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758

ADMINISTRATION REPORT

OF THE

758

INDIAN STORES DEPARTMENT

FOR THE YEAR

1932-33

(18)

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# ADMINISTRATION REPORT

OF THE

# INDIAN STORES DEPARTMENT

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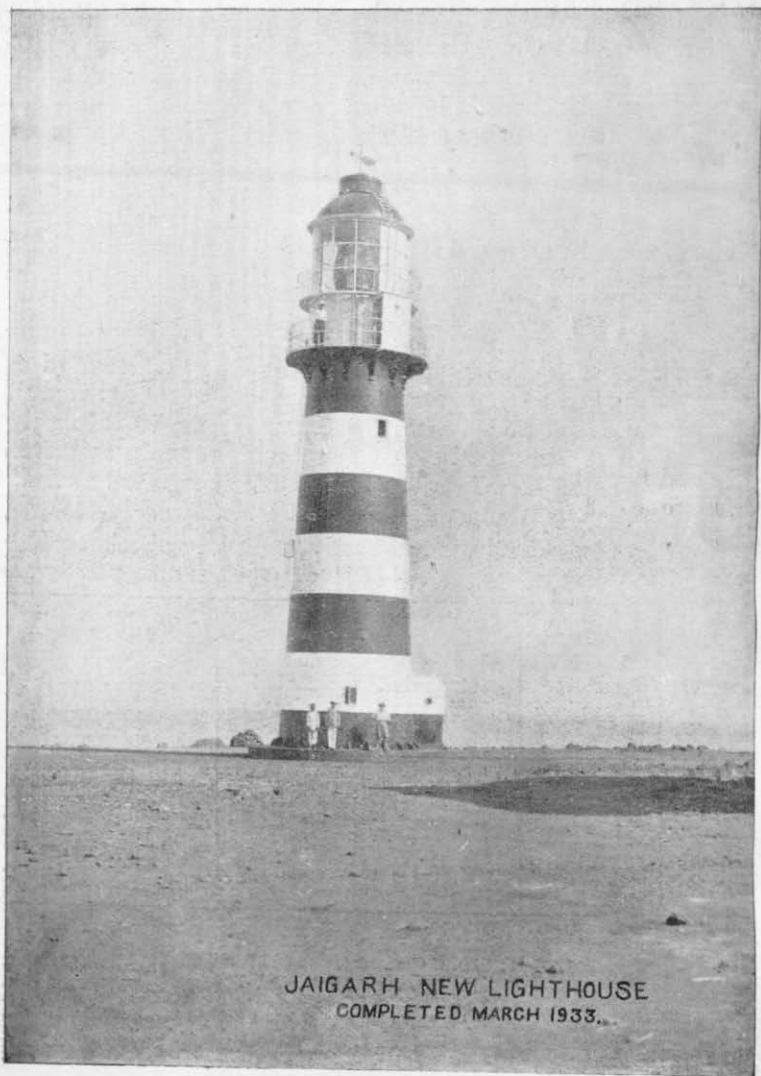
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COMPLETED MARCH 1933.

*(Vide paragraph 25.)*



# ADMINISTRATION REPORT OF THE INDIAN STORES DEPARTMENT FOR THE YEAR 1932-33.

## CHAPTER I.

### SUMMARY.

1. *General.*—There was no improvement during 1932-33 in the acute and widespread trade depression which prevailed during the previous year. As a consequence this report on the working of the Indian Stores Department has of necessity to record a still further all-round contraction in the value of business transacted, a direct consequence of the curtailment of activities of spending departments imposed by prevailing conditions and aggravated by a further drop in commodity prices.

2. *Activities of the Purchase Branch.*—The number of orders placed during the year increased from 34,923 to 44,045, but their value decreased from Rs. 3,60,00,006 to Rs. 3,30,90,903 (*vide* paragraph 16).

3. *Activities of the Inspection Branch.*—The value and tonnage of stores inspected during the year amounted to Rs. 3,54,07,609 and tons 156,203 as against Rs. 4,84,21,867 and tons 310,504 during the year 1931-32. The number of tests and analyses carried out at the laboratories of the Government Test House, Alipore, and the Metallurgical Inspectorate, Jamshedpur, amounted to 11,512 as compared with 14,401 during the preceding year. The large reduction in the value and tonnage of stores inspected was caused by a heavy decline in the orders placed by other Departments, the inspection of which is entrusted to the Indian Stores Department. This branch of the Department is mainly maintained to meet the requirements of the Railway Administrations. The Railway Board's demand for rails and fishplates, which are manufactured by the Tata Iron and Steel Co., Ltd., and inspected by the Metallurgical Inspector, declined from 120,000 tons in 1929-30 to 35,998 tons in 1932-33 and similarly the value of bridgework, structural steel and other supplies inspected on behalf of various Railways declined from Rs. 4,05,05,822 to Rs. 91,15,933 only. Consequently the total amount of stores inspected by the Department which amounted to Rs. 7,47,99,137 and tons 343,109 during the year 1929-30 have been reduced, by the financial depression of the last three years, to less than half of these figures.

Full details of the work of the Inspection Branch will be found in Chapters IV, V, and VI and in Appendices XI to XVI and XVIII.

4. *The operation of the Rupee Tender System.*—It was mentioned in paragraph 5 of the Report for the year 1931-32 that the Governments of Bombay, Madras, Central Provinces, Assam and Bihar and Orissa had remodelled their Rules for the supply of articles required to be purchased for the public service on the lines of the Rupee Tender System adopted by the Government of India. Similar rules were adopted during the year by the Government of Bengal and

and it now remains for the Governments of United Provinces, Punjab and Burma to follow suit. The newly constituted Government of North-West Frontier Province is following the rules issued by the Central Government, pending the formulation of their own rules.

