cent.

*Other Sorts.*—This omnibus heading accounts for 42 per cent. of the whole, and comprises a wide assortment of metal articles

and tools of all kinds, which it is impracticable to classify separately. In 1925-26 the United Kingdom supplied 50 per cent., Germany 23 per cent., the United States 10 per cent. and Japan 5 per cent.

*Cutlery.*—The classification distinguishes between pruning knives and other kinds as follows :—

	1924-25.	1925-26.	1926-27.
	Rs. (lakhs).	Rs. (lakhs).	Rs. (lakhs).
Pruning knives ... ..	2	2	2
Other kinds ... ..	38	31	39
<b>Total Imports</b> ... ..	<b>40</b>	<b>33</b>	<b>41</b>
<i>Of which from :—</i>			
The United Kingdom ... ..	11	9	9
Germany ... ..	27	22	30
Other countries ... ..	2	2	2
<b>Total</b> ... ..	<b>40</b>	<b>33</b>	<b>41</b>

Pruning knives are drawn almost exclusively from the United Kingdom, the only foreign import in 1925-26 being a small shipment from Germany of £150 worth. The demand for high grade cutlery is still met from Sheffield, but the bazaar trade is entirely based on cheap price, and the Solingen products control the market. As an illustration of how difficult it is for British firms to compete, I would cite the case of a well-known Sheffield quality which sells at Rs. 10/12 per dozen, but is being ousted by a German brand selling at Rs. 2/3/- per dozen. The British quality is, of course, greatly superior, but the German knife "will do," and price tells. The bazaar dealer might be willing to pay 15 per cent. to 20 per cent. more for British quality, but beyond that he will not go. It is interesting to note that even the old-established German brands are being undersold by 20 per cent. to 30 per cent. by other German firms willing to sacrifice profit in order to enter the market.

*Polishes.*—The aggregate trade was slightly reduced during the year. The statistics are :—

Article.	1924-25.	1925-26.	1926-27.
	Rs. (lakhs).	Rs. (lakhs).	Rs. (lakhs).
Leather polish ... ..	14	15	13
Metal polish ... ..	6	6	5
Wood polish ... ..	1	1	1
Other sorts ... ..	†	†	2
<b>Total Imports</b> ... ..	<b>21</b>	<b>22</b>	<b>21</b>

† Not separately distinguished.

The trade shows a progressive growth, and it is satisfactory to note that no less than 91 per cent. is supplied by the United Kingdom. British manufacturers are well represented, and in 1925-26



secured 91 per cent. of the leather polish, 93 per cent. of the metal polish, and 89 per cent. of the wood polish. There is competition from the United States of America in leather polishes, from the United States of America and Germany in metal polishes, and from the United States of America in wood polish.

**Arms, Ammunition and Military Stores.** — This comprehensive heading is made up as follows—

Description.	1925-26.	1926-27.
	Rs. (lakhs).	Rs. (lakhs).
Cartridge cases ... ..	32	16
Explosives ... ..	21	22
Firearms and parts thereof ... ..	29	24
Gunpowder ... ..	2	1
Other sorts ... ..	5	5
<b>Total Imports</b> ... ..	<b>89</b>	<b>68</b>

Filled cartridge cases during the past year were obtained from the United Kingdom (80 per cent.) and the United States of America (13 per cent.), and amounted to Rs.15 lakhs. Empty cartridge cases totalled only Rs.69,000, and were drawn from the United Kingdom (Rs.51,000) and other countries (Rs.18,000).

Explosives is also very largely a British trade. The United Kingdom supplied in 1925-26 no less than 96 per cent., the only foreign import being Rs.82,000 worth from Germany.

Firearms are imported from the United Kingdom (62 per cent.), the United States of America (8 per cent.), Germany (14 per cent.), Czechoslovakia (7 per cent.) and Belgium (7 per cent.). There has been a marked increase in the imports from Germany of cheap rifles and shotguns, which have, to some extent, displaced British and American productions. The United Kingdom supplies all the gunpowder.

In addition to this trade, mention should be made of Rs.24 lakhs worth of arms ammunition and military stores imported on Government Account.

**Brushes and Brooms**—These include :—

	1925-26.	1926-27.
	Rs. (lakhs).	Rs. (lakhs).
Paint and varnish brushes ... ..	2·5	3·4
Toilet brushes ... ..	4·8	4·3
Other brushes ... ..	4·5	4·7
Brooms ... ..	·4	·4
<b>Total Imports</b> ... ..	<b>12·2</b>	<b>12·8</b>

In paint and varnish brushes, British makers secure 86 per cent. and Germany 12 per cent. In toilet brushes, however, the United States supplies 42 per cent. of the trade, followed by Germany (31 per cent.), the United Kingdom (12 per cent.) and Japan

(9 per cent.). Other brushes for industrial and general use are drawn from the United Kingdom (47 per cent.), Germany (25 per cent.) and the United States of America (17 per cent.). The small trade in brooms is supplied by the United Kingdom, Straits Settlements and the United States of America.

**Toys and Requisites for Games and Sports.** — There was a marked increase during the year.

	1924-25.	1925-26.	1926-27.
Rupees ... ..	59,06,069	54,27,078	62,11,178

Toys account for about two-thirds of the whole, and are obtained from Germany (40 per cent.), Japan (33 per cent.), the United Kingdom (15 per cent.) and the United States of America (7 per cent.).

Playing cards were imported in 1925-26 to the extent of Rs.10 lakhs. The United States of America contributed 52 per cent., Belgium 34 per cent. and the United Kingdom only 5 per cent.

Requisites for games and sports were imported in 1925-26 to the amount of Rs.9½ lakhs. The United Kingdom sent Rs.7 lakhs, Norway Rs.1 lakh, Germany Rs.½ lakh, and lesser values were received from the United States and Japan. Indian manufacturers at Sialkot and other places are now keenly competing not only in the home trade, but they exported last year nearly Rs.3 lakhs worth.

**Tea Chests (entire or in sections).**—There has been a fall from the record figures during the boom in the trade in 1924-25.

Countries of consignment.	1924-25. Rs. (lakhs).	1925-26. Rs. (lakhs).	1926-27. Rs. (lakhs).
United Kingdom ... ..	75	68	49
Russia ... ..	1	—	—
Finland ... ..	11	14	9
Esthonia ... ..	2	—	3
Other countries ... ..	4	3	2
<b>Total ... ..</b>	<b>93</b>	<b>85</b>	<b>63</b>

Germany shipped most of the chests under the heading "other countries." The imports of Japanese Momi chests, which were such a feature during and immediately after the war, have now ceased owing to the competition of the Venesta and other improved makes.

**Umbrellas and Umbrella Fittings.** — The imports of complete umbrellas, including parasols and sunshades, were as follows:—

Countries of consignment.	1925-26.		1926-27.	
	No.	Rs. (lakhs).	No.	Rs. (lakhs).
United Kingdom ... ..	264,469	8	215,896	6
Japan ... ..	8,839	(a)	7,447	(a)
Other countries ... ..	57,212	1	46,222	1
Total ... ..	330,520	9	269,565	7

(a) Less than 1 lakh.

The imports of complete umbrellas will probably show a tendency to fall away, as umbrellas are being more and more made up in the country from imported cloth and fittings.

Umbrella fittings were imported as follows:—

Countries of consignment.	1924-25. Rs. (lakhs).	1925-26. Rs. (lakhs).	1926-27. Rs. (lakhs).
United Kingdom ... ..	13	10	9
Germany ... ..	12	17	21
Japan ... ..	14	13	14
Other countries ... ..	1	1	1
Total... ..	40	41	45

Germany is rapidly strengthening her hold on this trade at the expense of the United Kingdom and Japan.

**Jewellery and Plate of Gold and Silver (excluding imitation Jewellery, Precious Stones and Pearls unset).**

Article.	1925-26. Rs. (lakhs).	1926-27. Rs. (lakhs).
Jewellery ... ..	13	31
Plate of gold and silver ... ..	6	7
	<u>19</u>	<u>38</u>

Fifty-eight per cent. of the imports of jewellery were obtained from the United Kingdom in 1925-26, and the remainder from France, Ceylon and Germany. Of the gold and silver plate, the United Kingdom sent 75 per cent., and the balance was obtained from Germany, France, Ceylon and China. The heavy import duty of 30 per cent. tends to check any development in this trade.

**Electro-Plated Ware.**—The imports were:—

	1924-25.	1925-26.	1926-27.
Rupees ... ..	4,86,995	5,34,982	6,65,327

This is predominantly a British trade (88 per cent.). Small shipments were received from Germany and Italy.

**Carriages and Carts (excluding Railway Carriages) and Parts thereof.**—The total imports were :—

	1924-25.	1925-26.	1926-27.
Rupees ... ..	27,55,677	15,76,581	19,48,847

The United Kingdom supplies 44 per cent. and Japan 40 per cent. (probably jinrickshaws) of the complete vehicles imported. The small trade in perambulators and go-carts is British.

**Oil Cloth and Floor Cloth.**— The imports remain steady at about Rs.9 lakhs worth per annum, of which Rs.5½ lakhs are obtained from the United Kingdom, and Rs.3 lakhs from the United States.

#### **Furniture and Cabinetware.**

	1924-25.	1925-26.	1926-27.
Rupees ... ..	15,45,787	22,00,397	29,68,275

In 1925-26 the United Kingdom sent 41 per cent., Germany 28 per cent., the United States of America 10 per cent., Italy 6 per cent. and Japan 5 per cent. American competition is largely in camp furniture of patent design.

**Matches.**— The United Kingdom does not export matches to India on a commercial scale, but a large proportion of the capital which has been sunk in the Indian factories of the Swedish Combine was obtained on the London market, and the figures for the past year may be of interest :—

Principal countries of consignment.	1925-26.		1926-27.	
	Gross.	Rs. (lakhs).	Gross.	Rs. (lakhs).
Sweden ... ..	4,846,636	61	4,520,576	57
Norway ... ..	85,801	1	125,951	2
Czechoslovakia ... ..	502,675	5	319,525	3
Japan ... ..	2,290,532	25	951,736	11
Other countries ... ..	211,878	2	217,080	2
Total ... ..	7,937,522	94	6,134,868	75

The Swedish Combine have modern factories in the principal markets of India and a widespread sales organisation. It may be confidently expected, therefore, that they will secure a rapidly increasing share of the trade, and that imports will decline. The Indian Tariff Board are, at present, considering the whole question.

**Packing (Engine and Boiler) of all kinds excluding Asbestos.**

	1924-25.	1925-26.	1926-27.
Rupees ... ..	3,95,604	6,26,170	4,01,848

The United Kingdom usually supplies over 90 per cent. of this trade, but in 1925-26 France for the first time sent a large shipment of Rs.2,67,943 which reduced the United Kingdom proportion to 50 per cent.

**Toilet Requisites.** — This is a comprehensive heading, including all articles for toilet use not separately classified elsewhere. The statistics are :—

	1924-25.	1925-26.	1926-27.
Rupees ... ..	45,11,419	49,56,366	57,02,163

In 1925-26 the United Kingdom supplied 43 per cent., the United States of America 29 per cent., Germany 8 per cent., Japan 7 per cent. and France 5 per cent.

**Articles Imported by Post (not included elsewhere).**—This large item amounts to nearly £3,000,000 in value :—

	1924-25.	1925-26.	1926-27.
Rupees ... ..	3,28,33,900	3,48,78,820	3,72,04,496

In 1925-26 the United Kingdom sent 78 per cent., Italy 5 per cent., and considerable values were contributed by Egypt, Germany, Belgium, France and Switzerland.

The exchange of cash-on-delivery parcels between India and Great Britain and Northern Ireland was introduced in 1920-21, and has grown steadily. The following are the latest figures of C.O.D. parcels received from Great Britain and Northern Ireland in 1924-25 and 1925-26 :—

Year.	Number.	Value.
1924-25 ... ..	79,433	£219,743
1925-26 ... ..	95,030	£279,934

This system has been found to be of advantage to United Kingdom stores and mail-order firms, and is undoubtedly a convenience to residents in India.

#### RAW MATERIALS AND SEMI-MANUFACTURED ARTICLES.

**Coal and Coke.** — The effect of the long coal strike in the United Kingdom is shown in the reduction of imports from that country to a trifling amount, and is also reflected in a falling-off in the arrivals from South and Portuguese-East Africa.

Countries of consignment.	1925-26.		1926-27.	
	Tons.	Rs. (lakhs).	Tons.	Rs. (lakhs).
United Kingdom ... ..	97,172	26	12,908	3
Union of South Africa ... ..	115,216	26	85,788	19
Portuguese East Africa ... ..	125,921	28	25,521	5
Australia ... ..	11,961	3	12,613	3
Other countries ... ..	22,034	5	4,903	1
<b>Total ... ..</b>	<b>372,304</b>	<b>88</b>	<b>141,733</b>	<b>31</b>

Largely as a result of the activities of the Coal Grading Board, which was set up on the recommendations of the Indian Coal Commission, Bengal coal is meeting with more success in the Bombay market, and also in the export trade. The following are the average prices per ton of Bengal, Cardiff and Natal coal in the Bombay market in 1925 and 1926 :—

	Bengal.			Cardiff.			Natal.		
	Per ton.			Per ton.			Per ton.		
	Rs.	As.	Ps.	Rs.	As.	Ps.	Rs.	As.	Ps.
1925 ... ..	19	6	3 (a)	29	3	0 (a)	21	15	3 (a)
1926 (6 months) ...	19	6	8 (a)	24	6	1 (b)	19	8	7 (b)

(a) ex sales.

(b) c.i.f. sterling quotations converted into rupees at current rates of exchange.

**Mineral Oils.**—The following are the latest statistics of this valuable trade :—

*Kerosene Oil.*

Countries of consignment.	1925-26.		1926-27	
	Rs. (lakhs).		Rs. (lakhs).	
Georgia ... ..	...	24	...	—
Straits Settlements (including Labuan) ...	...	29	...	18
Sumatra ... ..	...	11	...	3
Borneo ... ..	...	59	...	31
United States ... ..	...	3,88	...	3,77
Other countries ... ..	...	6	...	—
<b>Total Imports</b> ... ..	...	<b>5,17</b>	...	<b>4,29</b>

The cessation of imports from the Caucasus is noteworthy.

*Fuel Oils.*—The imports were :—

Countries of consignment.	1925-26.		1926-27.	
	Rs. (lakhs).		Rs. (lakhs).	
Persia ... ..	...	1,46	...	1,33
Straits Settlements (including Labuan) ...	...	7	...	12
Borneo ... ..	...	58	...	50
Other countries ... ..	...	—	...	—
<b>Total</b> ... ..	...	<b>2,11</b>	...	<b>1,95</b>

*Lubricating Oils.*—Batching oils for use in the jute mills of Bengal were imported to the extent of Rs.72 lakhs, principally from Dutch Borneo and the United States of America. Other lubricating oils were derived as follows :—

Origin.	1924-25.	1925-26.	1926-27.
	Rs. (lakhs).	Rs. (lakhs).	Rs. (lakhs).
United Kingdom ... ..	...	17	14
United States ... ..	...	1,42	1,20
Other countries ... ..	...	5	13
<b>Total</b> ... ..	...	<b>1,64</b>	<b>1,47</b>

The leading American Companies, such as the Vacuum and the Valvoline, have very strong organisations, and it is somewhat difficult to make headway against them.

**Salt.** — Although India produces most of the salt it consumes, there is a considerable import into the two provinces of Bengal and Burma.

Principal countries of consignment.	1925-26.		1926-27.	
	Tons.	Rs. (lakhs).	Tons.	Rs. (lakhs).
United Kingdom ... ..	103,873	20	53,598	14
Germany ... ..	40,103	9	57,941	15
Spain ... ..	48,341	9	57,332	14
Aden and Dependencies ... ..	184,514	33	175,173	38
Egypt ... ..	118,489	23	132,455	30
Italian East Africa ... ..	50,867	8	54,551	12
Other countries ... ..	13,954	2	6,763	2
<b>Total ... ..</b>	<b>560,141</b>	<b>1,04</b>	<b>537,813</b>	<b>1,25</b>

The reduction in the British share is probably due to the effects of the coal stoppage.