5. *Indents on India Store Department, London.*—As a result of the close observance of the Rupee Tender Rules by Departments of the Central Government and of Provincial Governments which have promulgated similar rules—and also as a result of general curtailment of demands due to financial stringency, only 835 indents on the Director General, India Store Department, London, for stores estimated to cost Rs. 74,36,880 were received for examination during the year against 915 indents for stores of the estimated value of Rs. 93,84,301 examined during the preceding year. It was found necessary to challenge items aggregating Rs. 63,573 or 85% of the total value only in these indents.

The improvement is due to several causes, namely, closer observance of the rules by indenting authorities, increasing facilities for purchase of stores in India and utilisation by several Departments in an increasing degree of the services of the Indian Stores Department for a pre-scrutiny of their forecasts of estimates of expenditure on stores to be imported from abroad as well as of their indents on the Director General, India Store Department, London, before actual despatch.

The following statement shows the results of the examination of indents during the years 1929-30 to 1932-33.

Year.	No. of indents examined.	Value of indents examined.	Value of items challenged.	Percentage of the value of items challenged to total value of indents.
		Rs.	Rs.	
1929-30 .. ..	1,414	3,16,06,941	14,95,803	4.7
1930-31 .. ..	1,165	2,83,80,217	14,82,188	5.2
1931-32 .. ..	915	93,84,301	3,94,293	4.2
1932-33 .. ..	835	74,36,880	63,573	.85

6. *Utilisation of the services of the Indian Stores Department by authorities outside India.*—The services of the Department were utilised by the Resident Engineer, Royal Airship Base, Karachi, for the purchase and inspection of miscellaneous stores, and by the Inspector General of Police, Singapore, Straits Settlements, for Police uniforms and accoutrements. Cast iron pipes and specials manufactured at Kulti were inspected on behalf of the Singapore Municipality, and tents manufactured at Cawnpore on behalf of the Palestine Government. The Comptroller of Stores, Western Australian Government Railways and Tramways, Freemantle, also again utilised the services of the Bombay Inspection Circle for the inspection of Cotton Waste.

7. *Financial position.*—The final accounts of the receipts and expenditure of the Department for the year 1932-33 are not at present available, but a provisional account has been prepared by the Audit Officer, Indian Stores Department, and included in Appendix XVII.

The financial statement shows separately, as in the Report for 1931-32, the expenditure on the commercial and non-commercial activities of the Department. The net result of the working of the year shows an improvement of Rs. 53,902 in the non-commercial section of the account due to rigorous schemes of retrenchment carried out during the last two years. The commercial section of the account shows a deterioration of Rs. 1,01,190. It will be observed, from paragraph 2 that though there has been but a small reduction in the value of purchases transacted by the Department, the value of orders placed by other Departments direct, the inspection of which is entrusted to the Stores Department, has declined heavily. It is due to this decline that in spite of a reduction of Rs. 3,22,643 in the expenditure of the Department, as compared with the preceding year, the financial position has not improved.

Leaving apart the temporary set-back, due to the general financial depression, the main cause of a recurring deficit in the working of the Indian Stores Department is that the present scale of Departmental charges is not based on any commercial principles. The question was thoroughly examined by the Stores, Stationery and Printing Retrenchment Sub-Committee during their investigations. They received evidence that "no business concern would be satisfied with so low a rate of remuneration as one per cent. on the value of stores purchased or inspected". They were satisfied, moreover, that "a correct picture of the financial position could only be obtained if on the receipt side of the account credit was taken for the large savings in the expenditure budgets of the consuming departments on the cost of stores purchased through the Indian Stores Department". They went further and stated that "an account drawn up in that form would still be incomplete as it was impossible to assess in rupees, annas and pies the value of the services rendered by the Department in connection with the promotion and encouragement of Indian industries". In fact, the Committee definitely stated that in their opinion the idea that the Indian Stores Department should be self-supporting, on the basis of the *proforma* accounts as at present prepared, was misconceived.

A complete statement of the work done and fees earned by the Department year by year, since its constitution, will be found in Appendix XVIII.

8. *Organisation of the Indian Stores Department and procedure in force.*—A brief description of the organisation of the Department, with hints for the guidance of indenting authorities, will be found in Appendix I to this Report. Full details are given in a pamphlet copies of which can be obtained free of charge on application to the Chief Controller of Stores.

## CHAPTER II.

## ORGANISATION.

9. *Retrenchment and consequential changes in organisation.*—Mention was made in paragraph 10 of the Report for the year 1931-32 of the examination of the scope, functions and costs of the Department by the Stores Printing and Stationery Sub-Committee of the Retrenchment Advisory Committee appointed by the Government of India, and of the Interim Report submitted by the Sub-Committee suggesting a total immediate saving of Rs. 2,53,102 on the annual expenditure of the Department. Effect had been given to most of the proposals made in the Interim Report and savings exceeding those estimated by the Committee had been secured in anticipation of the receipt of their final recommendations. The final report of the Sub-Committee, which was issued in September 1932, contained no further proposals for direct retrenchment, but made several important suggestions on matters of policy and procedure which are under the consideration of the Government of India. The process of retrenchment was, however, continued departmentally, and savings exceeding Rs. 25,000 per annum were effected besides carrying out to completion the proposals initiated during the preceding year.

The Chemical Branch of the Metallurgical Inspectorate was overhauled and it was decided to transfer the work in connection with the analysis and examination of all miscellaneous materials to the Government Test House, Alipore, restricting the work at Jamshedpur to that connected with the examination of iron and steel. As a result, it was found possible to reduce the staff at Jamshedpur by one officer (a Chemist) and one subordinate (a Chemical Assistant). The latter post was transferred to the Government Test House, Alipore, in order to cope with the additional work, and the former was actually retrenched.

In view of the diminution of work in the Karachi area, the post of Assistant Controller of Purchase, as well as a post of Assistant Engineer at Karachi, were left vacant, and both the offices were run by single officers practically throughout the year. Following the arrangements introduced at Lahore during the year 1931-32, the Karachi Inspection Circle, which was previously in charge of an officer of the rank of Assistant Controller of Inspection, was placed under a junior officer of the rank of Assistant Engineer, and eight posts of clerk (five from the Purchase and three from the Inspection Branch) were brought under reduction. Four of the latter posts were actually retrenched, while the remaining four were utilised to meet demands for increased staff in other branches of the Department (*viz.*, two in the Bombay Purchase Circle and two in the Government Test House, Alipore).