**Sugar.**— Sugar is the second largest item of import into India, being exceeded only by cotton manufactures. In spite of attempts to stimulate cane cultivation in the country, the consumption of the immense vegetarian population is so enormous that increased indigenous production seems to have had little effect on the imports. The subjoined table shows the imports of 16 Dutch Standard and above (excluding beet):—

Principal countries of consignment.	1925-26.	1926-27.
	Rs. (lakhs).	Rs. (lakhs).
United Kingdom ... ..	6	13
Netherlands ... ..	1	3
Belgium ... ..	4	4
Ceylon ... ..	3	5
Straits Settlements ... ..	6	3
Java ... ..	13,40	13,55
China (including Hongkong) ... ..	7	7
Mauritius ... ..	48	—
United States ... ..	4	26
<b>Total Imports (all sources) ... ..</b>	<b>14,25</b>	<b>14,42</b>

The cessation of imports from Mauritius and the increased arrivals from the United States of America are noteworthy. The principal ports of entry in order of importance are Calcutta, Karachi, Bombay, Madras and Rangoon.

**Beet Sugar.**—The imports of beet sugar have been a feature of the last few years. The figures are:—

Principal countries of consignment.	1925-26. Rs. (lakhs).	1926-27. (Rs. lakhs).
United Kingdom ... ..	8	7
Poland ... ..	—	34
Germany ... ..	3	1,06
Netherlands ... ..	1	5
Belgium ... ..	11	26
Italy ... ..	2	7
Fiume ... ..	—	4
Austria ... ..	4	19
Hungary ... ..	42	59
Czechoslovakia ... ..	21	64
Other countries ... ..	1	55
<b>Total ... ..</b>	<b>93</b>	<b>3,86</b>

The German imports advanced by over a crore, and the increases in the case of Czechoslovakia, Poland and Hungary are worthy of note. The principal ports of entry were Karachi and Bombay, with a much lesser quantity through Calcutta.

The following table gives the other types of sugar imported :—

Description.	1925-26. Rs. (lakhs).	1926-27. Rs. (lakhs).
Sugar, 15 Dutch standard and below ...	2	8
Molasses ... ..	38	53
Confectionery ... ..	25	27
Saccharine ... ..	—	—

The imports of molasses are all drawn from Java. Confectionery, however, is an important British export. In 1925-26, of a total of Rs.25 lakhs, the United Kingdom supplied Rs.21 lakhs, or 85 per cent., Switzerland contributed 5 per cent., and lesser quantities were received from Japan, the Netherlands and United States of America.

*For supplementary tables giving particulars of the import trade to 30th September, 1927, see Appendix IV.*



## APPENDIX I.

## (APPENDIX TO CHAPTER I.)

## INDIAN TAXATION ENQUIRY COMMITTEE.

## SUMMARY OF THE COMMITTEE'S CONCLUSIONS.

The following is a summary of the more important of the conclusions arrived at by the Committee:—

**The Scope of the Problem.**—(1) The sources of the revenue of a State have been classified by modern writers on the following lines:— (a) State domains and tributes, (b) Fines and penalties, (c) Business undertakings and monopolies, (d) Fees, (e) Taxes.

(2) In order to determine which items of revenue fall within the scope of their enquiry, the Committee have adopted the following definition of taxation as a working basis: "Taxes are compulsory contributions made by the members of a community to the governing body of the same towards the common expenditure, without any guarantee of a definite measured service in return."

(3) The Committee do not consider revenues from State domains, from fisheries and mines or forests. The land revenue has some of the characteristics of a rent as well as of a tax, but they have been specifically instructed to enquire into its incidence and they therefore include it.

(4) Fines and penalties are of two kinds:—

(i) those imposed in connection with regulation of revenue, which the Committee treat as taxes;

(ii) those imposed primarily for purposes of restraint, which they do not.

(5) There is no agreement among economists as to the classification of revenue from State undertakings. In determining the element of taxation in the net profits from railways, posts and telegraphs and opium, profits on coinage, irrigation receipts, and receipts from enterprises of local authorities, the Committee have been largely guided by practical considerations.

(6) As regards fees, where the utilisation of services is rendered compulsory by legislation, there is an element of taxation, but the element of payment for services still prevails. When the fees exceed the value of the services, there is true taxation.

**Capitation and Apportioned Taxes.**—(7) Poll taxes are open to the obvious objection that they are regressive in character; they are far more common than is generally supposed in Europe, in America, in the British Empire, and in Eastern countries; but they have ceased to be important sources of revenue in the more advanced States.

(8) The principal taxes of this nature that now survive in India are confined to Burma.

(i) The "thathameda" of Upper Burma is theoretically not a poll tax, but in many parts operates as one.

(ii) The capitation tax of Lower Burma, being a poll tax at a flat rate, operates with less discrimination than the "thathameda," and has never lost the stigma which attached to it when it was imposed by the Burmese Kings as a tax on conquered races.

(9) The grant of the option to local bodies under the Burma Rural Self-Government Act of 1921 of converting these taxes into a circumstances and property tax is an appropriate way of providing for their extinction. The Committee recommend that the process of conversion should be expedited.

(10) The proposed tax on sea passengers, which seems likely to operate as a tax on transport and to impose a check on the flow of labour from province to province, is regarded as a development in the wrong direction.

(11) The endeavours made to replace the arrangements under which the villagers tax themselves for watch and ward have led to confusion and inequality.

(12) The "chowkidari" and other taxes still levied in certain provinces for this purpose are theoretically unobjectionable, but are complained of in practice. The conversion of these also into sources of local taxation, subject to proper control, is recommended as a desirable development.

### THE LAND REVENUE.

#### *Part I—Revenue from agricultural land.*

(13) From a survey of the systems of land taxation in other countries it would appear that the tendencies of modern development are as follows:—

(i) The flat rate of tax on annual or capital value is kept comparatively low.

(ii) Incomes from and property in land are treated for purposes of income tax and death duties on exactly the same footing as other incomes and property

(iii) Where an increasing share has been taken of the return from land, it has generally been taken for local purposes.

(14) The Indian systems are the result of a gradual process of evolution from indigenous practices, and they have been moulded into their present shape by British officers quite independently of one another to suit local circumstances in different provinces.

(15) Except in British Baluchistan, the land revenue has ceased to represent a portion of the gross produce. In the United Provinces, the Punjab and the Central Provinces the Government demand is theoretically based on economic rent, but actually takes many other factors into consideration. In the case of Madras and Burma the assessment is theoretically based on the net produce, while in Bombay the rate of assessment is arrived at empirically with reference to general economic considerations, and in practice is based rather on the actual rents paid than on any theoretical calculations of the net produce.

(16) The Committee are divided in opinion as to whether or not the land revenue should be regarded as a tax on the individual who pays it, but they are agreed that, since it forms a deduction from the national dividend, it should be taken into consideration in dealing with the question of the incidence of taxation on the country as a whole.

(17) Application of the canons of taxation to the land revenue.

(i) *Certainty*.—This canon is satisfied.

(ii) *Convenience*.—Convenience has in some respects been sacrificed to certainty.

The inelasticity of the systems drives a number of people to the money-lender during bad seasons.

The system of making settlements that last for a generation may necessitate a change in the standard of living when the period comes to a close.

When the process of settlement continues for years and involves meticulous enquiry by a large staff, the inconvenience and expense to the ryots concerned is very considerable.

(iii) *Economy*.—The application of this canon cannot be decided on considerations relating to the land revenue alone. If the assessment and collection of the land revenue were the only matter in issue, it would be practicable to devise a scheme under which the present revenue could be collected at a much smaller cost. The justification of the high cost of the settlement and collectorate establishments must be looked for in directions that are outside the scope of the Committee's terms of reference.

(iv) *Ability*.—Land revenue is essentially a tax on things and not on persons, and as such it is not a tax to which the doctrine of progression can be applied. The Committee therefore confine their attention to the question of the burden of the land revenue on the land, in other words, the proportion which the Government demand bears to the economic rental or net profits in the different provinces. Even in this respect they are unable to discover any acceptable basis of comparison, and are forced to the conclusion that the uncertainty as to both the basis of the assessment and the rate is one of the chief respects in which the systems are open to criticism.

(18) The results flowing from the fact that land revenue viewed as a scheme of taxation is not only not progressive, but actually tends in the opposite direction, are aggravated by the conspicuous absence of provision for an income tax on agricultural incomes or a death duty, which serve in the more advanced European countries and Japan to introduce an element of progression into the taxation of the land.

(19) Of the alternatives suggested, the proposals for the redemption of the land revenue either in part or in whole, or for the substitution for it of a tax on produce, are impracticable for reasons given. The adoption of a tax on capital value on Australian lines is less so, but would involve changes of a more radical nature than is necessary.

(20) The essentials of a new scheme of temporary settlements are that it should be definite as regards both the basis and the pitch of assessment; that it should be as simple and cheap as possible; that it should so far as possible ease or steady the burden on the smallest cultivator; and finally that it should, in common with the rest of the system of taxation, involve some element of progression in the case of the larger owners.

(21) The Committee recommend that these essentials should be secured by providing that for the future the basis of the settlement should be annual value, i.e., the gross produce less cost of production, including the value of the labour actually expended by the farmer and his family on the holding, and the return for enterprise. The functions of the settlement officer should be limited to the ascertainment of this value on a uniform basis. A uniform rate fixed for a whole province should then be applied to these valuations as they were made on districts falling in for resettlement.

(22) In the case of controlled rents, where the rent is fixed by the settlement officer or is limited by law or by custom having the force of law, such rent should be taken to be the annual value.

(23) Where the practice of levying "nazaranas" exists, their annual equivalent spread over the term of the lease should be added to the rent for the purpose of determining the annual value.

(24) The rate of assessment should be standardised at a comparatively low figure not exceeding 25 per cent. of the annual value.

(25) The reduction in the share borne by the land revenue to the total taxation should be accompanied by an increase in the local rate, the maximum for the ordinary rates being fixed at about 25 per cent. of the sum taken as land revenue.

(26) It is not possible, in the case of a tax "in rem" to relieve the poorest cultivator by an exemption. The relief of his difficulties is to be found in a better system of rural economy generally.

(27) The obvious ways of introducing an element of progression in the case of the large holder are through an income tax on agricultural incomes, or through something in the nature of a succession duty, or both.

*Part II.—Revenue from non-agricultural land.*

(28) Where land outside the limits of towns or villages which is assessed to land revenue on the basis of its crop value is diverted from use for cultivation, it should be liable to re-assessment on the basis of its annual value for other purposes.

(29) House sites in villages should continue free of assessment, but all future grants should be made subject to the levy of ground-rent, if and when the village becomes a town.

(30) In the case of town lands that have been permitted to be occupied free of provincial taxation or at a nominal rent, it is impracticable at present to impose anything in the shape of a provincial tax.

(31) In the case of town lands that pay agricultural assessment, there is no reason why the assessment should not be based on annual value, provided due notice is given.

(32) In the case of lands still under Government control, the procedure laid down in the order relating to ground-rents is satisfactory.

(33) The practice of making over to municipalities a substantial fraction of the receipts from town lands should be generally adopted, but the management of the lands should be left in the hands of the revenue authorities.

(34) As regards the taxation of unearned increment—

(i) It is both impracticable and unfair to impose a tax on increments in land values that have already accrued.

(ii) It is not impracticable to tax future increments, especially in large towns which can afford to employ highly paid competent staffs, if an account is maintained of improvements effected after a fixed date with a view to deduction of their value on the occasion on which the duty is levied.

**The Charge for Water.**—(35) Wherever possible the charge for water should be separated from the charge on the land.

(36) The minimum charge, except in the case of protective works, should be the cost of supplying the water, that is to say, the cost of maintenance of the irrigation work plus interest on capital cost, and the normal charge should be a moderate share of the value of the water to the cultivator.

(37) The rates, which should be fixed with regard to prices, area irrigated, crop raised and other considerations, should be as few as possible, and they should be examined periodically with a view to increase or decrease.

(38) Where the demand is not constant and the ryots agree to pay for water, whether they require it or not, a reduced payment for a term of years may be accepted.

(39) Where a guarantee of supply is newly given, a reasonable share of the addition made to the capital or annual value of the land by such guarantee may be taken.

**TAXES ON CONSUMPTION—CUSTOMS.**

*Import duties.*—(40) Recent revisions of the tariff have had far-reaching effects.

(41) Some of the duties that are not protective in intention are protective in operation.

(42) Other duties are exercising a restrictive effect on trade.

(43) So far as conclusions can be drawn from the figures of incidence, they tend to indicate a certain amount of shifting of the burden from the richer classes to the general population.

(44) A higher rate of duty can safely be imposed on wine, beer and spirits.

(45) A reduction of the duty on the conventional necessities of life, such as sugar, and on the raw materials of industry and means of production is desirable.

(46) The Committee endorse the opinion of Dr. Gregory that the customs tariff should be the object of periodical survey, and recommend that an expert enquiry be undertaken forthwith.

(47) When the Sea Customs Act comes up for revision, section 30 should be amended so as to make the charge on invoice price *plus* cost of freight the normal procedure, and the charge on a price which includes the wholesaler's profit the exceptional one.

(48) Conditions in India offer many facilities for smuggling operations. The Committee recommend a skilled preventive officer should be deputed to compare and co-ordinate the arrangements in the different provinces, not only at the main ports, but also at minor ports, along the coast and on the land frontiers.

(49) An ideal arrangement would be the institution of a customs zollverein, but this is not practical politics at present.

*Export duties.* (50) The Committee accept in general the recommendations of the Indian Fiscal Commission, that export duties should be levied on articles of which India has a complete or a partial monopoly, that the rates in any case should be low, and that an export duty should not be utilised for the purpose of protecting an industry.

(51) They do not recommend any increase in the rate of duty or any alteration in the rate of duty on rice.

(52) The duty on tea may continue for the present, but it should be removed or reduced if and when the conditions of the trade indicate that it is having a prejudicial effect.

(53) The majority of the Committee agree with the Fiscal Commission in considering that the duty on hides is wrong in principal and dangerous in its effects, and advise its early abolition. The duty on skins may, however, be retained, but the matter should be examined by the Tariff Board at a suitable opportunity.

(54) The imposition of an export duty on lac is recommended.

(55) As regards oil-seeds and manures a majority of the Committee recommend that an export duty should be levied, and that a part of the export duty should be applied towards educating the cultivator to make an increased use of artificial manures.

#### TAXES ON CONSUMPTION—EXCISES FOR PURPOSES OF REVENUE.

*Salt.*—(56) The duty on salt falls on a necessary of life, and to the extent that salt is essential for physical existence it is in the nature of a poll tax.

(57) The present rate of duty is appropriate and causes no serious hardship; changes in the rate should not be made except in cases of grave emergency.

(58) The system of monopoly supply in Northern India and at Kharaghora results in the issue of salt of a good quality at a reasonable price.

(59) The Committee do not recommend any radical change in the systems of supply in Bombay and Madras, but think it desirable that steps should be taken to secure more control over stocks and prices and to assimilate the arrangements in the two provinces, especially in the matter of guarding and accounts.

(60) The obstacles to the supply of Indian salt to Bengal should be removed, and India should be made self-supporting in the matter of salt supply, if this end can be secured by the grant of a strictly temporary advantage to

the local manufacturer by means of a rebate of duty or of a differential duty on imports. An enquiry should be made into this aspect of the question by the Tariff Board.

(61) The rules regulating the issue of duty-free salt for use in industries are satisfactory. The rules in force in Bombay regarding issues for use in agriculture should be made general.

(62) The present concession as regards duty-free issues for the purpose of fish-curing should be continued so long as it does not involve any cost to the Imperial Government in excess of the actual duty remitted. The concession should, however, be extended to all provinces.

*Cotton Piecegoods.*—(63) If for revenue purposes a general excise is considered necessary, an excise duty on locally-manufactured cotton goods, coupled with an adequate customs duty on imported goods, need not necessarily be condemned so long as the burden on the consumer is not too great.

(64) The Government of India are, however, pledged to remove the present tax as soon as financial considerations permit. The Committee, therefore, class it among the taxes to be abolished.