An officer of class III of the cadre of the Purchase Branch, holding the post of Controller of Purchase, Bombay Circle, offered himself for voluntary retirement on retrenchment terms. It was not found possible to abolish the post held by him, but his offer was accepted, and a post of Assistant Controller of Purchase in class IV of the cadre, the incumbent of which was appointed to replace him, was retrenched.

One post of Superintendent, two posts of Assistant, and two posts of peon were brought under reduction in the Headquarters office.

10. *Organisation of the Department at the end of the year.*—A conspectus of the organisation as it stood at the end of the year will be found in Appendix II.

11. *Important changes in personnel.*—Sir James Pitkeathly proceeded on leave for a short period in November 1932 and Mr. R. W. Targett officiated as Chief Controller of Stores from the 5th November 1932 to the 12th March 1933. In consequence of the decision to hold the post of Director of Inspection in abeyance, the services of Mr. D. Cardew were replaced at the disposal of the Railway Department, with effect from the 7th April 1932. Mr. C. A. Williams, Deputy Director of Purchase, another senior officer of the Department, proceeded on leave preparatory to voluntary retirement with effect from the 10th March 1933.

12. *Technical training.*—The probationary Assistant Engineer, who was recruited for training in the inspection of rolling stock and engineering supplies on 1st December 1930, continued to make very satisfactory progress and it was decided to extend his period of training to the full term of three years.

13. *Retrenchment in the Gazetted Staff.*—No officer was appointed to gazetted ranks during the year under review. Two European and two Indian Officers left the Department during the year as a result of retrenchment and one European Officer of (Indian domicile) retired on voluntary retrenchment terms. The services of one other European Officer were terminated and the post held by him kept unfilled.

14. *Numbers of European and Indian Officers in the Department.*—Thirty-eight out of 61 officers employed in the Department on the 31st March 1933 were Indians and 23 were non-Indians, as against 41 Indians and 26 non-Indians on the 31st March 1932. The progress of Indianisation and the proportion of Indians and Non-Indians in the Gazetted ranks of the Department at various stages since the constitution of the Department in 1932 are shown in the graph in Appendix III.

15. *Retrenchment of the Subordinate Staff.*—No recruitment was made to the Subordinate technical staff of Examiners of Stores, Chemical Assistant and Physical Assistants, but one Examiner of Stores retired on superannuation.

## CHAPTER III.

## WORK OF THE PURCHASE BRANCH.

16. *General.*—The total value of orders placed by the Department during the year amounted to Rs. 3,30,90,903 as compared with Rs. 3,60,00,006 during 1931-32. That is to say, there was a decline of 8·1% or Rs. 29,09,103. On the other hand the volume of work increased as measured by the number of indents received and contracts placed. The number of indents received during 1931-32 was 28,259 (comprising 61,657 items), whereas 38,720 indents (comprising 77,288 items) were received during 1932-33. During 1931-32, 34,928 contracts were placed, whereas during 1932-33 the figure increased to 44,045. As already indicated, the decrease in value was due partly to the fact that stores were demanded in smaller quantities as compared with previous years, and partly to the continued drop in market prices. A statement showing indents, items, and contracts dealt with in the year under review in comparison with those of the two preceding years is given in the table below :—

Organization.	No. of Indents received.			No. of items in indents received.			No. of orders placed.		
	1930-31	1931-32	1932-33	1930-31	1931-32	1932-33	1930-31	1931-32	1932-33
<i>Provincial.</i>									
Calcutta .. ..	6,073	5,600	7,179	18,855	15,056	20,233	9,217	7,180	9,458
Bombay .. ..	2,644	2,450	3,468	10,355	9,411	10,263	5,138	4,763	5,933
Karachi .. ..	2,452	1,904	1,717	12,923	7,022	5,636	5,528	3,593	3,081
Total Provincial	11,169	9,954	12,364	42,133	31,489	36,132	19,883	15,536	18,472
Total Head-quarters ..	12,064	18,305	26,356	25,091	30,168	41,156	13,428	19,392	25,573
Grand Total ..	23,233	28,259	38,720	67,224	61,657	77,288	33,311	34,928	44,045

Details of the values of orders placed will be found in Appendices IV to VII.

17. *Clientele of the Department.*—The year 1932-33 records further additions to the list of indentors who utilised the services of the Department for the first time. These additions amounted to thirty-three and the value of orders placed on their behalf was Rs. 1,20,998, distributed as follows :—

	No.	Rs.
(1) Central Departments (Civil, Military and Railways).	10	3,667
(2) Provincial Governments .. .. .	6	9,359
(3) Indian States, <i>Quasi</i> -public bodies and Colonial Administrations .. .. .	17	1,07,972
Total ..	33	1,20,998

The authorities which chiefly contributed to this amount were :—

	Rs.
1. Corporation of Madras .. .. .	36,594
2. Quetta Municipality .. .. .	19,212
3. Bezwada Municipality .. .. .	13,989
4. Khairpur State .. .. .	13,938
5. Cocanada Municipality .. .. .	8,984
6. Salt and Excise Department, Madras .. .. .	7,281

18. *Variation in demands.*—The following statement shows the fluctuations in the values of orders placed on behalf of various indenting authorities as compared with the corresponding figures of the preceding years :—