*Petroleum.*—(65) There is no urgent case for the reduction of the duty on petrol. Should remission of taxation become possible, the Committee would give preference to the tax on kerosene, which falls on all classes of the population.

*Matches.*—(66) The statistics available to the Committee do not indicate that the time for the introduction of an excise duty on matches has yet arrived; but the matter will require examination by an expert body sooner or later.

*Aerated waters.*—(67) An excise duty on aerated waters, to be levied by means of a tax on cylinders of carbonic acid gas issued for this purpose, is a comparatively unobjectionable way of raising revenue.

*Patent Medicines.*—(68) An excise duty on patent medicines, accompanied by the application of a similar duty to imported patent medicines, is a suitable form of taxation.

*Tobacco.*—(69) Tobacco is universally recognised as a suitable object for taxation.

(70) Of the plans suggested, a Government monopoly in India would be too vast an undertaking to be considered.

(71) An acreage duty presents considerable administrative difficulties, and would probably excite resentment, and it is consequently not recommended.

(72) A local excise on all production would be impracticable, but the increases in the tariff make one desirable in the case of cigarettes and pipe tobacco made in factories.

(73) The experience of Indian States and Foreign territories in India disprove the idea that very little revenue is to be derived from a system of licensing.

(74) The Committee recommend an excise duty on locally-made cigarettes and pipe tobacco, accompanied by an indirect excise through a system of licensing in the case of country tobacco.

**Taxes on Consumption—Restrictive Excises.**—(75) In the case of country spirit, a system of supply through a managed monopoly should be extended wherever possible, and the rate of duty should be raised in Bihar and Orissa and Assam. Where it is proposed to depart from the auction system of disposal of licenses, the sliding scale system is recommended as satisfactory, if supported by a sufficiently large and efficient preventive staff.

(76) In the case of foreign liquors, a definite increase in the tariff rate is recommended in lieu of vend fees being imposed in the shape of additions

to the tariff rate. The tariff rate should also be levied on "foreign" liquors made in India, and arrangements should be made to credit all the duty on foreign liquor, whether country-made or imported, to the Imperial head.

(77) In the case of country fermented liquors, the tree-tax system should be extended wherever possible, but only under rigid and systematic control; and experiments should be expedited in the direction of bringing the brewing of country beers under control.

(78) In the case of hemp drugs, a system of contract supply or managed monopoly should be introduced where it does not exist, and enquiries should be made as to the proportion of the intoxicating principle in the "bhang" consumed, and as to the practicability of making up the "ganja" in a more uniform and consistent form.

(79) In the case of opium, the cultivation should be restricted, the stock should be reduced, the duty made uniform, the auction system abandoned, and experiments made in making up the drug into pills of a fixed size.

(80) The necessity for employing a special force to deal with inter-provincial smuggling is emphasised.

(81) Action already taken in the direction of prohibition has involved a very large loss of revenue and increase in crime.

(82) The consistent pursuit of a policy of real prohibition would involve the exploitation of every alternative source of possible revenue.

### TAXES ON INCOMES.

*Part I.—General.*—(83) In the assessment of incomes the loss sustained in any one year should be allowed to be set off against the profits in the next subsequent year, subject to the condition that any assessee who claims to have made a loss must prove the fact by producing his accounts as soon as possible after the close of the year in which the loss is made.

(84) The effect of section 42 (1) of the Income Tax Act is to impose a much wider charge on the non-resident than is desirable. The law and practice should be brought into conformity with those adopted in England.

(85) The law in respect of refunds to non-residents should also be similar to that prevailing in England at present.

(86) The high limit of exemption and the almost universal practice of marriage make allowances for dependents unnecessary.

(87) A differentiation between earned and unearned income is not recommended in the present circumstances of India, but the case would be different if at any time incomes derived from agriculture were made liable to the tax.

(88) The rates in the case of incomes between £1,000 and £10,000 are very low in comparison with other countries. A moderate increase in the rates applicable to incomes above Rs.10,000 would be equitable.

The following scale is recommended:—

Rs.	Pies.
10,000 to 15,000	9
15,000 to 20,000	12
20,000 to 25,000	15
Above 25,000	18

The limit for super tax should at the same time be reduced to Rs.30,000 and a new rate of super-tax of six pies on the first Rs.20,000 or part thereof in excess of that sum introduced. In the case of the joint Hindu family the limit of exemption might be reduced to Rs.60,000, the anna rate being applied to the first Rs.40,000 of excess.

(89) The super-tax on companies should be converted into a corporation profits tax, the exemption of the first Rs.50,000 should be removed, and holding companies should not be assessed to this tax on profits which represent dividends of subsidiary companies.

(90) The necessary steps should be taken to secure an appeal to the Privy Council on points of law in respect of which conflicting decisions have been given.

(91) While secrecy in respect of income-tax matters is desirable, exceptions might be made (a) by permitting income-tax officers to draw up lists of persons who are liable to local taxes which are based on income, and (b) by publishing in the annual reports the names of persons penalised for income-tax offences.

(92) The most suitable method of preventing evasion by the formation of private companies and the withholding of dividends is to give the income-tax authorities power to treat such companies as if they were firms.

(93) In order to prevent evasion through the formation of bogus firms, (1) the incomes of married couples living together should be taxed at the rates applicable to their aggregate incomes; (2) the income-tax officer should be given power in particular cases to require the partners in an unregistered firm to furnish particulars of the partnership, and to compute the liability of the partners on the same basis as if the partnership had been registered; (3) particulars of the registration of any firm should be recorded by the income-tax officers and should be open to inspection; and (4) it is desirable to provide for the imposition of a heavy penalty in cases where loss of duty has arisen through failure to distribute the profits in accordance with the terms of a partnership.

*Part II.—Income-tax on agricultural incomes.*—(94) There is no historical or theoretical justification for the continued exemption from the income-tax of incomes derived from agriculture. There are, however, administrative and political objections to the removal of the exemption at the present time.

(95) There is ample justification for the proposal that incomes from agriculture should be taken into account for the purpose of determining the rate at which the tax on the other income of the same person should be assessed, if it should prove administratively feasible and practically worth while.

(96) The planter or other manufacturer who derives his income partly from cultivation and partly from manufacturing the produce so derived is fortunate in securing the benefit of the exemption.

(97) The money-lender who is a landlord only in name, ought, in equity, to pay the tax, but it does not seem administratively practicable to impose it.

**Taxes on Transactions.**—(98) The existing entertainment taxes are appropriate, and may be levied elsewhere. The power to levy the tax and the administration of it should be retained in the hands of the Local Governments, a share of the proceeds being made over to the local bodies concerned.

(99) Betting is recognised in many countries as a suitable object for taxation, and the form of the taxes levied in India is not objectionable.

(100) Municipal bodies should be given discretionary power to levy taxes on advertisements.

(101) A tax on railway tickets of the higher classes, which has been advocated by some witnesses, is not recommended.

*Duties under the Stamp Act.*—(102) The Indian Stamp Law fulfils its purpose satisfactorily and no drastic changes are recommended.

(103) The duty on documents of indebtedness such as bonds and mortgage deeds should be reduced as soon as circumstances permit.

(104) The distinction drawn between documents by which possession is given and that by which it is not should be removed.

(105) The rate charged on reconveyances should be reduced to two annas per Rs.100 of the mortgage debt, and the existing maximum of Rs.10 should be removed.



(106) In the case of deeds of cancellation, the duty should be that payable on the instrument sought to be cancelled, subject to a maximum of Rs.5.

(107) The duty on deeds of transfer should have regard to the value of the rights actually transferred.

(108) The duty on deeds of adoption should be reduced to Rs.5 where the property involved is of a value not exceeding Rs.2,000. A reduction may also be made in the case of deeds of authority to adopt.

(109) The duty on a settlement should be enhanced to the equivalent of the duty on a deed of gift.

(110) When a deed of release operates to convey property, it should be charged at the rate appropriate to a conveyance.

(111) In the case of deeds of partition land should be valued for purposes of duty at its actual value and not at a multiple of the assessment.

(112) The present fixed duties on instruments of partnership might be abolished and a duty at 4 annas per Rs.100 substituted.

(113) In the case of companies an *ad valorem* stamp duty on the nominal share capital at the rate of 8 annas per Rs. 100 might be levied and the duty on the articles of association and memorandum of association might be reduced to Rs.10.

(114) It is recommended that the distinction for purposes of duty between documents that are attested and those that are not should be done away with.

(115) Also that it should not be optional to the parties to fix values for purposes of duty other than the true values.

*Stock and produce transactions.*—(116) The issue of a contract note should be compulsory, both where a broker acts in that capacity and where he sells stock on his own account.

(117) It is hoped that it may be possible, with the aid of the stock exchange authorities, to put a stop to the loss of revenue arising from the use of blank transfers.

(118) In the absence of such action, the duty on contract notes should be raised to 4 annas for every Rs.10,000 subject to a maximum of Rs.40.

(119) In the case of the produce exchanges the taxation of futures is not only practically impossible, but on other grounds it would be undesirable to recognise these gambling transactions and to attempt to secure a revenue from them. It may be possible hereafter to secure a revenue from contract notes on the lines indicated in the case of the Stock Exchanges.

*Penalties.*—(120) For the existing maximum penalty on unstamped or insufficiently stamped documents there should be substituted a penalty of twice the deficient duty *plus* a sum of Rs.5.

(121) The limitation of the period within which a document can be voluntarily produced for rectification of the stamp duty should be removed.

(122) The disability of inadmissibility in evidence should be limited to the case of bills of exchange and promissory notes.

(123) From the point of view of the administration of the stamp law uniform legislation and unified rates of stamp duty are desirable.

*Fees.* — (124) Fees for the registration of vehicles should not be more than sufficient to cover the expenses of examining and registering the vehicles and testing the drivers.

(125) The fees for possession of firearms might be increased in the case of weapons licensed for purposes of sport and display, and in that of numerous weapons possessed by the same person.

(126) A cautious experiment might be made in selected local areas in the imposition of a fee for the registration of marriages, provided it is made clear that the purpose of the registration is merely to afford superior probative value of the fact of marriage.

(127) The fees charged for the registration of companies might be reduced, if a stamp duty on the nominal share capital is levied as recommended by the Committee.

(128) Recent increases in the fees for the registration of documents do not represent an increase in the element of taxation. It is permissible to increase these fees up to the point where they correspond to the probable value of the benefit derived.

(129) The fees for mutation of names in the revenue registers might with advantage be made more uniform. *Ad valorem* fees would not be appropriate in this case.

*Court-fees.*—(130) The pitching of the scale of the court-fees so as to produce a revenue just sufficient to cover all the costs of the administration of civil justice is an ideal to be aimed at, but financial considerations may justify the State in charging something more, provided that the fees charged do not cause substantial hardship to any class.

(131) A record should be maintained on uniform lines in each province to determine what is the amount of fees actually levied in the course of litigation, what is the actual cost of the courts and how the one compares with the other.

(132) The copyist and process services should just pay for themselves.

(133) The system under which the fees are fixed on a graduated and regressive scale with reference to the value of the subject matter litigated is suitable, but effect might be given to the principle of measuring court-fees by the cost of the service rendered to the extent of taking the fee in two instalments, the first being payable at the institution of the suit and the second on or immediately after the settlement of issues.

(134) The Court Fees Act and the schedules thereto need thorough revision by an expert committee.

(135) Section 7 should be recast and a schedule prepared similar to that in the Indian Limitation Act of suits and appeals which commonly arise in civil courts with a method of valuation prescribed for each.

(136) Provision should be made for recovery of deficient fees in decided suits.

(137) A series of instances is given of cases in which the fees are inadequate.

(138) In the matter of court-fees uniformity is desirable, not only as regards general principles, procedure and methods of realisation, but also as regards rates.

(139) In particular it is desirable that steps should be taken to render the fees on the Original Sides of the Chartered High Courts so far as possible uniform with one another, and not less than those in courts in the mofussil.

(140) The fees payable on applications to revenue and other officers should be examined and abolished except possibly in the case of those on applications which involve enquiries of a judicial nature.

(141) Fees paid in cash to officers of Government should also be subjected to scrutiny.

(142) An audit of receipts is recommended in the case both of stamp duties and of court-fees.

**Probate Duties.**—(143) A succession duty is impracticable in India, but a duty on the lines of the English Estate Duty, which may initially take the form of a transfer or mutation duty on death, is more practicable.

(144) This involves representation of the deceased, which is desirable on other grounds.

(145) The existing law provides for it in certain cases, but is limited to particular communities.

(146) The taxation that it involves is very inequitable in its incidence.

(147) The Committee recommend its modification and extension to all communities, and discuss the means of effecting this.

(148) They do not find the law of the joint Hindu family an insuperable obstacle.

(149) The legislation dealing with the question should be undertaken by the Central Legislature.

**Local Taxation.**—(150) A comparison with conditions in other countries indicates that the difficulties in local administration in India, and especially the unwillingness of the people to submit to taxation, is mainly due to the large jurisdictions of the local bodies.

**Taxes on trade.**—(151) The octroi and the terminal tax in the form in which they are levied in India offend against all the canons of taxation.

(152) It is a function inherent in the Imperial Government to protect inter-provincial traffic from obstruction by taxes imposed by subordinate authorities, and it is regretted that the Government of India have to so large an extent abandoned their control of a matter that is of paramount importance to the trade of the country.

(153) Four possible means of replacing these taxes are discussed, viz. :—

(a) a rate on land and houses,

(b) a profession tax,

(c) market dues and taxation of private markets,

(d) a tax on retail sales.

(154) If it is not possible to adopt any of these alternatives, general principles to govern the levy of octroi and terminal taxes in future are indicated.

**Tolls.**—(155) Where a terminal tax is levied and the rates are raised beyond a certain level, terminal tolls on the roads are necessary to prevent evasion.

(156) General municipal tolls are justified when they form part of a scheme for the taxation of vehicles.

(157) Ferry charges are apt to develop into a pure tax on transit.

(158) Tolls on district roads are undoubtedly an impediment to through traffic. It is desirable to abolish them, at least in the case of motor vehicles, and to replace them by a provincial tax on the vehicle. In case this is done, the import duty should be reduced.

**Taxes on property.**—(159) The rates of property tax in India are very low, and there is considerable scope for increase in the assessment of town property.

(160) Another outstanding feature of the property tax in India is the inefficiency of the machinery of collection and assessment. The remedy for this state of affairs lies in provincial control.

(161) In view of the recommendation for the standardisation of the land revenue at a comparatively low rate, it is suggested that the maximum limit on the rate of cess on agricultural land be altogether removed, or at least be raised to  $6\frac{1}{2}$  per cent. of the annual value.

(162) In the case of works executed by local authorities for the benefit primarily of specific areas, it is recommended that the local authority concerned should be in a position to recover the whole or a portion of the cost in the shape of an annual cess imposed for a limited period on land in those areas.

*Taxes on persons.*—(163) The assessment of the tax on circumstances and property has given rise to widespread complaints of unfair incidence, while the levy of the profession tax has been found to be administratively difficult. It is recommended that the assessment and collection of these taxes in rural areas should be entrusted to the general administrative staff of the districts.

(164) The tax on pilgrims is theoretically objectionable, but the rate is so low that it involves little hardship or addition to the expenditure which the pilgrimage normally involves.

(165) A light terminal tax on passengers may be appropriate in the case of a large city, but the tax of Rs.2 levied in Rangoon on passengers departing by sea is difficult to justify.

*General.*—(166) The general rate of local taxation in India is very low. This is partly due to the fact that the taxation of land, which should be the main basis of local taxation, has in a great measure in India been reserved for the State, and partly to the fact that the jurisdictions of local bodies are so large as to remove them from effective touch with the tax payers.

(167) It is recommended that, from the point of view of taxation at any rate, the development of the future should be in the direction of restoring the influence of the village panchayat, and limiting the functions of the bodies at present operating.

*Local taxation of railways.*—(168) Where it is proposed to include a railway colony within the area of a municipality, it is recommended that provision should be made for the railway authorities to be heard by the Local Government before any order is issued approving the inclusion.