Indenting authorities.	Value of orders placed.		Increase + Reduction. —.	Percentage Increase + Reduction—.
	During 1931-32.	During 1932-33.		
Central Army .. .. .	1,38,23,488	90,69,243	—47,54,245	—34%
Central Civil .. .. .	38,22,712	40,30,379	+2,07,667	+5%
Railways—State worked .. .. .	1,18,08,062	1,46,84,761	+26,76,699	+23%
Railways—Company worked .. .. .	7,87,189	4,69,603	—3,17,586	—40%
Railways—Indian State worked .. .. .	18,801	1,23,114	+1,04,313	+555%
<b>Total—Railways .. .. .</b>	<b>1,26,14,052</b>	<b>1,52,77,478</b>	<b>+26,63,426</b>	<b>+21%</b>
Provincial Governments .. .. .	53,61,701	42,30,220	—11,31,481	—21%
Indian States .. .. .	1,57,343	1,15,968	—41,375	—26%
Quasi-public bodies .. .. .	2,18,627	3,61,420	+1,42,793	+65%
British Government and Colonies.. .. .	2,083	6,195	+4,112	+197%
<b>Grand Total .. .. .</b>	<b>3,60,00,006</b>	<b>3,30,90,903</b>	<b>—29,09,103</b>	<b>—8·1</b>

19. *Purchases on behalf of the Civil Departments of the Central Government.*—The value of demands received from Civil Departments of the Central Government increased by Rs. 2,07,667 as compared with that of the preceding year. Demands for Plant and machinery and other stores amounting in value to Rs. 9,00,000 were received from the Administrative Officer, Vizagapatam Harbour. There was an increase in the value of stores ordered for the Salt Department of Rs. 1,37,000. Small increases in the value of stores ordered have also to be recorded for certain other Civil Departments. The largest decrease has to be shown against the value of orders received from the Posts and Telegraphs Department. It amounts to Rs. 7,24,000. The value of textile stores purchased for this Department increased by Rs. 3,47,000 but the value of engineering stores declined by Rs. 10,71,000. Purchases on behalf of the Central Public Works Department were less in value by Rs. 67,000 and small decreases are disclosed in the transactions undertaken for certain other Departments.

It will be observed that the fluctuations as between 1931-32 and 1932-33 are not so great as the comparisons recorded in previous reports. The volume

of demands generally has been greatly restricted and there has therefore been smaller scope for variations.

20. *Purchases on behalf of the Military Department.*—The Purchase Co-ordinating Committee referred to in previous Reports continued to meet during the year. The question of entrusting to the Indian Stores Department the purchase of certain classes of stores which is at present being carried out by the purchasing agency of the Army was referred to by the Stores, Printing and Stationery Sub-Committee of the Retrenchment Advisory Committee in its Report which is under consideration by the Government of India. The total purchases made during the year on behalf of the Army amounted to Rs. 90,69,000 against Rs. 1,38,23,000 in the previous year. In other words there was a notable decrease of Rs. 47,54,000 or 34·4 per cent. The textile stores purchased declined in value by Rs. 26,70,000 and engineering stores were less in value by Rs. 20,84,000. These remarkable reductions are due to the rigid economy in expenditure which is being observed. Textile stores have been ordered in much smaller quantities. The purchase by the Quartermaster General's Branch, including the Department of Mechanical Transport, declined by Rs. 15,93,000, and owing to the curtailment of works programme the value of stores purchased for the Military Engineer Services fell by Rs. 5,55,000.

21. *Purchases on behalf of Railway Administrations.*—Meetings with the Railway Department (Railway Board) were continued throughout the year and as a result the following items were added to the list of requirements of State Railway Administrations, the purchase and inspection of which for the future will be entrusted to the Indian Stores Department :—

*Engineering plant.*—

Boilers, non-locomotive, and tubes for the same.

Wheels and axles for trollies.

*Workshop machinery, plant and equipment.*—

Electric welding plant.

Electric cranes, all kinds.

Air Compressors.

Motors and control gear for driving machines (except where the motor forms a component part of a machine).

*Permanent-way materials.*—

Gangman's tools.

*Electric locomotives, parts and fittings.*—

Superheater elements.

Diesel Electric Locomotives.

*Trimnings.*—

Cloth, linoleum.



*Signalling and interlocking material.*—

Poles, tubular, for signals (where purchased without signals).

Point, rodding, tubular or solid.

*Leather, India-rubber and canvas goods.*—

Belting of all kinds (leather, cotton, hair, rubber, balata, etc.).

*Metals.*—

Electrodes.

Wire, steel, mild.

The value of purchases made during 1932-33 for Railway Administrations as a whole (*i.e.*, State, Company and Indian State lines) totalled Rs. 1,52,77,000. During the preceding year this figure was Rs. 1,26,14,000. Thus there was an increase of Rs. 26,63,000 or 21 per cent. In the present circumstances this result may be held to be very gratifying as it has been achieved despite the restriction exerted by the policy of strict economy which existing conditions have imposed and despite also the fall in the general level of prices. The increase, therefore, it will be realised, is greater than is shown by the bare statistics and is due to the expansion of new business entrusted by the Railway Board and Railway Administrations to the Indian Stores Department. But for this welcome support and co-operation a heavy decline would have had to be recorded. An analysis of the increase shows that purchases on behalf of the State Railways accounted for extra turnover amounting to Rs. 28,77,000. Contracts entered into on behalf of Company Railways declined in value by Rs. 3,18,000. On the other hand, purchases for Railways in Indian States increased by Rs. 1,04,000.

22. *Purchases on behalf of major Local Governments.*—The total of purchases made on behalf of major Local Governments, including the recently constituted Government of the North-West Frontier Province which was previously shown under Central Government Departments, was Rs. 42,30,220 for the year as compared with Rs. 53,61,701 for 1931-32, *i.e.*, there was a reduction of Rs. 11,31,481 or 21 per cent.

The value of demands received from the Governments of Bombay, Bengal, United Provinces, Punjab and Assam accounted for a decrease of approximately Rs. 12,83,000 while those from the Governments of Madras, Bihar and Orissa, Burma and Central Provinces showed an increase of approximately Rs. 1,35,000.