(169) In the case of an existing colony within a municipality where the railway company derives some benefit from a municipal service or services, for which a specific tax is imposed, but not the full benefit which the levy of the tax implies, it is suggested that a reasonable basis of agreement between the company and the municipality would be the remission of a proportion of the tax paid by the colony, to be fixed on principles indicated.

(170) The assessment of railway property to the general municipal rates should be based on the principle that the service rendered to a railway can best be gauged by the extent and value of property used for the reception and despatch of goods and passengers. The method of assessment of such property followed in Bombay is recommended for general adoption.

(171) The exemption from the cess on land enjoyed by the State and guaranteed railways under the Bengal Cess Act should be extended throughout India, if there are any railways that do not enjoy it.

(172) There is no sufficient justification for the exemption of railways from the chowkidari tax.

*Local taxation of mines.*—(173) There is no necessary anomaly in the fact that the general taxes on mines are based on annual value and net profits, and the special taxes sometimes on raisings and sometimes on despatches.

(174) But an arrangement under which the same rate of taxation is applied to the annual net profits of a mining enterprise as to the annual value of agricultural land must make for differential taxation.

**The Distribution of the Burden.**—(175) An estimate of the proportion borne by average taxation to average income has a very limited value.

(176) It was not possible within the time of the Committee's appointment to secure new data on these or any other lines, nor is the existing material sufficient to enable an estimate to be framed of the economic condition of the various classes of the people.

(177) The Committee are therefore thrown back on such general considerations relating to typical classes of the population as a prudent Finance Minister would examine in framing or revising a scheme of taxation.

(a) *The urban labourer.*—The burden on this class has increased during recent years. It will, to some extent, be reduced by the abolition of the cotton excise duty. It is not desirable to reduce the salt duty or the excises on intoxicants, and a decrease in the customs duties and in the municipal taxes on consumption is indicated as the more satisfactory course.

(b) *The landless agricultural labourer.*—The burden on this class is very low, and it would be benefited by the abolition of the excise duty on cotton goods and by a reduction in customs duty on goods consumed by all classes.

(c) *The small landholder.*—The difficulties of this class are not primarily the result of taxation. In order to afford it relief it has been suggested that the land revenue should be standardised at a flat rate not exceeding 25 per cent. of the annual value.

(d) *The peasant proprietor.*—The burden of this class is comparatively light. The only recommendations made that are likely to affect it are the extension of the probate duties and the raising of the rate of local cesses.

(e) *The large landholder.*—Except in individual cases, the burden of this class is comparatively light. The possible means of increasing its contribution are by the imposition of an income-tax on agricultural incomes or the extension of the probate duty.

(f) *The village trader.*—This class escapes certain taxes intended to affect it, and should be brought within the scope of further taxation by a more general extension and a more efficient administration of taxes of the nature of the circumstances and property tax and the profession tax.

(g) *The small trader in towns.*—The contribution of this class is more than that of the previous one owing to municipal taxation, which may well be raised.

(h) *The larger trader.*—This class escapes with a comparatively light burden, but would be affected by the extension of the probate duties, the steepening of the graduation of the income-tax and the increase in local taxation.

(i) *The big merchants.*—Though this class bears a large portion of the tax revenue, its burden is not as heavy as that of similar classes in other countries. It would be increased by the extension of the probate duties, by the increase in the super-tax and by the abolition of the exemption limit in the case of companies.

(j) *The professional classes—lower grades.*—This class has suffered under recent developments, but its tax burden is comparatively small.

(k) *The higher professional classes.*—The position of this class is similar to that of the largest merchants.

**The Order of Precedence.**—(178) A change almost amounting to a revolution has already taken place in the proportions borne by the different taxes to the total revenue. The tendencies that have brought this about have been generally in the right directions.

(179) As regards the tendencies that are now in operation, (a) a policy of real prohibition would involve a loss of revenue exceeding the return from any new proposals which can be put forward, (b) the pledge given in relation to

the cotton excise involves provision for its replacement, (c) it is impossible to forecast the further effects of the policy of discriminating protection or of high customs duties for revenue purposes, (d) an increase in the import duties on imported liquors is desirable on special grounds.

(180) The Committee do not include local taxation in their recommendations regarding the order in which taxes may be remitted or imposed.

(181) Subject to these considerations, the following is the order of priority suggested in the case of the remission of taxation:—

(a) Reduction in the customs duties on conventional necessities, especially on sugar, with a view to affording relief to the poorest classes.

(b) The removal of the export duty on hides.

(c) In the case of non-judicial stamps, a revision of the schedule in the direction of reduction, especially in relation to documents such as bonds and agreements.

(d) Standardisation of the land revenue, which will ultimately result in a further reduction of the proportion borne by the land revenue to the total taxation.

(e) Reduction of court-fees, especially by the collection of the court-fees on suits in two instalments and by the cessation of the practice of making a profit out of the fees for copying and for service of processes.

(182) The following order of priority has been suggested in the matter of substitutes for taxes removed or reduced, including the cotton excise and the loss under restrictive excises:—

(a) Proper collection of duties on stock exchange transactions.

(b) Conversion of the super-tax on companies into a corporation profits tax and the abolition of the exemption limit

(c) Regrading of the income-tax and introduction of a super-tax on incomes from Rs.30,000 to Rs.50,000.

(d) Enhancement in the rate of duty on country-made "foreign" liquors up to the tariff rate and an increase in the excise duty on country spirits in Bihar and Orissa and Assam.

(e) Increase in the license fees for firearms.

(f) Taxation of patent medicines.

(g) A general extension of probate duties.

(h) Extension of the tax on entertainments and betting.

(i) Imposition of taxation on tobacco through means of an excise on local manufactures or an increase in the import duty on unmanufactured tobacco, coupled with a system of licensing of sales of country tobacco.

(j) Export duties on lac, oil-seeds, bones and other manures.

(k) An excise duty on aerated waters.

(l) The imposition of income tax on agricultural incomes is put in the last place for reasons which are explained.

### THE DIVISION OF THE PROCEEDS.

*Part I.—Imperial and Provincial.*—(183) There is no ideal system of division of sources of taxation between Imperial and State Governments.

(184) A system of separation of sources is the best if a scheme can be discovered which gives to each Government a revenue adequate to its needs and at the same time effects a fair division between them.

(185) Where this is not possible, a system of division of the proceeds of taxes is better than a system of subsidies.

(186) Certain taxes are essentially Imperial, namely, import duties; revenue excises; and revenue derived from the export of opium.

The revenue from non-judicial stamps is much more appropriate to the Imperial than to the Provincial head. It is desirable that the duty on country-

made "foreign" liquors should be levied at the tariff rate and be credited to the same head as the import duty. The increasing restrictions that are being imposed upon excise opium suggest that it is desirable that this item of revenue also should be credited to the Imperial Government, which undertakes responsibility for the restrictions.

(187) Certain taxes are essentially Provincial, namely, land revenue and receipts from irrigation; taxes on transactions other than those levied under the Stamp Act; fees, including court-fees; and revenue from the licensing of sale of tobacco.

(188) The following taxes afford possible balancing factors; income-tax, export duties, restrictive excises other than on opium, and probate duties.

(189) The absence of an income-tax on agricultural incomes and the large proportion of the total revenue that is derived from the land make a division of the income-tax unavoidable if the division is to be fair to industrial and agricultural provinces alike.

(190) If equilibrium can be secured by this means alone, it is undesirable to use the other balancing factors; in other words, the export duties should be entirely Imperial and the restrictive excises, other than that on opium, and the probate duty entirely Provincial.

The Committee's proposals therefore reduce themselves to the transfer of non-judicial stamps and the excise duty on country-made "foreign" liquors, and possibly the revenue now derived from excise opium, to the Imperial Government, and the establishment of equilibrium by the transfer to the provinces of a share of the income-tax.

(191) The most satisfactory means of determining such a share is to make over the proceeds of a basic rate on personal incomes, graduated proportionately to the general rate, to which should be added a small proportion of the receipts from the corporation profits tax.

(192) It is not within the Committee's functions to suggest a detailed revision of the settlement between the Government of India and the Provinces, and they therefore leave the application of the principles suggested by them to some other body.

(193) While Devolution Rule 15 appears to have failed of its object, it does not appear practicable to revise it except as part of the general revision.

*Part II.—Provincial and Local.*—(194) The Committee have recommended an increase in the resources of local bodies—

(a) by conversion of the "thathameda," the capitation tax and the "chowkidari" into sources of local revenue;

(b) by standardising the land revenue so as to give greater scope for local taxation of land, and by the imposition of special assessments;

(c) by transfer to local bodies of a share of the collections of Local Governments from ground-rents in towns, and by increasing the rates on non-agricultural land;

(d) by giving municipalities the power to tax advertisements;

(e) by extending the imposition of taxes on entertainments and betting and giving local bodies a substantial share of the proceeds;

(f) by extending and improving the administration of the taxes on circumstances and property and the profession tax;

(g) by reducing the import duty on motor cars and enabling Local Governments to levy a Provincial tax for distribution in lieu of tolls;

(h) by grant of power to levy a fee for the registration of marriages in selected areas.

(195) When all these allotments are made, the resources of local authorities will still require to be supplemented by subsidies.

(196) The manner in which these should be distributed is an administrative question, but the following principles are recommended :—

(a) Subsidies should ordinarily be restricted to services which are of national importance.

(b) They should be granted on a system which will enable the Provincial Government effectively to enforce efficiency.

(c) They should be granted on some uniform and easily comprehensible plan, so worked out in advance that the local body can arrange its programme of expenditure in good time and provide for a due adjustment between that, its expected receipts and its scheme of taxation.

#### THE MACHINERY OF TAXATION.

(197) The effect of past developments has been—

(a) that the Collector has been relieved in a great measure of the function of assessment, while remaining responsible for collection and remittance;

(b) that the increase of specialisation and the separation of Imperial from Provincial functions have led to multiplication of departments; and

(c) that, in the case of local bodies, there has been a transfer to elected representatives of functions which are not rightly theirs.

(198) The Committee's recommendations are as follows :—

(1) *Imperial taxes.*—The pivot of the tax administration in the case of these taxes should be the Central Board of Revenue, directing separate but co-ordinated staffs to deal with the income-tax, customs and salt.

(2) *Provincial taxes.*—In the case of Provincial taxes, there is no similar central head, but the Collector should be the district head of the staffs responsible for land revenue, excise, registration, taxes on transactions and fees.

(3) *Local bodies.*—The pivot of the administration in the case of local bodies should be the executive officer, who might be a lent officer of the district staff, and who would be in touch, in the administration of the taxes, with certain Provincial and Imperial officers.

The Collector should act as a liaison officer between the Imperial and Provincial and between the Provincial and Local departments, and he or one of his assistants should also be the appellate authority in all cases of appeals against assessments to local taxes, except where provision is made for appeal to a court.



## APPENDIX II.

## (APPENDIX TO CHAPTER III.)

ACT No. III of 1927.

[PASSED BY THE INDIAN LEGISLATURE.]

*(Received the assent of the Governor General on the 8th March, 1927.)***An Act to provide for the continuance of the protection of the steel industry in British India.**

Whereas it is expedient, in pursuance of the policy of discriminating protection of industries in British India with due regard to the well-being of the community, that increased import duties should continue to be levied on certain iron and steel articles for the purpose of fostering and developing the steel industry in British India, and that the rates of the duties leviable in the application of that policy should be fixed for a period of seven years from the 1st day of April, 1927; It is hereby enacted as follows:—

1. *Short title and commencement.*—(1) This Act may be called the Steel Industry (Protection) Act, 1927.

(2) It shall come into force on the 1st day of April, 1927.

2. *Amendment of section 3, Act VIII. of 1894.*—(1) For sub-section (4) of section 3 of the Indian Tariff Act, 1894, the following sub-sections shall be substituted, namely:—

“(4) If the Governor General in Council is satisfied, after such inquiry as he thinks necessary, that articles of British manufacture chargeable with duty under Part VII of the Second Schedule are being imported into British India at such a price as is likely to render ineffective the protection intended to be afforded by such duty to similar articles manufactured in India, he may, by notification in the Gazette of India, increase such duty to such extent as he thinks necessary.

(5) If the Governor General in Council is satisfied, after such inquiry as he thinks necessary, that articles not of British manufacture chargeable under Part VII of the Second Schedule with a higher duty than similar articles of British manufacture are being imported into British India from any place outside India at such a price as is likely to render ineffective or excessive the protection intended to be afforded by such duty to similar articles manufactured in India, he may, by notification in the Gazette of India, increase or reduce such duty to such extent as he thinks necessary either generally or in respect of such articles when imported from or manufactured in any country or countries specified in the notification:

Provided that the duty leviable on any such article shall in no case be less than the duty leviable on a like article of British manufacture.

(6) The Governor General in Council may, by notification in the Gazette of India, prescribe the conditions subject to which articles shall be deemed to be of British manufacture for the purposes of this section and of the Second Schedule.”

(2) In the Second Schedule to the same Act there shall be made the amendments specified in the Schedule to this Act.

(3) The amendments made by this section other than those made in Parts I and II of the Second Schedule to the Indian Tariff Act, 1894, shall have effect only up to the 31st day of March, 1934.

3. *Statutory inquiry.*—The Governor General in Council shall, not later than the 31st day of March, 1934, cause to be made, by such persons as he may appoint in this behalf, an inquiry as to the extent, if any, to which it is

necessary to continue the protection of the steel industry in British India and as to the manner in which any protection found necessary should be conferred.

4. *Repeal of Act XIV of 1924.*—The Steel Industry (Protection) Act, 1924, is hereby repealed.

### THE SCHEDULE.

AMENDMENTS TO BE MADE IN SCHEDULE II OF THE INDIAN TARIFF ACT, 1894.  
(See section 2.)

1. In Part I after item No. 20 the following item shall be inserted, namely:—

“ 20A | Zinc, unwrought, including cakes, ingots, tiles (other than boiler tiles), hard or soft slabs and plates, dust, dross and ashes; and broken zinc.”

2. In Part II—

(a) in the heading, after the words “ liable to ” the word “ non-protective ” shall be inserted; and

(b) after item No. 39 the following heading and item shall be inserted, namely:—

#### “ METALS.

39A | TIN, block | Ton | Rs.250 ”

3. For items Nos. 60, 61 and 62 and the heading thereto the following shall be substituted, namely:—

#### “ METALS—IRON AND STEEL.

- |    |   |
|----|---|
| 60 | Iron alloys.<br>Iron angle, channel and tee not otherwise specified (see No. 143).<br>Iron bar and rod not otherwise specified (see No. 144).<br>Iron pig.<br>Iron rice bowls.  |
| 61 | Iron or Steel anchors and cables.<br>Iron or Steel bolts and nuts, including hook-bolts and nuts for roofing.<br>Iron or Steel hoops and strips.<br>Iron or Steel nails, rivets and washers, all sorts, not otherwise specified (see No. 145).<br>Iron or Steel pipes and tubes; also fittings therefor, that is to say, bends, boots, elbows, tees, sockets, flanges, plugs, valves, cocks and the like, excluding pipes, tubes and fittings therefor otherwise specified (see No. 146).<br>Iron or Steel railway track material not otherwise specified (see Nos. 63 and 150), including bearing plates, cast iron sleepers and fastenings therefor, and lever-boxes.<br>Iron or Steel tramway track material, not otherwise specified (see No. 150), including rails, fish-plates, tie-bars, switches, crossings and the like materials of shapes and sizes specially adapted for tramway tracks.<br>Iron or Steel sheets (including cuttings, discs and circles) under $\frac{1}{4}$ inch thick, whether fabricated or not, if coated with metals other than tin or zinc. |

61—*continued.*

Iron or Steel plates and sheets (including cuttings, discs and circles) not under  $\frac{1}{8}$  inch thick, not otherwise specified (see Nos. 146, 147, 153 and 154), whether fabricated or not.  
 Iron or Steel barbed or stranded fencing-wire and wire-rope.  
 Iron or Steel (other than bar or rod) specially designed for the reinforcement of concrete.  
 Iron or Steel expanded metal.

62

Steel, angle and tee if galvanized, tinned or lead-coated.  
 Steel (other than bars), alloy, crucible, shear, blister and tub.  
 Steel (other than bars) made for springs and cutting tools by any process.  
 Steel ingots, blooms and billets, and slabs of a thickness of  $1\frac{1}{2}$  inches or more.  
 Steel bar and rod, the following kinds—  
 (a) shapes specially designed for the reinforcement of concrete, if the smallest dimension is under  $\frac{1}{2}$  inch;  
 (b) all shapes and sizes, if—  
     (i) of alloy, crucible, shear, blister or tub steel, or  
     (ii) galvanized or coated with other metals, or  
     (iii) planished or polished, including bright steel shafting;  
 (c) other qualities, if of any of the following shapes and sizes—  
     (i) rounds under  $\frac{1}{2}$  inch diameter.  
     (ii) squares under  $\frac{1}{2}$  inch side.  
     (iii) flats, if under 1 inch wide and not over  $\frac{1}{2}$  inch thick.  
     (iv) flats not under 8 inches wide and not over  $\frac{1}{2}$  inch thick.  
     (v) ovals, if the dimension of the major axis is not less than twice that of the minor axis.  
     (vi) all other shapes, any size."

4. For item No. 63 and the heading thereto the following shall be substituted, namely:—

**" RAILWAY PLANT AND ROLLING-STOCK.**

63

Railway materials for permanent-way and rolling-stock, namely, sleepers, other than iron and steel, and fastenings therefor; bearing plates, fish bolts and nuts, chairs, interlocking apparatus, brake-gear, shunting skids, couplings and springs, signals, turn-tables, weighbridges, carriages, wagons, traversers, rail removers, scooters, trollies, trucks, and component parts thereof; switches, crossings and the like materials made of alloy steel; also cranes, water-cranes and water-tank when imported by or under the orders of a railway company:

Provided that for the purpose of this entry 'railway' means a line of railway subject to the provisions of the Indian Railways Act, 1890, and includes a railway constructed in a State in India and also such tramways as the Governor General in Council may, by notification in the Gazette of India, specifically include therein:

Provided also that nothing shall be deemed to be dutiable hereunder which is dutiable under No. 51 or No. 51A."

THE SCHEDULE—*continued.*

5. In item No. 87, before the word "trams" the words "CONVEYANCES not specified in No. 142, namely," shall be inserted.

6. After Part VI the following Part shall be inserted, namely:—

## "PART VII.

*Articles which are liable to protective duty at special rates.*

No.	Name of Article.	Rate of duty.
<b>CONVEYANCES.</b>		
142	COAL TUBS, tipping wagons and the like conveyances designed for use on light rail track, if adapted to be worked by manual or animal labour and if made mainly of iron or steel; and component parts thereof made of iron or steel— (a) if of British manufacture . . . . (b) if not of British manufacture . .	Rs. 21 per ton or 17 per cent. <i>ad valorem</i> , whichever is higher. Rs. 21 per ton or 17 per cent. <i>ad valorem</i> , whichever is higher, plus Rs. 15 per ton.
<b>METALS—IRON AND STEEL.</b>		
143	IRON angle, channel and tee— (a) fabricated, all qualities— (i) of British manufacture . . . . (ii) not of British manufacture (b) not fabricated, kinds other than galvanized, tinned or lead-coated and other than Crown or superior qualities— (i) of British manufacture . . . . (ii) not of British manufacture	Rs. 21 per ton or 17 per cent. <i>ad valorem</i> , whichever is higher. Rs. 21 per ton or 17 per cent. <i>ad valorem</i> , whichever is higher, plus Rs. 15 per ton. Rs. 19 per ton. Rs. 30 per ton.
144	IRON, COMMON BAR not galvanized, tinned or lead-coated if not of any shape and dimensions specified in clause (a) or clause (c) of No. 82—	

## THE SCHEDULE—continued.

No.	Name of Article.	Rate of duty.
144— <i>contd.</i>	(i) of British manufacture	Rs. 26 per ton.
	(ii) not of British manufacture	Rs. 37 per ton.
145	IRON OR STEEL NAILS, wire or French	Rs. 3 per cwt.
146	IRON OR STEEL PIPES and tubes and fittings therefor, if riveted or otherwise built up of plates or sheets—	
	(a) galvanized . . . . .	Rs. 33 per ton or 17 per cent. <i>ad valorem</i> , whichever is higher.
	(b) not galvanized—	
	(i) not under $\frac{1}{2}$ inch thick—	
	of British manufacture	Rs. 21 per ton or 17 per cent. <i>ad valorem</i> , whichever is higher.
	not of British manufacture	Rs. 21 per ton or 17 per cent. <i>ad valorem</i> , whichever is higher, plus Rs. 15 per ton.
	(ii) under $\frac{1}{2}$ inch thick—	
	of British manufacture	Rs. 39 per ton or 17 per cent. <i>ad valorem</i> , whichever is higher.
	not of British manufacture	Rs. 39 per ton or 17 per cent. <i>ad valorem</i> , whichever is higher, plus Rs. 26 per ton.
147	IRON OR STEEL plates or sheets (including cuttings, discs and circles) not under $\frac{1}{2}$ inch thick and not of cast iron—	
	(a) fabricated, all qualities—	
	(i) of British manufacture . . .	Rs. 21 per ton or 17 per cent. <i>ad valorem</i> , whichever is higher.
	(ii) not of British manufacture	Rs. 21 per ton or 17 per cent. <i>ad valorem</i> , whichever is higher, plus Rs. 15 per ton.

THE SCHEDULE—*continued.*

No.	Name of Article.	Rate of duty.
147— <i>contd.</i>	(b) not fabricated, chequered and ship, tank, bridge and common qualities—	
	(i) of British manufacture	Rs. 20 per ton.
	(ii) not of British manufacture	Rs. 36 per ton.
148	IRON OR STEEL sheets (including cuttings, discs and circles) under $\frac{1}{8}$ inch thick—	
	(a) fabricated—	
	(i) galvanized . . . . .	Rs. 33 per ton or 17 per cent. <i>ad valorem</i> , whichever is higher.
	(ii) all other sorts not otherwise specified ( <i>see</i> No. 61)—	
	of British manufacture	Rs. 39 per ton or 17 per cent. <i>ad valorem</i> , whichever is higher.
	not of British manufacture	Rs. 39 per ton or 17 per cent. <i>ad valorem</i> , whichever is higher, plus Rs .26 per ton.
	(b) not fabricated—	
	(i) galvanized . . . . .	Rs. 30 per ton.
	(ii) all other sorts not otherwise specified ( <i>see</i> Nos. 61 and 154)—	
	of British manufacture	Rs. 35 per ton.
	not of British manufacture	Rs. 59 per ton.
149	IRON OR STEEL WIRE, other than barbed or stranded fencing wire, wire-rope or wire-netting.	Rs. 60 per ton.
149A	IRON OR STEEL the original material (but not including machinery), <i>see</i> Nos. 51 and 51A of any ship or other vessel intended for inland or harbour navigation which has been assembled abroad, taken to pieces and shipped for re-assembly in India:	Rs. 23 per ton or 10 per cent. <i>ad valorem</i> , whichever is higher.
	Provided that articles dutiable under this item shall not be deemed to be dutiable under any other item.	

THE SCHEDULE—*continued.*

No.	Name of Article.	Rate of duty.
150	<p>IRON OR STEEL RAILWAY TRACK MATERIAL—</p> <p>A. Rails (including tramway rails) the heads of which are not grooved—</p> <p>(a) (i) 30 lbs. per yard and over . . . . .</p> <p>(ii) fish-plates therefor . . . . .</p> <p>(iii) spikes and tie-bars therefor—</p> <p>    of British manufacture . . . . .</p> <p>    not of British manufacture . . . . .</p> <p>(b) under 30 lbs. per yard, and fish-plates, spikes and tie-bars therefor—</p> <p>    if of British manufacture . . . . .</p> <p>    if not of British manufacture . . . . .</p> <p>B. Switches and crossings and the like materials not made of alloy steel, including switches and crossings and the like materials for tramway rails the heads of which are not grooved—</p> <p>(i) for rails 30 lbs. per yard and over . . . . .</p> <p>(ii) for rails under 30 lbs. per yard—</p> <p>    of British manufacture . . . . .</p> <p>    not of British manufacture . . . . .</p> <p>C. Sleepers, other than cast iron, and keys and distance pieces and the like for use with such sleepers.</p>	<p>Rs. 13 per ton.</p> <p>Rs. 6 per ton or 10 per cent. <i>ad valorem</i>, whichever is higher.</p> <p>Rs. 26 per ton.</p> <p>Rs. 37 per ton.</p> <p>Rs. 26 per ton.</p> <p>Rs. 37 per ton.</p> <p>Rs. 14 per ton or 17 per cent. <i>ad valorem</i>, whichever is higher.</p> <p>Rs. 29 per ton or 17 per cent. <i>ad valorem</i>, whichever is higher.</p> <p>Rs. 29 per ton or 17 per cent. <i>ad valorem</i>, whichever is higher, plus Rs. 12 per ton.</p> <p>Rs. 10 per ton or 10 per cent. <i>ad valorem</i>, whichever is higher.</p>

THE SCHEDULE.—*continued.*

No.	Name of Article.	Rate of duty.
151	<p>STEEL, angle and tee, not otherwise specified (<i>see</i> No. 62) and beam, channel, zed, trough and piling—</p> <p>(a) fabricated—</p> <p>(i) of British manufacture . . .</p> <p>(ii) not of British manufacture</p> <p>(b) not fabricated—</p> <p>(i) of British manufacture . . .</p> <p>(ii) not of British manufacture . . .</p>	<p>Rs. 21 per ton or 17 per cent. <i>ad valorem</i>, whichever is higher.</p> <p>Rs. 21 per ton or 17 per cent. <i>ad valorem</i>, whichever is higher, plus Rs. 15 per ton</p> <p>Rs. 19 per ton.</p> <p>Rs. 30 per ton.</p>
152	<p>STEEL, bar and rod, not otherwise specified (<i>see</i> No. 62)—</p> <p>(i) of British manufacture . . . . .</p> <p>(ii) not of British manufacture . . .</p>	<p>Rs. 26 per ton.</p> <p>Rs. 37 per ton.</p>
153	<p>STEEL STRUCTURES, fabricated partially or wholly, not otherwise specified, if made mainly or wholly of steel bars, sections, plates or sheets, for the construction of buildings, bridges, tanks, wellcurbs, trestles, towers and similar structures or for parts thereof, but not including builders' hardware (<i>see</i> No. 90) or any of the articles specified in Nos. 51, 51A, 64 or 87—</p> <p>(i) of British manufacture . . . . .</p> <p>(ii) not of British manufacture . . .</p>	<p>Rs. 21 per ton or 17 per cent. <i>ad valorem</i>, whichever is higher.</p> <p>Rs. 21 per ton or 17 per cent. <i>ad valorem</i>, whichever is higher, plus Rs. 15 per ton.</p>
154	<p>STEEL, tinplates and tinned sheets, including tin taggers and cuttings of such plates, sheets or taggers.</p>	<p>Rs. 48 per ton."</p>



## APPENDIX III.

## (APPENDICES TO CHAPTER VI.)

## A.—STATEMENT SHOWING THE PRODUCTION, IMPORTS AND EXPORTS OF YARN DURING THE PERIOD 1899-1900 TO 1925-26.

Years.	Imports of Yarn.	Re-exports of Yarn.	Net imports of Yarn (2-3)	Indian Production.	Exports of Indian Yarn.	Net consumption of Indian mill production (5-6).	Total Indian consumption (4-7)	Yarn consumed in mills for production of woven goods assuming 100 lbs. of yarn = 112 lbs. of cloth.	Balance of Yarn available for consumption in handloom industry (8-9).	Population.	Consumption of Yarn per capita.
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
	lbs. (million)	lbs. (million)	lbs. (million)	lbs. (million)	lbs. (million)	lbs. (million)	lbs. (million)	lbs. (million)	lbs. (million)	(million)	lbs.
1899-1900	42.6	5.5	37.1	514	244	270	307	87	220	292	1.06
1900-01	34.8	4.7	30.1	353	122	231	261	88	173	294	.88
1901-02 ...	38.3	6.7	31.6	573	278	295	327	107	220	295	1.10
1902-03 ...	33.7	5.8	27.9	576	255	321	349	110	239	297	1.17
1903-04 ...	28.0	4.9	23.1	579	260	319	342	123	219	299	1.14
1904-05 ...	30.6	5.2	25.4	578	256	322	347	142	205	310	1.15
1905-06 ...	45.8	5.0	40.8	681	305	376	417	146	271	302	1.38
1906-07 ...	37.7	5.5	32.2	654	251	403	435	148	287	305	1.42
1907-08 ...	37.3	6.6	30.7	638	223	415	446	169	277	307	1.45
1908-09 ...	41.5	6.5	35.0	658	242	416	451	171	280	309	1.42
1909-10 ...	40.3	5.6	34.7	628	234	394	429	204	225	311	1.37
1910-11 ...	32.5	5.4	27.1	610	191	419	446	220	226	313	1.42
1911-12 ...	42.0	7.3	34.7	625	161	464	499	238	261	315	1.58
1912-13 ...	50.0	9.3	40.7	688	215	473	514	254	260	315	1.63
1913-14 ...	44.2	8.3	35.9	683	207	476	512	245	267	316	1.62
1914-15 ...	42.9	8.9	34.0	652	143	509	543	247	296	316	1.71
1915-16 ...	40.4	8.7	31.7	722	168	554	586	314	272	317	1.84
1916-17 ...	29.5	6.7	22.8	681	178	503	526	337	189	317	1.65
1917-18 ...	19.4	6.1	13.3	661	130	531	544	340	204	317	1.71
1918-19 ...	38.1	6.1	32.0	615	73	542	574	312	262	318	1.81
1919-20 ...	15.2	7.2	7.9	636	161	475	483	343	140	318	1.51
1920-21 ...	47.3	3.6	43.7	660	89	571	615	328	287	319	1.92
1921-22 ...	57.1	3.6	53.5	694	88	606	660	361	299	319	2.06
1922-23 ...	59.3	6.3	53.0	706	64	642	695	362	333	319	2.17
1923-24 ...	44.6	5.1	39.5	617	46	571	611	359	252	320	1.90
1924-25 ...	55.9	5.4	50.5	719	46	673	724	410	314	320	2.26
1925-26 ...	51.6	1.0*	50.6	686	32*	654	705	415	290	320	2.20

\*Figures for exports and re-exports by sea only are available for the year 1925-26.

B.—STATEMENT SHOWING THE PROGRESS OF THE COTTON MILL INDUSTRY IN INDIA.