The value of textiles purchases for Major Local Governments was approximately the same as that for 1931-32. The net decrease referred to is in respect of demands for Engineering Stores. Decreases have to be recorded against the value of engineering stores purchased on behalf of the Governments of Bombay, Punjab and the United Provinces the total being approximately Rs. 12,38,000. The decreases in expenditure are almost entirely accounted for by the cessation of demands from the Lloyd Barrage and Canals Constructions Scheme and a falling off in value of indents from the Hydro-Electric Branch of the Punjab Public Works Department.

23. *Effect of drop in prices on the turn-over of the Department.*—A statement illustrative of the effect of the drop in prices on the turn-over of the Department

was published in the Administration Report for 1931-32. The following list comprises some of the important items of stores which show a further drop in price levels compared with those of the previous year :—

					Average percentage drop as compared with 1931-32 prices.
	<i>Textiles.</i>				Per cent.
Postal bags, Jute canvas	..	..	..	..	5·8
Serge, blue, medium	..	..	..	..	10·3
Sheets, barrack	..	..	..	..	7·7
<i>Engineering, Hardware and miscellaneous stores.</i>					
Axles, carriage and wagon	..	..	..	..	9·5
Black Japan	..	..	..	..	8·2
Cables, V. I. R. Flexible cords	..	..	..	..	15 to 20
Disinfecting fluid	..	..	..	..	5·9
Fans, Electric A. C., ceiling	..	..	..	..	5
Gauges, Vacuum, single	..	..	..	..	23·7
Graphite, country	..	..	..	..	11·7
Hose pipe	..	..	..	..	7·7
Insulators—					
Pot head	..	..	..	..	26
D. S. large	..	..	..	..	7·5
Composition	..	..	..	..	7
Lamps, electric	..	..	..	..	12
Methylated spirit	..	..	..	..	15·4
Oil, gas making, solar	..	..	..	..	12·5
Oil, kerosene, 1st quality	..	..	..	..	9·7 to 11·7
Oil, kerosene, 2nd quality	..	..	..	..	14·6
Oil, kerosene, Victoria Swan brand	..	..	..	..	17·4
Oil, linseed, double-boiled	..	..	..	..	14·3
Oil, linseed, raw	..	..	..	..	32·3
Paint, black stiff	..	..	..	..	22·5
Paint, red-oxide, ready-mixed	..	..	..	..	11
Pipes, cast iron	..	..	..	..	7
Pipes, mild steel	..	..	..	..	18
Rings, gland packing, 1½" piston rods V. B. 86	..	..	..	..	13·6
Tubes, boiler	..	..	..	..	28
Turpentine, genuine, 1st quality	..	..	..	..	10·9
Tyres, steel, for carriages and wagons	..	..	..	..	13
Varnish, body, hard, drying—, inside	..	..	..	..	14
Wire, copper	..	..	..	..	20
Wire, galvanized iron	..	..	..	..	9

24. *Purchases of Textile and Leather goods.*—The total value of purchases made during the year under this head amounted to Rs. 79,12,155 as compared with Rs. 1,06,14,978 during 1931-32. The purchases comprised :—

Items.	1931-32.	1932-33.	Percentage decrease.
	Rs.	Rs.	Per cent.
Cotton goods .. .. .	50,31,242	40,32,398	19·9
Woollen goods .. .. .	42,58,917	29,96,167	29·6
Jute flax, etc. .. .. .	12,09,474	7,81,257	35·4
Leather goods .. .. .	1,15,345	1,02,333	11·3
Total .. .. .	1,06,14,978	79,12,155	25·5

The largest decrease is shown against purchases for the Army. The value fell during the year under review to Rs. 42,97,908 as compared with Rs. 69,64,846 for the previous year. There was thus a heavy decline by 38 per cent. which was due to the diminution of the quantities of textile stores ordered. Practically all the items of stores demanded during the previous year were indented for but in much smaller quantities.

Similarly there was a marked falling off in value of orders received from Railway Administrations. The year 1931-32 showed textile purchases for State Railways at a very low level but whereas in that year they were Rs. 16,66,737 during the year under review they fell to Rs. 13,08,609, *i.e.*, a drop of 22 per cent. In this case also stores have been ordered in smaller quantities owing to the still pressing need for economy.

The purchases made on behalf of the Posts and Telegraphs Department increased in value from Rs. 2,53,515 to Rs. 6,00,788. This increase is accounted for by the fact that uniforms of the staff are now as an economy measure issued during alternate years and issues were due during 1932-33.

The value of textiles purchased for major Local Governments was as already stated approximately the same as for the preceding year.

The percentage value of indigenous textile stores purchased was 85·2 per cent. and that of imported textiles 14·8 per cent. as compared with 74·2 per cent. and 25·8 per cent. respectively for 1931-32.

25. *Purchase of Engineering, Hardware and Miscellaneous Stores.*—The total value of purchases of these stores amounted during 1932-33 to Rs. 2,51,78,748 as compared with Rs. 2,53,85,028 in 1931-32, *i.e.*, a decrease of Rs. 2,06,280 or ·8 per cent. Reasons have already been stated accounting for this decrease and it has been shown that the decrease would have been much greater but for the large increase of new business entrusted to the Department by the Railway Board. The increase in the value of engineering, hardware and miscellaneous stores purchased on behalf of Railway Administrations as compared with the preceding year was Rs. 30,12,095. Increased demands were received from all Railways excepting the following: Burma Railways, South Indian Railway, Madras and Southern Mahratta Railway. Demands from

these three Railways were less by Rs. 3,80,252 than those received from them during the preceding year.

A reference has already been made to the heavy decline in value (Rs. 20,84,000) of engineering stores purchased on behalf of the Army. The engineering stores purchased on behalf of the Civil Departments of the Central Government fell in value by Rs. 1,24,000 and the drop would have been greater but for the purchase of a considerable value of machinery and craft for the Vizagapatam Harbour. A steam tug costing over Rs. 5 lakhs was purchased for this indenting authority. This tug, one of the most powerful of its kind, was built in India and exhaustive trials proved that its design and construction were entirely satisfactory in every respect. The workmanship compared in no way unfavourably with that obtainable in other countries and reflected the greatest credit on the builders. A photograph of the tug faces this page. Contracts placed for major Local Governments decreased in value by approximately Rs. 10,90,000 for the reasons explained in paragraph 22.