Year ending 30th June.	Number of mills working.	Number of spindles.	Number of looms.	Number of mills not working.	Number of spindles.	Number of looms.	Number of mills in course of erection.	Number of spindles.
1	2	3	4	5	6	7	8	9
1883-84...	68	1,838,911	16,162	1	15,264	Nil.	13	147,492
1884-85...	83	2,099,346	16,437	Nil.	Nil.	Nil.	7	46,300
1885-86...	86	2,227,464	15,060	5	171,736	2,395	4	55,728
1886-87...	94	2,272,982	17,576	Nil.	Nil.	Nil.	9	148,308
1887-88...	95	2,462,497	19,145	3	26,354	Nil.	16	150,920
1888-89...	99	2,654,592	20,652	4	62,824	909	20	251,626
1889-90...	111	2,971,510	23,408	Nil.	Nil.	Nil.	25	431,642
1890-91...	121	3,187,302	23,927	1	6,868	Nil.	12	237,524
1891-92...	125	3,320,984	24,719	3	46,148	300	11	166,420
1892-93...	125	3,322,071	27,427	6	146,598	260	10	129,648
1893-94...	133	3,592,238	30,618	2	18,762	211	7	87,736
1894-95...	137	3,722,116	34,661	1	12,042	211	10	107,339
1895-96...	144	3,895,602	36,764	Nil.	Nil.	Nil.	26	147,204
1896-97...	149	4,003,457	37,165	2	23,986	419	39	242,816
1897-98...	153	4,011,383	36,323	4	53,673	517	32	315,504
1898-99...	167	4,549,791	38,155	4	55,300	464	25	328,052
1899-1900	170	4,591,568	35,259	13	327,395	4,868	10	22,709
1900-01...	176	4,747,380	39,359	11	259,586	1,821	6	30,200
1901-02...	178	4,841,313	40,511	6	98,660	1,829	8	92,492
1902-03...	181	4,946,811	43,839	4	50,240	75	7	46,244
1903-04...	183	5,003,737	45,037	7	114,384	300	1	18,000

B.—STATEMENT SHOWING THE PROGRESS OF THE COTTON MILL INDUSTRY IN INDIA—*continued.*

Year ending, 30th June.	Number of mills working.	Number of spindles.	Number of looms.	Number of mills not working.	Number of spindles.	Number of looms.	Number of mills in course of erection.	Number of spindles.
1	2	3	4	5	6	7	8	9
1904-05...	191	5,122,474	49,506	3	41,012	633	3	50,096
1905-06...	194	5,226,957	52,068	3	20,446	88	20	208,961
1906-07...	199	5,270,175	57,546	5	33,944	1,516	20	266,316
1907-08...	218	5,662,332	66,230	7	50,192	860	16	182,400
1908-09...	224	5,936,395	74,495	9	35,844	748	26	197,868
1909-10...	222	5,988,317	81,295	21	207,354	1,430	20	167,352
1910-11...	217	5,943,634	82,965	26	413,826	2,387	18	36,216
1911-12...	233	6,094,642	85,801	19	369,287	3,150	16	35,896
1912-13...	236	6,320,028	92,487	23	276,834	1,649	13	29,460
1913-14*	240	6,484,691	101,022	21	294,204	3,157	10	104,500
1914-15*	240	6,446,266	106,067	23	402,478	1,942	9	73,000
1915-16*	237	6,347,422	107,603	25	492,455	2,665	4	50,000
1916-17*	238	6,466,381	112,144	22	272,316	2,477	3	Nil.
1917-18*	249	6,562,637	115,818	9	91,234	636	4	Nil.
1918-19*	250	6,642,048	117,385	6	47,632	836	2	Nil.
1919-20*	242	6,715,128	118,297	8	47,948	715	3	5,712
1920-21*	245	6,845,824	123,544	5	24,980	239	7	25,000
1921-22*	249	7,277,571	133,544	5	53,648	1,076	44	245,000
1922-23*	280	7,560,405	140,455	12	171,681	2,373	41	195,852
1923-24*	274	7,851,104	146,453	15	270,751	2,941	47	191,418
1924-25*	275	8,093,801	148,612	19	264,520	4,337	43	152,312

\*Ending 31st August.

B.—STATEMENT SHOWING THE PROGRESS OF THE COTTON MILL INDUSTRY IN INDIA—continued.

Year ending 30th June.	Number of looms.	Total number of mills.	Number of spindles.	Number of looms.	Average number of hands employed daily.	Approximate quantity of cotton consumed in bales of 392 lbs.	Year ending 30th June.
	10	11	12	13	14	15	16
1883-84...	100	82	2,001,667	16,262	60,287	531,365	1883-84
1884-85...	100	90	2,145,646	16,537	67,186	596,749	1884-85
1885-86...	Nil.	95	2,454,928	17,455	74,383	643,204	1885-86
1886-87...	960	103	2,421,290	18,536	76,942	726,276	1886-87
1887-88...	351	114	2,639,771	19,496	82,379	786,982	1887-88
1888-89...	Nil.	123	2,969,042	21,561	91,598	888,654	1888-89
1889-90...	1,528	136	3,403,152	24,936	102,721	1,008,462	1889-90
1890-91...	1,404	134	3,431,694	25,331	111,018	1,178,906	1890-91
1891-92...	2,145	139	3,533,552	27,164	116,161	1,165,938	1891-92
1892-93...	477	141	3,598,317	28,164	121,500	1,171,008	1892-93
1893-94...	325	142	3,698,736	31,154	130,461	1,222,508	1893-94
1894-95...	466	148	3,841,497	35,338	138,669	1,341,714	1894-95
1895-96...	731	170	4,042,806	37,495	145,432	1,409,318	1895-96
1896-97...	Nil.	190	4,270,259	37,584	144,335	1,300,936	1896-97
1897-98...	1,173	189	4,380,560	38,013	148,964	1,481,328	1897-98
1898-99...	1,414	205	4,933,143	40,033	162,108	1,675,190	1898-99
1899-1900	442	193	4,941,672	40,569	161,189	1,453,352	1899-1900
1900-01...	100	193	5,037,166	41,280	172,883	1,351,740	1900-01
1901-02...	300	192	5,032,465	42,640	181,031	1,765,038	1901-02
1902-03...	178	192	5,043,295	44,092	181,399	1,739,340	1902-03
1903-04...	Nil.	191	5,136,121	45,337	184,779	1,744,766	1903-04

B.—STATEMENT SHOWING THE PROGRESS OF THE COTTON MILL INDUSTRY IN INDIA—*continued.*

Year ending 30th June.	Number of looms.	Total number of mills.	Number of spindles.	Number of looms.	Average number of hands employed daily.	Approximate quantity of cotton consumed in bales of 392 lbs.	Year ending 30th June.
	10	11	12	13	14	15	16
1904-05...	Nil.	197	5,213,582	50,139	195,277	1,879,244	1904-05
1905-06...	2,212	117	5,456,364	53,368	208,616	2,023,516	1905-06
1906-07...	3,760	224	5,570,435	62,822	205,696	1,980,170	1906-07
1907-08...	2,798	241	5,894,924	69,889	221,195	1,991,500	1907-08
1908-09...	3,165	259	6,170,107	78,408	236,924	2,109,000	1908-09
1909-10...	2,300	263	6,363,023	85,025	233,624	1,935,010	1909-10
1910-11...	1,800	261	6,393,676	87,152	230,649	1,905,866	1910-11
1911-12...	1,839	268	6,499,825	90,790	243,637	2,050,102	1911-12
1912-13...	800	272	6,626,322	94,936	253,786	2,096,016	1912-13
1913-14*	2,400	271	6,883,395	106,579	260,276	2,143,126	1913-14*
1914-15*	2,400	272	6,921,744	110,409	265,346	2,102,632	1914-15*
1915-16*	1,800	266	6,889,877	112,068	274,361	2,197,718	1915-16*
1916-17*	Nil.	263	6,738,697	114,618	276,771	2,198,164	1916-17*
1917-18*	Nil.	262	6,653,871	116,454	282,227	2,085,678	1917-18*
1918-19*	Nil.	258	6,689,680	118,221	293,277	2,044,230	1918-19*
1919-20*	470	253	6,768,788	119,482	311,078	1,952,318	1919-20*
1920-21*	Nil.	257	6,895,804	123,783	332,179	2,120,230	1920-21*
1921-22*	2,800	298	7,576,219	137,420	343,723	2,203,540	1921-22*
1922-23*	1,966	333	7,927,938	142,462	347,390	2,151,698	1922-23*
1923-24*	2,091	336	8,313,273	151,485	356,887	1,917,748	1923-24*
1924-25*	1,071	337	8,510,633	154,020	367,877	2,226,310	1924-25*

C.—VALUE OF TRADE WITH PRINCIPAL COUNTRIES, DISTINGUISHING PRINCIPAL ARTICLES.

TABLE No. 1.

## UNITED KINGDOM.

Articles.	Pre-war average.	1924-25.	1925-26.	1926-27.
		Rs. 000's	omitted.	
<i>Imports therefrom—</i>				
Animals, living ... ..	5,02	19,76	18,20	13,38
Apparel ... ..	59,29	70,09	83,16	86,26
Arms, ammunition, etc. ...	30,60	62,29	55,58	53,69
Artificial silk yarn ... ..	—	26,05	23,80	14,07
Asbestos ... ..	—	11,12	14,05	19,39
Belting for machinery ... ..	36, 26	79,74	62,82	62,17
Bobbins ... ..	—	36,99	33,40	30,71
Books and printed matter	41,05	47,41	48,68	47,45
Boots and shoes ... ..	51,33	20,18	26,61	29,22
Building materials ... ..	59,89	79,57	76,75	64,71
Carriages and carts ... ..	19,11	12,89	9,03	9,07
Chemicals ... ..	69,55	1,30,44	1,24,01	1,41,55
China clay ... ..	—	16,03	13,53	16,56
Coal and coke ... ..	41,33	41,30	30,87	6,81
Cordage and rope ... ..	4,39	4,31	2,87	6,92
Cotton—				
Raw ... ..	58,67	23,33	2,78	44,64
Twist and yarn ... ..	3,35,18	4,54,98	3,13,80	3,08,08
Piecegoods—				
Grey ... ..	20,73,55	24,06,16	17,08,36	15,24,09
White ... ..	10,87,38	19,24,71	15,08,86	16,67,04
Coloured ... ..	11,29,72	16,44,95	11,90,90	12,57,96
Other manufactures ... ..	1,40,25	1,94,12	1,76,53	1,53,45
Cutlery ... ..	10,53	10,58	9,19	9,03
Cycles and parts ... ..	29,40	65,13	87,07	91,70
Drugs and medicines ... ..	54,03	84,85	84,60	86,26
Dyeing and tanning sub- stances ... ..	6,90	8,77	12,18	11,30
Earthenware and porcelain	30,50	29,49	29,05	29,95
Flax manufactures... ..	28,83	29,42	31,69	30,00
Furniture ... ..	10,84	6,77	9,07	14,45
Glass and glassware ... ..	22,26	29,11	26,23	25,47
Haberdashery and mil- linery ... ..	61,21	29,45	29,48	27,48
Hardware ... ..	1,88,61	2,00,34	1,97,76	1,84,45
Instruments' apparatus, etc.	1,04,88	1,98,51	2,22,18	2,50,55
Ivory ... ..	11,33	15,16	9,24	9,84
Jewellery, etc. ... ..	14,51	8,44	12,39	27,48
Jute manufactures ... ..	10,09	9,38	12,84	9,85
Leather, including hides, tanned, etc. ... ..	38,59	44,47	31,80	43,17
Liquors—				
Ale, beer and porter ... ..	45,64	51,33	51,09	54,48
Spirit ... ..	69,47	1,30,76	1,34,62	1,35,64
Wines ... ..	13,62	12,55	11,48	11,94

TABLE NO. 1—continued.

Articles.	Pre-war average.	1924-25.	1925-26.	1926-27.
Machinery and millwork ...	4,97,69	(Rs. 000's omitted). 12,39,54	11,87,23	10,65,86
Metals—				
Aluminium ... ..	5,38	18,46	22,84	23,08
Brass ... ..	6,13	1,56,06	1,27,96	77,33
Copper ... ..	1,67,45	32,17	39,67	28,27
Iron ... ..	28,88	13,47	13,70	8,36
Iron and steel ... ..	6,96,13	11,25,39	11,60,99	9,93,24
Lead ... ..	13,99	9,70	8,88	7,70
Steel ... ..	42,02	52,71	49,70	37,29
Zinc ... ..	14,85	16,14	13,45	17,70
Others ... ..	27,43	20,61	15,79	24,22
Motor cars and motor cycles ... ..	74,50	74,26	1,23,58	1,36,09
Oils, mineral ... ..	22,31	24,64	21,38	19,56
Oils, vegetable, animal, etc.	17,76	12,31	14,43	15,80
Packing engine and boiler ...	4,98	3,75	3,18	3,63
Paints and painters' materials... ..	56,00	96,03	99,89	1,04,52
Paper and pasteboard ... ..	73,44	1,30,22	1,16,63	1,09,30
Piecegoods of cotton and artificial silk ... ..	—	83,08	58,10	1,17,19
Pitch and tar ... ..	8,72	3,53	4,03	2,19
Polishes ... ..	9,48	19,26	19,89	18,85
Precious stones ... ..	14	15,86	16,91	12,48
Printing materials ... ..	14,70	22,69	20,50	20,79
Provisions ... ..	1,34,15	1,54,18	1,71,50	2,03,23
Railway plant, etc. ... ..	5,54,48	5,41,08	4,24,53	2,00,84
Rubber manufactures, including tyres, etc. ...	16,45	78,57	96,01	88,71
Salt ... ..	23,44	27,79	19,55	14,08
Ships, parts of ... ..	18,00	10,83	8,70	2,86
Silk manufactures, including yarn ... ..	19,07	13,49	9,79	8,57
Soap ... ..	56,52	1,24,81	1,35,67	1,37,10
Stationery ... ..	41,44	51,26	51,30	45,13
Sugar ... ..	25,37	20,42	35,51	41,74
Tallow and stearine ... ..	10,43	9,95	9,54	8,65
Tea-chests ... ..	41,32	75,38	67,52	48,86
Tobacco ... ..	54,83	1,39,93	1,76,23	2,11,97
Toilet requisites ... ..	10,35	20,60	21,43	23,57
Toys and requisites for games	16,75	12,38	12,97	14,11
Umbrellas ... ..	24,71	18,78	18,35	14,75
Woollen manufactures, including yarn ... ..	1,85,24	2,08,13	2,11,14	1,94,84
Other articles ... ..	1,49,67	3,96,77	3,97,00	3,50,93
Total ... ..	91,58,01	1,33,45,16	1,15,32,02	1,10,63,75

TABLE No. 2.

## ITALY.

Articles.	Pre-war average.	1924-25.	1925-26.	1926-27.
<i>Imports therefrom—</i>		(Rs. 000's omitted).		
Apparel ... ..	6,98	14,35	12,78	16,40
Art, works of ... ..	45	89	1,45	1,08
Building materials ... ..	2,57	11,52	13,02	12,83
Buttons ... ..	—	5,44	6,91	12,12
Chemicals ... ..	4,72	10,95	6,32	14,34
Dyeing and tanning sub- stances ... ..	1,49	2,48	2,20	4,60
Fruits and vegetables ... ..	8,48	18,88	15,45	37,23
Glassware ... ..	4,26	8,21	8,37	6,37
Instruments ... ..	1,70	6,34	8,66	8,13
Liquors ... ..	78	2,86	2,46	3,08
Machinery ... ..	1,44	4,10	8,22	6,38
Metals—				
Aluminium ... ..	9	2,41	3,31	6,80
Brass ... ..	1,09	1,22	46	1,16
German silver ... ..	—	1,19	4,46	1,90
Others ... ..	67	3,83	6,22	8,13
Motor cars, etc. ... ..	66	10,16	29,94	40,10
Paper and pasteboard ... ..	79	3,50	3,71	3,56
Rubber manufactures ... ..	13	3,77	18,11	5,15
Stone and marble ... ..	2,48	2,56	3,38	3,61
Sugar ... ..	23	3,13	3,10	7,88
Textiles—				
Artificial silk yarn ... ..	—	13,50	33,71	64,15
Cotton-twist and yarn ... ..	4,98	4,05	6,96	4,36
Cotton manufactures ... ..	45,22	81,26	66,78	81,80
Haberdashery and mil- linery ... ..	4,32	7,12	6,67	5,97
Silk manufactures ... ..	19,83	39,13	11,85	24,72
Piecegoods of cotton and artificial silk ... ..	—	43,83	37,42	80,82
Wool manufactures ... ..	4,07	28,15	50,69	69,06
Other articles ... ..	27,41	48,12	53,06	84,58
Total ... ..	1,44,84	3,83,95	4,25,67	6,16,11



TABLE NO. 3.

## BELGIUM.

Articles.	Pre-war average.	1924-25.	1925-26.	1926-27.
		(Rs. 000's	omitted).	
<i>Imports therefrom—</i>				
Artificial silk ... ..	—	8,47	6,25	9,01
Arms, etc. ... ..	26	2,46	3,96	4,23
Building materials ... ..	4,04	3,60	5,59	7,37
Cotton manufactures, including yarn ... ..	42,12	24,74	17,02	30,10
Dyeing and tanning substances ... ..	10,82	16,44	5,57	9,41
Earthenware and porcelain ... ..	3,45	1,88	1,48	1,64
Glass and glassware ... ..	16,92	27,11	22,76	26,69
Hardware ... ..	5,58	3,17	3,66	4,12
Liquors ... ..	1,50	3,81	1,76	1,59
Machinery and millwork ... ..	1,76	7,44	29,64	24,61
Manures ... ..	75	8,65	9,25	8,15
Metals—				
Brass ... ..	37	3,31	3,67	2,27
Copper ... ..	3,54	6,30	10,09	21,91
Iron ... ..	15,95	6,99	3,23	7,31
Iron or steel ... ..	45,46	1,79,67	1,77,41	1,93,24
Steel ... ..	63,54	1,85,69	1,01,60	1,12,00
Motor cars, etc. ... ..	4,15	3,53	1,38	1,10
Paints and painters' materials ... ..	2,08	2,65	2,84	5,38
Paper and pasteboard ... ..	5,00	6,00	9,12	11,20
Precious stones ... ..	1	38,60	47,19	37,13
Provisions ... ..	1,41	41,97	26,95	10,58
Railway plant, etc. ... ..	4,28	17,71	27,64	38,65
Sugar ... ..	29	22,37	15,92	30,74
Woollen manufactures ... ..	2,11	12,58	23,47	15,09
Other articles ... ..	40,61	40,92	55,61	66,56
<b>Total ... ..</b>	<b>2,76,00</b>	<b>6,76,06</b>	<b>6,13,06</b>	<b>6,80,08</b>

TABLE NO. 4.  
GERMANY.

Articles.	Pre-war average.	1924-25.	1925-26.	1926-27.
		(Rs. 000's	omitted).	
<i>Imports therefrom—</i>				
Apparel ... ..	14,87	18,59	16,07	20,61
Bobbins ... ..	—	2,30	2,50	2,48
Building materials ... ..	6,72	3,80	2,59	6,93
Buttons ... ..	—	6,36	5,06	6,49
Carriages ... ..	2,81	2,13	1,08	2,50
Chemicals ... ..	10,62	39,38	41,87	52,48
Cutlery ... ..	7,95	26,93	22,25	30,29
Cycles ... ..	1,75	10,75	12,75	12,96
Drugs and medicines ... ..	6,19	17,39	20,63	33,35
Dyeing substances ... ..	87,40	1,92,29	82,36	1,06,05
Glassware ... ..	23,69	38,96	39,89	51,85
Hardware ... ..	57,24	1,33,64	1,42,68	1,58,32
Instruments ... ..	13,57	42,93	46,92	52,62
Liquors ... ..	19,41	36,03	35,02	39,10
Machinery ... ..	30,27	50,93	85,99	94,59
Metals—				
Aluminium ... ..	12,16	29,33	21,75	18,02
Brass ... ..	1,56	1,29,52	78,89	1,27,24
Copper ... ..	93,41	94,98	97,03	86,64
Iron ... ..	2,86	12	54	9
Iron or steel ... ..	86,97	1,31,13	98,17	91,31
Steel ... ..	65,19	33,51	17,91	33,14
Zinc ... ..	3,23	1,68	2,93	13,70
Motor cars, etc. ... ..	5,64	2,24	2,84	4,05
Oils ... ..	19,57	40,88	49,98	31,40
Paints and painters' materials ... ..	5,58	8,75	8,48	10,36
Paper and pasteboard ... ..	21,82	64,25	34,16	49,77
Paper making materials ... ..	1,61	3,88	7,09	6,72
Printing materials ... ..	1,02	5,56	5,19	5,62
Railway plant ... ..	12,19	7,50	18,11	27,81
Rubber manufactures ... ..	3,82	8,00	16,34	15,21
Salt ... ..	9,46	9,33	9,07	15,13
Stationery ... ..	5,04	17,88	24,35	24,93
Sugar ... ..	3,84	61,29	3,63	1,10,88
Textiles—				
Artificial silk ... ..	—	13,02	14,07	33,68
Cotton manufactures ... ..	83,71	42,30	30,93	47,29
Haberdashery ... ..	22,10	32,66	21,48	36,21
Silk manufactures ... ..	16,81	10,06	5,74	8,49
Wool manufactures ... ..	90,62	55,61	62,87	67,29
Toys ... ..	11,10	19,70	15,13	17,68
Umbrellas ... ..	7,66	12,07	17,65	21,45
Other articles ... ..	66,10	89,20	1,08,80	1,19,03
Total ... ..	9,35,56	15,46,86	13,30,79	16,90,72

TABLE No. 5.

JAPAN.

Articles.	Pre-war average.	1924-25.	1925-26.	1926-27.
		(Rs. 000's omitted).		
<i>Imports therefrom—</i>				
Ale, beer and porter ...	3	2,43	1,74	—
Apparel ... ..	9,17	10,15	11,11	13,15
Bobbins ... ..	—	3,09	1,68	1,03
Brass, bronze, etc. ...	7	11,56	36,91	33,36
Brushes and brooms ...	48	40	70	78
Buttons of all sorts ...	—	9,13	9,68	11,62
Camphor ... ..	11,48	18,88	16,32	18,19
Carriages ... ..	11	8,81	3,45	5,34
Cement ... ..	1	1,93	2,30	3,88
Chemicals ... ..	93	2,48	2,72	3,35
Coal and coke ... ..	7,02	94	2,73	16
Copper ... ..	27,99	4	5	6
Cotton, raw ... ..	9	12	56	56
"  hosiery ... ..	65,23	85,55	1,11,38	1,17,66
"  piece goods ... ..	6,10	5,74,63	6,88,15	6,57,55
"  yarn ... ..	6,16	4,59,37	4,24,80	3,20,21
"  other manufactures	2,12	16,92	24,06	20,74
Cutlery ... ..	—	77	31	10
Drugs and medicines (other than camphor) ... ..	1,72	6,73	8,59	7,86
Earthenware and porcelain	4,23	28,71	34,84	33,12
Furniture and cabinetware	71	57	1,23	1,56
Glass and glassware—				
Bangles ... ..	5	25,61	23,67	20,64
Beads and false pearls ...	7,61	12,97	11,06	9,69
Bottles and phials ... ..	1,00	10,30	10,46	11,80
Funnels, globes, etc. ...	58	2,25	2,62	2,27
Tableware ... ..	1,41	4,79	6,07	5,05
Others ... ..	3,35	9,82	13,61	17,96
Haberdashery and millinery ... ..	10,88	16,12	23,60	14,71
Hardware ... ..	3,59	27,08	37,09	28,95
Instruments ... ..	85	3,24	5,37	3,91
Iron or steel ... ..	—	8	15	8
Leather ... ..	38	20	24	34
Machinery and millwork ...	63	2,72	2,95	3,02
Matches ... ..	28,40	40,77	24,63	10,58
Paints and painters' materials ... ..	—	3,74	3,90	3,82
Paper and pasteboard ... ..	55	3,04	4,60	4,79
Provisions and oilman's stores ... ..	1,57	2,84	2,44	3,18
Rubber manufactures ... ..	—	77	1,14	1,20
Silk, raw ... ..	1,15	6,09	1,25	1,28
Silk manufactures, including yarn, etc. ...	1,31,45	1,76,87	1,29,45	1,37,85
Spices, ginger ... ..	3,40	3,28	2,41	59
Starch and farina ... ..	7	32	26	3

TABLE No. 5—continued.

Articles.	Pre-war average.	1924-25.	1925-26.	1926-27.
		(Rs. 000's omitted).		
Stationery (excluding paper) ... ..	2,17	4,83	5,25	4,43
Tea-chests ... ..	87	45	26	30
Toilet requisites ... ..	1,31	3,44	3,59	3,06
Toys and requisites for games ... ..	3,16	13,78	11,77	11,18
Umbrella fittings ... ..	4,91	13,70	13,11	14,38
Wood—timber ... ..	32	6,69	13,36	18,94
„ —manufactures ... ..	71	74	2,87	4,04
Woollen manufactures (including yarn) ... ..	8	12,02	20,57	11,01
Other articles ... ..	10,25	60,31	57,64	47,88
<b>Total ... ..</b>	<b>3,64,35</b>	<b>17,12,07</b>	<b>18,19,00</b>	<b>16,47,24</b>

TABLE No. 6.  
UNITED STATES.

Articles.	Pre-war average.	1924-25.	1925-26.	1926-27.
<i>Imports therefrom—</i>		(Rs. 000's omitted).		
Aluminium ... ..	4,26	31,02	25,33	35,13
Apparel ... ..	33	9,44	10,95	11,30
Arms ... ..	80	4,99	5,05	4,02
Belting for machinery ... ..	1,11	6,69	9,08	11,42
Boots and shoes ... ..	54	2,91	5,08	14,41
Building materials ... ..	88	10,39	10,91	13,65
Carriages ... ..	72	1,75	56	1,10
Chemicals ... ..	22	4,41	5,82	6,90
Clocks and watches ... ..	3,82	7,19	7,23	6,57
Copper ... ..	—	16,23	18,98	2,47
Cotton, raw ... ..	27,72	8,00	1,56	2,11,19
„ piecegoods ... ..	26,44	31,20	41,92	45,01
Drugs and medicines ... ..	4,18	14,34	13,30	17,68
Dyeing substances ... ..	—	10,21	16,77	19,38
Furniture ... ..	1,44	1,80	2,18	2,76
Glassware ... ..	1,17	3,46	3,86	4,77
Hardware ... ..	24,72	78,09	80,83	71,21
Instruments ... ..	5,86	34,68	44,81	59,24
Iron and steel ... ..	48,56	69,35	81,24	96,56
Leather ... ..	—	3,93	5,75	10,11
Machinery ... ..	24,56	1,40,12	1,40,98	1,39,27
Motor cars, etc. ... ..	8,49	1,14,42	1,64,45	1,77,87
Oils, mineral ... ..	2,19,66	5,60,18	5,56,62	5,40,57
Paper and pasteboard ... ..	1,21	9,50	13,23	14,76
Provisions ... ..	3,80	28,11	33,76	44,09
Railway plant ... ..	54	17,46	14,70	20,82
Rubber ... ..	16	17,65	37,53	40,62
Ships ... ..	24	8	3	29
Spirit ... ..	5,34	12,33	13,19	14,11
Stationery ... ..	2,05	4,94	4,31	3,60
Sugar ... ..	18	2,14	5,00	35,94
Tobacco ... ..	5,90	52,47	32,56	39,87
Toilet requisites ... ..	2,22	12,27	14,44	15,11
Wood and timber ... ..	6,56	4,81	3,76	6,60
Other articles ... ..	15,35	1,07,80	4,82,80	91,27
<b>Total ... ..</b>	<b>4,49,03</b>	<b>14,07,03</b>	<b>15,07,35</b>	<b>18,29,67</b>

## APPENDIX IV.

## THE IMPORT TRADE OF INDIA DURING THE FIRST HALF (1ST APRIL TO 30TH SEPTEMBER) OF THE FISCAL YEAR, 1927-1928.

India's visible balance of trade in merchandise and treasure during the six months April to September, 1925, 1926, and 1927, is shown in the table given below. Both the exports and imports in 1927 are higher than in the corresponding period of the previous year. During the first quarter of the fiscal year, exports of Indian merchandise on private account were nearly four crores lower than in the previous year, but during the second quarter of the current year, exports reached a total of 79 crores, or eight crores more than in the second quarter of 1926.

## BALANCE OF TRADE.

	Six months April to September.		
	1925.	1926.	1927.
	Rs. lakhs.	Rs. lakhs.	Rs. lakhs.
Exports of Indian Merchandise (Private) ... ..	+ 180,09	+ 146,57	+ 150,62
Re-exports of Foreign Merchandise (Private) ... ..	+ 5,84	+ 3,60	+ 4,52
Imports of Foreign Merchandise (Private) ... ..	- 107,97(a)	- 115,10 (a)	- 121,57 (a)
Balance of Trade in Merchandise (Private) ... ..	+ 77,96	+ 35,07	+ 33,57
Gold (Private)* ... ..	- 16,00	- 11,04	- 8,07
Silver (Private)* ... ..	- 8,19	- 7,81	- 7,56
Currency Notes (Private) ... ..	+ 3	- 12	- 20
Balance of transactions in Treasure (Private)* ... ..	- 24,16	- 18,97	- 15,83
Total Visible Balance of Trade ... ..	+ 53,80	+ 16,10	+ 17,74
Council Bills, purchases of Sterling and other Government Remittances to the United Kingdom(b)	- 27,24	—	- 13,89
Sterling Transfers on London sold in India ... ..	—	—	—
Transfers of Government Securities	- 1,10	- 23	- 23
Interest Drafts on India in respect of Government of India securities ... ..	- 19	- 17	- 16
Balance of Remittances of Funds	- 28,53	- 40	- 14,28

(a) Exclusive of the value of Railway materials imported direct by State Railways working under Company management which were not paid for in the ordinary way and not therefore taken into account in arriving at the balance of trade.

(b) This head includes, in addition to Council Bills, (1) Sterling purchases in India and (2) payments in India to Local Bodies, etc., against proceeds of sterling loans floated by them in London and taken over by the Secretary of State.

\*These exclude transactions which do not enter into the balance of trade.

The following table shows the value of the merchandise imported from the principal countries :—

Country.	1st April to 30th September,	
	1926.	1927.
	Rs. lakhs.	Rs. lakhs.
United Kingdom ... ..	56,90	59,93
Rest of British Empire ... ..	8,25	8,33
United States of America ... ..	8,06	12,36
Japan ... ..	8,17	8,39
Germany ... ..	8,84	7,51
Java ... ..	7,74	6,42
All countries ... ..	115,81	122,88

The percentage share obtained by the United Kingdom has fallen slightly from 49·1 per cent. in the first half-year of 1926, to 48·8 per cent. in 1927. United States has increased her percentage from 7 per cent. to 10 per cent. The proportion obtained by Japan has fallen slightly, while there has been a sharp fall in the share of the trade obtained by Germany and Java. Imports from Italy increased slightly from 2·5 per cent. to 2·6 per cent.

Among the imports in which the United Kingdom has secured an increased share of the trade may be mentioned artificial silk yarn, wrought copper, steel bars (other than cast steel), sheets and plates (not galvanized or tinned), tubes, pipes and fittings (wrought), and railway plant and rolling stock.

Among large increases of trade by foreign countries are imports of fents from the United States, of woollen piecegoods from France, and of carpets and rugs from Italy. There has been a striking increase in the total imports of artificial silk yarn, and of raw cotton from the United States.

PRINCIPAL IMPORTS INTO BRITISH INDIA DURING THE SIX MONTHS, 1ST APRIL TO 30TH SEPTEMBER, 1926 AND 1927.