The total value of important items of engineering and miscellaneous stores wholly or partly manufactured in India for which contracts were placed during the year amounted to approximately Rs. 75,18,000. Details of these purchases will be found in paragraph 70.

The order for a tower lantern and second order for optical apparatus for the Jaigarh New Lighthouse, costing Rs. 1,02,000, mentioned in paragraph 26 of the Report for 1931-32, was completed during the year under review. An illustration of the equipment in actual position appears as frontispiece.

26. *Distribution of Purchases.*—The statistics given in Appendix VII show the distribution of the orders placed by the Department among the various provinces and other territories during the year under review and three preceding years. It will be observed from these that the system followed by the Department in making purchases continues to ensure that orders are widely distributed throughout the country.

27. *Details of important purchases.*—The more important purchases made during the year are shown below :—

	Amount.
<i>Textile and leather stores.</i>	Rs
1. Blankets, woollen .. .. .	10,22,000
2. Drill, khaki, coloured, white and grey .. .. .	10,19,000
3. Pugree cloth, muslin, nainsook, calico, etc. .. .. .	4,98,000
4. Socks, cotton and woollen .. .. .	4,16,000
5. Tents and tent components .. .. .	3,52,000
6. Yarn, cotton and woollen .. .. .	3,39,000
7. Flannel .. .. .	3,17,000
8. Cotton waste .. .. .	3,10,000
9. Jackets, cardigan, jerseys, waistcoats, banians, etc. .. .. .	2,66,000
10. Putties, cotton and woollen .. .. .	2,08,000
11. Rugs, horse and <i>lohis</i> .. .. .	1,95,000



*Steam Tug "Sir Guthrie Russell" for the Vicagapatam Harbour.*

*(Vide paragraph 25.)*



	Amount.
<i>Textile and leather stores.</i>	
	Rs.
12. Serges.. .. .	1,65,000
13. Greatcoats, greatcoat cloth, cloth, drab mixture .. ..	1,28,000
14. Durries, cotton .. .. .	1,28,000
15. Flannelette .. .. .	1,20,000
16. Canvas, flax, cotton and jute .. .. .	1,20,000
17. Sheets, barrack and hospital .. .. .	1,12,000
18. Wool cotton, absorbent .. .. .	1,06,000
19. Ropes, head, heel and picketting .. .. .	1,01,000
20. Bags, postal, jute, flax, leather, etc. .. .. .	99,000
21. Twill .. .. .	97,000
22. Web components, and equipment .. .. .	81,000
23. Nets and netting, mosquito .. .. .	75,000
24. Leather cloth and binding furniture .. .. .	65,000
25. Dhotie cloth and long cloth .. .. .	63,000
26. Garments, uniform .. .. .	62,000
27. Cloth cord cotton, and Duck cotton, flax, etc. .. .. .	60,000
28. Garments and covers, waterproof .. .. .	59,000
29. Tape and webbing .. .. .	56,000
30. Boots, <i>chappals</i> , sandals, etc. .. .. .	55,000
31. Hessians and gunnies .. .. .	55,000
32. Paulins .. .. .	54,000
33. Cloths, Domestic, jaconet, <i>dungri</i> , madapalam, etc. .. .. .	50,000
<i>Engineering and allied stores.</i>	
34. Oil, kerosene .. .. .	17,76,000
35. Steel, axles, tyres and wheels for Railway carriages, wagons, locomotives and tenders .. .. .	15,29,000
36. Road dressing materials .. .. .	12,81,000
37. Mild steel sections .. .. .	12,08,000
38. Oil, lubricating (cylinder, superheat and miscellaneous) .. .. .	10,02,000
39. Cement .. .. .	9,82,000
40. Oil fuel .. .. .	9,36,000
41. Paints, including dry pigments .. .. .	8,04,000
42. Lamps, electric .. .. .	7,84,000
43. Train lighting equipment .. .. .	7,55,000
44. Fans and fittings, electric .. .. .	7,50,000
45. Oil axle .. .. .	7,40,000
46. Transformers, switchgear and switchboards .. .. .	5,18,000
47. Steam tug .. .. .	5,09,000
48. Motor vehicles and spares .. .. .	4,92,000
49. Cables, electric .. .. .	4,24,000
50. Oil, castor .. .. .	3,68,000
51. Vacuum brake fittings .. .. .	3,41,000
52. Enamels and varnishes .. .. .	3,35,000

	Amount. Rs.
53. Petrol .. .. .	3,23,000
54. Pipes, mild steel, and fittings .. .. .	2,93,000
55. Pig iron .. .. .	2,84,000
56. Tubes, steel, high pressure .. .. .	2,76,000
57. Meters, water .. .. .	2,74,000
58. Oils, linseed, raw and double boiled .. .. .	2,71,000
59. Primary and secondary cells and spares (other than train lighting) .. .. .	2,56,000
60. Electric Generating plant .. .. .	2,50,000
61. Tyres and tubes, motor .. .. .	2,25,000
62. Wire, galvanized, iron .. .. .	2,24,000
63. Pumping plant and equipment .. .. .	2,22,000
64. E. H. T. Electricity Distribution mains including construction at site .. .. .	2,00,000
65. Wire, copper .. .. .	1,87,000
66. Oxygen gas .. .. .	1,71,000
67. Pipes and specials, cast iron .. .. .	1,41,000
68. Sheets, galvanized iron, corrugated .. .. .	1,32,000
69. Miscellaneous engineering plant and spare parts of machinery .. .. .	1,30,000
70. Tin tents and components .. .. .	1,28,000
71. Charpoys, galvanized iron .. .. .	1,29,000
72. Level luffing electric quay cranes .. .. .	1,27,000
73. Greases .. .. .	1,26,000
74. Asbestos cement pressure pipes .. .. .	1,11,000
75. Oil, for gas making .. .. .	1,09,000
76. Salt crushing and screening plant .. .. .	1,05,000
77. Turpentine, genuine and substitute .. .. .	92,000
78. Creosote .. .. .	86,000
79. Firebricks, and fireclay .. .. .	82,000
80. Tubes, boiler, and flues for locomotives .. .. .	76,000
81. Asbestos cement sheets and packing .. .. .	75,000
82. Acids and Chemicals .. .. .	75,000
83. Steel structures (including shelving, racks, almirahs and cabinets) .. .. .	72,000
84. Sheets, mild steel .. .. .	72,000
85. Machine tools .. .. .	65,000
86. Coal .. .. .	65,000
87. Road rollers and spares .. .. .	64,000
88. Zinc ingots .. .. .	63,000
89. Poles, steel, for electric transmission lines .. .. .	59,000
90. Wire ropes .. .. .	58,000
91. Flexible electric cords .. .. .	52,000
92. Roofing materials for Railway carriages .. .. .	52,000
93. Insulators, porcelain and composition .. .. .	51,000
94. Pipe hose, canvas and India rubber .. .. .	51,000
95. Meters, electric .. .. .	50,000
96. Disinfecting fluids .. .. .	50,000