	1926.		1927.	
	Quantity.	Value.	Quantity.	Value.
		Rs. lakhs.		Rs. lakhs.
Raw cotton (thousand tons)	17·2	2,39·4	55·0	5,41·4
United Kingdom ..	1·4	15·3	0·5	4·6
Kenya Colony ..	9·4	1,63·0	9·8	1,48·6
U.S.A. ... ..	5·1	49·0	43·2	3,71·5
Cotton twist and yarn (million lbs.)	25·8	3,78·7	31·4	3,94·2
United Kingdom ..	11·3	1,81·0	12·9	1,87·3
Japan ... ..	13·4	1,80·1	11·0	1,34·4
Cotton piecegoods grey unbleached (million yds.)	421·0	11,23·8	474·9	11,47·5
United Kingdom ..	348·2	9,14·4	372·8	8,86·7
Japan ... ..	71·2	2,03·9	97·2	2,48·0
Cotton piecegoods, white bleached (million yds.)	282·2	8,95·0	300·5	8,17·1
United Kingdom ..	273·0	8,48·6	288·4	7,67·9
Switzerland ..	3·7	21·4	4·2	20·2
Cotton piecegoods, coloured, printed or dyed (million yds.)	214·7	8,72·8	246·1	8,36·7
United Kingdom ..	159·5	6,60·7	174·2	6,07·6
Japan ... ..	35·4	97·1	47·6	1,22·6
Holland ... ..	6·8	38·4	5·7	28·1
Italy ... ..	6·6	32·7	12·7	41·4

PRINCIPAL IMPORTS INTO BRITISH INDIA DURING THE SIX MONTHS, 1ST APRIL  
TO 30TH SEPTEMBER, 1926 AND 1927—*continued.*

	1926.		1927.	
	Quantity.	Value.	Quantity.	Value.
		Rs. lakhs.		Rs. lakhs.
Hosiery (cotton) ... ..	—	64·0	—	67·9
United Kingdom ... ..	—	1·5	—	1·0
Japan ... ..	—	50·7	—	56·0
Fents of all descriptions (million yds.)	10·5	33·9	17·6	46·2
United Kingdom .. ..	4·5	17·6	5·9	18·7
U.S.A. ... ..	5·9	15·4	11·5	26·9
Cotton thread, sewing (thousand lbs.)	1,053·3	40·4	1,239·1	39·1
United Kingdom .. ..	873·6	36·0	1,017·3	34·3
Haberdashery and millinery	—	63·9	—	56·7
United Kingdom ... ..	—	14·9	—	14·1
Germany ... ..	—	22·1	—	13·4
Switzerland ... ..	—	10·7	—	9·7
Woollen piecegoods (million yds.)	9·1	1,61·1	9·7	1,70·5
United Kingdom .. ..	3·2	79·9	3·4	80·2
Italy ... ..	2·0	20·8	1·5	18·8
France ... ..	1·7	27·2	3·0	40·5
Woollen shawls (thousands)	512·9	18·7	520·4	17·2
United Kingdom .. ..	100·3	4·2	137·0	4·9
Germany ... ..	130·1	7·6	187·6	8·2
Wool, raw (thousand lbs.)	3,475·8	19·3	3,824·7	26·6
United Kingdom .. ..	865·3	8·6	863·7	11·8
Persia ... ..	1,905·8	7·7	1,962·4	7·9
Carpets and rugs .. ..	880·5	18·1	2,317·2	36·7
United Kingdom .. ..	161·4	5·2	153·0	4·6
Italy ... ..	645·1	10·6	1,997·0	28·5
Artificial silk yarn .. ..	1,990·7	38·7	4,094·1	78·6
United Kingdom .. ..	253·6	7·3	1,236·2	25·3
Italy ... ..	1,157·3	19·5	2,019·3	37·5
Netherlands .. ..	210·7	4·3	235·9	4·8
Piecegoods of cotton and arti- ficial silk (million yds.)	19·0	1,42·3	19·3	1,47·3
United Kingdom .. ..	7·9	57·3	5·7	40·1
Italy ... ..	6·0	34·6	5·3	30·8
Switzerland .. ..	3·0	28·5	4·0	34·7
Silk, raw (thousand lbs.)	950·7	61·8	1,027·5	63·4
Silk yarn, noils and warps (thousand lbs.)	594·6	35·9	655·7	26·7
Goods of silk mixed with other materials (thousand yds.)	1,156·0	17·1	926·2	14·5
Silk piecegoods .. ..	10,356·1	1,33·2	10,153·6	1,23·0
Machinery and millwork ...	—	6,64·8	—	7,67·4
United Kingdom ... ..	—	5,24·9	—	6,00·9
U.S.A. ... ..	—	66·8	—	77·1
Aluminium, wrought and un- wrought (thousand cwts.)	51·8	51·7	71·8	58·0



PRINCIPAL IMPORTS INTO BRITISH INDIA DURING THE SIX MONTHS, 1ST APRIL  
TO 30TH SEPTEMBER, 1926 AND 1927—continued.

	1926.		1927.	
	Quantity.	Value. Rs. lakhs.	Quantity.	Value. Rs. lakhs.
Yellow metal for sheathing (thousand cwts.)	207·0	1,01·5	165·0	75·5
United Kingdom ..	55·1	28·9	61·8	27·7
Germany ... ..	127·3	60·9	73·3	33·4
Copper, wrought (thousand tons)	171·7	81·0	129·3	64·5
United Kingdom ..	11·2	6·6	41·3	20·9
Germany ... ..	129·0	58·2	46·6	23·2
Steel bars (other than cast steel) (thousand tons)	79·9	79·4	90·6	95·0
United Kingdom ..	4·8	7·5	12·6	20·3
Belgium ... ..	44·0	42·2	54·2	52·1
Luxemburg ..	4·8	4·5	12·9	11·3
Germany ... ..	18·5	17·5	5·3	5·0
Iron or steel beams, channels, pillars, girders and bridge- work (thousand tons)	44·7	57·5	78·9	100·1
United Kingdom ..	17·8	30·3	29·9	45·4
Belgium ... ..	17·6	18·2	37·0	41·0
Bolts and nuts ..	6·4	18·1	4·7	14·3
United Kingdom ..	1·3	5·0	1·5	6·1
Belgium ... ..	2·3	4·6	1·6	3·3
Germany ... ..	2·0	5·8	0·7	2·0
Hoops and strips ..	15·3	23·2	12·4	18·4
United Kingdom ..	6·4	11·3	6·7	11·2
Belgium ... ..	6·0	7·7	3·7	4·6
Nails, rivets and washers other than wire nails (thousand tons)	9·4	26·8	8·3	24·3
United Kingdom ..	4·0	11·2	3·2	8·6
Belgium ... ..	1·9	4·5	2·1	4·6
Cast pipes and fittings ..	5·1	11·9	5·7	12·8
United Kingdom ..	3·8	9·2	3·1	8·7
Galvanised sheets and plates (thousand tons)	132·8	3,48·2	162·3	4,07·3
United Kingdom ..	124·2	3,22·8	148·6	3,73·0
Tinned plates and sheets (thousand tons)	8·6	30·0	13·2	44·6
United Kingdom ..	5·9	20·7	9·8	33·1
U.S.A. ... ..	2·7	9·2	3·3	11·4
Sheets and plates, not galvan- ised or tinned (thousand tons)	37·8	51·2	39·8	54·4
United Kingdom ..	11·1	18·5	23·8	35·2
Belgium ... ..	17·5	21·4	14·1	16·9
Tubes, pipes and fittings, wrought (thousand tons)	16·3	49·1	25·1	69·9
United Kingdom ..	6·2	23·0	13·7	40·5
Germany ... ..	5·6	14·3	4·5	11·7
Belgium ... ..	2·1	5·6	4·3	10·4

PRINCIPAL IMPORTS INTO BRITISH INDIA DURING THE SIX MONTHS, 1ST APRIL  
TO 30TH SEPTEMBER, 1926 AND 1927—*continued.*

	1926.		1927.	
	Quantity.	Value.	Quantity.	Value
		Rs. lakhs.		Rs. lakhs.
Wire nails (thousand tons)	7.6	13.4	5.7	10.5
United Kingdom .. .. .	0.3	0.3	0.2	0.5
Belgium ... .. .	4.7	8.2	2.8	5.1
Germany ... .. .	2.3	4.1	0.9	1.8
Wire rope ... .. .	1.4	9.6	2.4	14.8
United Kingdom .. .. .	1.3	8.7	2.2	13.8
Railway plant and rolling stock ... .. .	—	1,92.8	—	2,05.9
United Kingdom ... .. .	—	1,26.0	—	1,68.6
Australia ... .. .	—	20.1	—	1.8
Germany ... .. .	—	18.3	—	8.1
U.S.A. ... .. .	—	10.1	—	5.5
Railway plant and rolling stock (Government Stores) ... .. .	—	1,47.9	—	1,98.8
United Kingdom ... .. .	—	95.3	—	1,05.1
Belgium ... .. .	—	25.0	—	75.8
Hardware (excluding cutlery and electro-plated ware)	—	2,63.0	—	2,63.3
United Kingdom ... .. .	—	89.3	—	1,02.2
Germany ... .. .	—	88.1	—	82.2
U.S.A. ... .. .	—	39.0	—	32.5
Cutlery... .. .	—	21.3	—	22.4
United Kingdom ... .. .	—	4.5	—	5.0
Germany ... .. .	—	15.5	—	16.2
Electric fans and parts thereof	—	15.9	—	18.3
United Kingdom ... .. .	—	9.3	—	10.6
Electric wires and cables	—	39.4	—	46.2
United Kingdom ... .. .	—	33.3	—	39.3
Total of electrical instruments, apparatus, and appli- ances and parts thereof, not being machinery ... .. .	—	1,20.6	—	1,39.4
United Kingdom ... .. .	—	76.1	—	91.4
U.S.A. ... .. .	—	19.7	—	17.9
Germany ... .. .	—	12.0	—	13.5
Electrical machinery	—	1,11.7	—	96.8
United Kingdom ... .. .	—	90.8	—	80.4
U.S.A. ... .. .	—	9.4	—	5.9
Leather and manufactures thereof (excluding boots, shoes and belting for machinery) ... .. .	—	24.9	—	31.2
United Kingdom ... .. .	—	18.5	—	22.0
Matches (million gross)	3.5	44.8	2.1	28.2
Sweden ... .. .	2.4	32.9	1.7	23.1
Tin, unwrought (thousand cwts.)	26.4	47.7	30.1	58.5

PRINCIPAL IMPORTS INTO BRITISH INDIA DURING THE SIX MONTHS, 1ST APRIL  
TO 30TH SEPTEMBER, 1926 AND 1927—*continued.*

	1926.		1927.	
	Quantity.	Value.	Quantity.	Value.
Mineral oils (million galls.)	79.3	Rs. lakhs. 4,06.0	95.0	Rs. lakhs. 4,77.5
Packing paper (thousand cwts.)	111.2	20.9	134.7	27.8
United Kingdom ..	10.9	3.1	11.0	2.7
Germany ... ..	38.7	6.9	28.5	7.2
Sweden ... ..	25.8	4.7	56.9	11.1
Printing paper ..	337.8	56.5	269.7	42.3
United Kingdom ..	45.7	10.3	41.4	9.4
Norway ... ..	94.8	14.3	102.6	12.8
Germany ... ..	76.1	12.3	27.9	4.8
Austria ... ..	52.1	7.9	32.8	4.7
Writing paper and envelopes (thousand cwts.)	110.7	33.0	122.8	35.5
United Kingdom ..	41.2	16.2	39.4	16.5
Germany ... ..	15.8	4.0	8.2	2.2
Norway ... ..	15.8	3.7	20.4	4.7
Provisions ... ..	—	2,42.6	—	2,73.5
United Kingdom ... ..	—	92.6	—	100.0
Netherlands ... ..	—	62.9	—	81.0
Straits Settlements (in- cluding Labuan) ... ..	—	27.8	—	24.2
U.S.A. ... ..	—	21.2	—	24.0
Pneumatic motor covers (thousands)	99.8	45.3	222.2	88.3
United Kingdom ..	36.0	16.6	70.1	25.8
France ... ..	24.8	10.4	33.7	13.5
U.S.A. ... ..	14.5	7.2	65.2	29.1
Canada ... ..	12.0	6.2	28.7	12.0
Pneumatic motor-cycle covers (thousands)	3.0	0.8	6.4	0.8
United Kingdom ..	2.1	0.7	3.9	0.5
Pneumatic cycle covers ..	226.2	5.9	337.0	6.6
United Kingdom ..	95.2	3.0	197.2	4.1
France ... ..	94.5	2.0	135.8	2.4
Solid rubber tyres for motor vehicles (thousands)	4.4	5.3	6.2	7.8
United Kingdom ..	2.3	2.9	2.6	3.4
U.S.A. ... ..	1.4	1.7	2.2	2.7
Salt (thousand tons)	250.0	46.9	318.1	95.2
United Kingdom ..	33.3	7.3	50.1	16.6
Aden and Depend- encies ..	87.5	15.6	102.0	30.7
Soap (thousand cwts.)	202.6	77.0	196.7	78.4
United Kingdom ..	191.7	69.7	187.1	72.5
Betelnuts ..	684.2	1,44.3	449.4	91.8
Stationery (excluding paper)	—	45.3	—	46.3
United Kingdom ... ..	—	21.8	—	26.6
Germany ... ..	—	17.2	—	11.9

PRINCIPAL IMPORTS INTO BRITISH INDIA DURING THE SIX MONTHS, 1ST APRIL TO 30TH SEPTEMBER, 1926 AND 1927—*continued.*

	1926.		1927.	
	Quantity.	Value. Rs. lakhs.	Quantity.	Value Rs. lakhs.
Sugar, 16 Dutch standard and above (excluding beet) (thousand tons)	373.5	8,05.1	296.3	6,10.3
Java ... ..	346.6	7,43.5	291.9	5,99.9
Beet sugar ... ..	57.9	1,19.7	16.9	34.8
United Kingdom ... ..	3.6	7.3	—	—
Tea chests, entire or in sections ... ..	—	25.4	—	33.5
United Kingdom ... ..	—	20.8	—	28.0
Cigarettes (thousand lbs.)	1,839.0	86.0	2,807.0	1,23.1
United Kingdom ... ..	1,824.0	85.2	2,788.0	1,22.1
Umbrellas and fittings ... ..	—	29.1	—	33.2
United Kingdom ... ..	—	9.0	—	8.8
Germany ... ..	—	12.3	—	15.8
Japan ... ..	—	6.5	—	6.7
Cycles (other than motor cycles) and parts thereof and accessories (excluding tyres) ... ..	—	54.2	—	51.2
United Kingdom ... ..	—	45.2	—	43.8
Germany ... ..	—	7.6	—	6.3
Motor cars (including taxicabs) ... .. No.	5,986	1,25.4	7,167	1,58.8
United Kingdom ... ..	713	24.4	1,033	34.1
Canada ... ..	2,363	35.1	1,854	31.9
U.S.A. ... ..	1,925	43.1	3,283	67.6
Italy ... ..	696	17.3	735	18.5
Motor cycles ... ..	816	4.9	946	5.2
United Kingdom ... ..	746	4.5	869	4.8
Motor omnibuses, vans and lorries ... .. No.	2,954	57.0	4,434	72.4
United Kingdom ... ..	178	9.5	174	10.1
Canada ... ..	1,593	20.4	2,137	27.2
U.S.A. ... ..	1,076	24.6	1,994	32.9
Paints and colours (thousand cwts.)	181.9	51.5	217.1	59.5
United Kingdom ... ..	124.0	37.1	141.8	40.2
Germany ... ..	18.5	3.9	12.6	4.3
Ale, beer and porter (thousand galls.)	1,835	44.8	2,173	49.7
United Kingdom ... ..	1,107	25.9	1,433	30.5
Germany ... ..	571	15.6	526	14.8
Spirits ... ..	1,051	1,10.4	979	1,01.6
United Kingdom ... ..	363	66.1	339	61.0
France ... ..	205	25.0	171	21.9
Apparel (excluding hosiery and boots and shoes) ... ..	—	82.0	—	77.6
United Kingdom ... ..	—	41.6	—	33.9
Germany ... ..	—	10.8	—	11.9
France ... ..	—	8.7	—	13.4

PRINCIPAL IMPORTS INTO BRITISH INDIA DURING THE SIX MONTHS, 1ST APRIL TO 30TH SEPTEMBER, 1926 AND 1927—continued.

	1926.		1927.	
	Quantity.	Value.	Quantity.	Value.
Boots and shoes		Rs. lakhs.		Rs. lakhs.
(thousand pairs)	936.2	27.7	1,291.0	31.5
United Kingdom	401.9	15.3	430.6	14.3
U.S.A. ... ..	239.7	6.3	316.3	7.6
Bobbins ... ..	—	20.0	—	19.1
United Kingdom ... ..	—	17.6	—	17.0
Cement (thousand tons)	37.6	21.2	48.6	28.5
United Kingdom ... ..	29.7	17.5	41.0	24.4
Coal ... ..	74.8	14.9	134.1	31.2
United Kingdom ... ..	6.2	1.5	31.4	8.4
Union of S. Africa ... ..	46.5	9.1	71.8	15.1
Aniline Dyes (thousand lbs.)	4,663.8	66.9	5,803.3	74.8
United Kingdom ... ..	202.2	3.2	142.5	2.9
Germany ... ..	2,678.7	39.3	4,191.5	53.9
U.S.A. ... ..	1,011.9	9.6	701.2	6.3
Earthenware and porcelain ...	—	34.8	—	35.3
United Kingdom ... ..	—	13.6	—	14.4
Japan ... ..	—	13.2	—	12.7
Glass and glassware ... ..	—	1,35.4	—	1,26.6
United Kingdom ... ..	—	12.9	—	11.6
Czechoslovakia ... ..	—	39.7	—	31.1
Japan ... ..	—	31.0	—	33.0
Germany ... ..	—	26.9	—	26.9
Belgium ... ..	—	15.6	—	13.4

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