28. *Running and Rate Contracts.*—The system of Running and Rate contracts on an annual basis or for longer periods was extended during the year to several new classes of stores. Particulars of such contracts made during the year are shown in Appendix VIII. Applications for permission to purchase under these contracts have been received in increasing numbers from all parts of India and it is evident that an increasing number of indenting officers appreciate the advantages which the system offers to them. There has also been a gratifying utilisation of these contracts by *quasi*-public bodies, such as municipalities, particularly in regard to the supply of consumable stores required for use in Electricity Supply undertakings and other public utility services.

29. *Work done by Provincial Circles.*—The Provincial Purchase Circles at Calcutta, Bombay and Karachi, continued to provide ready access to those important markets for indentors who are distant from places of supply and to afford useful liaison on behalf of the more important indentors and of the Indian Stores Department Headquarters office itself. The returns from the Calcutta and Bombay Circles show satisfactory increases in spite of the universal depression and its effects, but the Karachi Circle has to record a falling off in the volume of business as compared with 1931-32.

The total volume of stores purchased by the Provincial Offices during the year amounted to Rs. 50,38,809 as compared with Rs. 47,41,408 or an increase of 6 per cent. The number of indenting authorities decreased from 687 to 670. The number of indents received increased from 9,954 to 12,364 and the number of contracts placed increased from 15,536 to 18,472. In addition, the Circles assisted in the negotiations connected with the placing of some of the larger contracts entered into by the Headquarters Office. One hundred and twenty-eight firms, which applied for registration as approved contractors during the year, were inspected by the Provincial Circles, and of this number ninety-two were reported on favourably.

Details of contracts placed by the Provincial Circles and the fees earned by them are shown in Appendix IV.

30. *The Calcutta Purchase Circle.*—The business transacted by this Purchase Circle showed a general increase as compared with 1931-32. The total value of stores purchased increased from Rs. 23,15,897 to Rs. 26,66,773, *i.e.*, 15 per cent. The number of indents received rose from 5,600 to 7,179, and the number of contracts placed from 7,180 to 9,458. The number of indentors declined from 341 to 301. These results in face of general retrenchment are considered to be satisfactory. There was a notable increase in the value of stores purchased on behalf of Railway Administrations which rose from approximately Rs. 9 lakhs in value to approximately 14½ lakhs. Decreases are shown in the value of contracts placed for other indenting authorities with the exception of those received from the Government of Bihar and Orissa, which increased from Rs. 36,000 to Rs. 81,000.

During the year the capacity of 102 firms which applied for registration was investigated. Of these 46 were recommended for registration on the Headquarters list and 24 on the Calcutta Circle list.

31. *The Bombay Purchase Circle.*—The returns from this Circle also show a satisfactory general increase as compared with the previous year. The

total value of stores purchased increased from Rs. 13,40,312 to Rs. 15,04,559 or 12.25%. The number of indents received was 3,468 as compared with 2,450, and the number of contracts placed was 5,933 as against 4,763. The number of indentors increased from 220 to 240. The value of purchases for the Army including the Royal Indian Marine decreased by 40%, *i.e.*, from Rs. 4,37,490 to Rs. 2,61,450 but those for Civil Departments of the Central Government increased by 27% from Rs. 1,99,602 to Rs. 2,73,913. The value of stores purchased for State Railways increased from Rs. 4,42,938 to Rs. 6,57,637. There was also an increase of Rs. 60,337 in the value of demands received from Major local Governments and from *quasi*-public bodies. During the year the capacity of 18 firms was investigated of which 15 were recommended for registration.

32. *The Karachi Purchase Circle.*—In this Circle decreases are reported. The value of stores purchased fell from Rs. 10,85,199 to 8,67,477. The number of indents received declined from 1904 to 1,717. The number of indentors showed a slight increase, being 129 as against 126 during the preceding year. Demands from the Military Engineer Services showed a large drop in value from Rs. 5,29,110 in 1931-32 to Rs. 3,51,163. This decrease was mainly due to the present financial stringency. Owing to the completion of the Lloyd Barrage and Canals Construction Project demands from the P. W. D., Sindh, decreased from Rs. 4,07,462 to Rs. 1,81,256. Purchases for the Punjab Public Works Department increased from Rs. 77,333 to Rs. 1,19,068, and those for the North Western Railway from Rs. 7,121 to Rs. 1,06,576. During this year applications for registration were received from 8 firms of whom 7 were placed on the "Approved Contractors List".

33. *Comparison with the London Stores Department.*—Appendix IX furnishes a comparison of the number of contracts for stores and freight placed by the India Store Department, London, and the expenditure incurred thereon, with the numbers and values of the contracts made by the Indian Stores Department during the years 1929-30 to 1931-32.

Appendix X provides a comparison between the values of contracts placed by the two organizations during the same period. The figures relating to the London Stores Department have been converted into Indian currency at the rate of 1/6*d.* to the rupee.

Attention is invited to the considerable decrease in the value of stores purchased by the London Stores Department during the year 1931-32. The figures of the London Stores Department for 1932-33 are not yet available.

## CHAPTER IV.

## WORK OF THE INSPECTION BRANCH.

34. *General.*—It was mentioned in the previous year's Report (paragraph 10) that it had been decided as a measure of retrenchment to hold in abeyance the post of Director of Inspection at Headquarters. Effect was given to this measure from the commencement of the year under review on the reversion of Mr. D. Cardew to the N. W. Railway, with effect from the 7th April 1932. As a consequence, in spite of the general contraction in the volume of purchase and inspection work handled by the Department, the staff of the Inspection Branch at Headquarters was very fully occupied, more especially as this Branch is responsible for all work connected with the development of Indian industries, the standardisation of stores and preparation and revision of specifications.

35. *Arrangements for inspection of materials in the country of origin.*—Under the arrangement for the pre-inspection of railway materials referred to in paragraph 36 of the Report for the year 1931-32, only 10 calls for inspection were received during the year and forwarded to the Director-General, India Store Department, London, for disposal.

In consequence of the further decrease in orders for rolling stock and steel structure, calls for the services of the technical staff of the Director-General of Stores, London, in connection with inspection of materials in the country of origin were less than in the previous year.

36. *Specifications.*—An important feature of the work devolving on the Inspection Branch at Headquarters has always been the preparation and revision of specifications. During the year under review, 50 specifications were framed, and 167 specifications were revised, as compared with 61 and 142 respectively in the preceding year. In addition to these, 14 specifications were scrutinised for the Standing Committee on Standards and Specifications for Indian Railways and 11 specifications were examined for the Army as against 22 and 5 respectively during the previous year. The total number of specifications dealt with was 242 as against 230 in the year 1931-32.

A list of the specifications which were current at the end of the year 1932-33 will be found in Appendix XI.

This Department has been considering for some time the question of issuing standard specifications as saleable publications. In order to meet the increasing demands from firms and indenting departments for Indian Stores Department standard specifications, arrangements were made during the year to adopt a new system under which all Indian Stores Department standard specifications will be printed up separately as saleable publications. It has been arranged that an index list of such specifications will be issued *gratis* half-yearly, and copies of the specifications will be obtainable shortly on payment of Annas 8 or 10d. per copy (postage extra) from the following places:—

- (1) Office of the Manager of Publications, Civil Lines, Delhi.
- (2) Office of the Chief Controller of Stores, Indian Stores Department, New Delhi/Simla.

- (3) Inspectorates of the Indian Stores Department at Calcutta, Bombay, Karachi, Lahore, Cawnpore and Madras.
- (4) Office of the Director-General, India Store Department, London.

37. *Standardisation*.—The work connected with standardisation as carried out by this Department has for its objects :—

- (a) To set up standards of quality, type, pattern and dimensions which would, as far as possible, be in conformity with the standards laid down by the British Standards Institution where such standards exist, and be suitable, compatible with efficiency and economy, for the service conditions obtaining in India.
- (b) To ensure that the standards adopted would depart as little as possible from the standard manufacturing practice of approved makers.
- (c) To obtain acceptance from several indentors of standards which would suit the requirements of all, thereby eliminating the waste of time and material involved in the manufacture of an unnecessary variety of patterns and sizes of articles for one and the same purpose and consequent reduction in cost of production and economy in their purchase.

During the year under review a substantial volume of work connected with the standardisation of stores used by various Government departments was carried out. Some of the articles in respect of which definite standards have been adopted were :—

Clothing materials for Railways,  
 Spring oil feeders,  
 Galvanized steel buckets,  
 Paulins,  
 Towels, and  
 Blankets.

A large amount of work was also done towards securing standardisation in respect of other materials, and articles especially those required for Railways, the purchase and inspection of which has been entrusted to the Department.

The close liaison between the Railway Board's Central Standards Office and the Inspection Branch of this Department, mentioned in paragraph 41 of the Administration Report for the year 1931-32, was fully maintained during the year under review. Technical officers of the Department attended the meetings of the Standing Committee on Standards and Specifications for Indian Railways and of the Bridge Standards Committee held during the year.

38. *Schedules of Requirements*.—Ninety five schedules of requirements were framed during the year as against 115 in the previous year. Some of the more important of these are detailed below :—

- (1) Forty and 60 k. w. oil engine driven generating sets for the Delhi Fort.

- (2) Three ton level luffing electric quay cranes for the Vizagapatam Harbour Construction.
- (3) Electrically driven air compressor for the G. I. P. Railway.
- (4) Electric capstans and fairleads for the Vizagapatam Harbour.
- (5) Six inch Victaulic pipes and fittings for Chaman Extension Water supply.
- (6) Steel wire ropes for colliery winding and haulage engines for E. I. Railway.
- (7) Tubing and fittings, hot rolled weldless steel, for the Military Engineer Services.
- (8) Platform wagons, crane skips and locomotives for plant for handling manganese ore at Vizagapatam Harbour Construction.
- (9) River launch for the P. W. D., Madras.
- (10) Seventy five K. V. A. transformer H. & L. tension switchgear and shed switchboards for the Vizagapatam Harbour.
- (11) Steel wire ropes for haulageway for the Punjab P. W. D., Hydro-Electric Branch.

39. *Technical investigations and advisory work.*—A number of schemes was subjected to technical scrutiny by the Department. Thirty nine enquiries as against 51 during the last year were received from various indenting officers asking for technical advice or other particulars, and the information or advice asked for was furnished to them.

In paragraph 40 of the Administration Report for the year 1930-31 it was stated that a senior technical officer of the Department was placed on special duty to investigate *inter alia* the complaints received from two consuming departments regarding a white lead product of Indian manufacture, and that the valuable technical information available as a result of the investigations was placed at the disposal of the parties concerned.

The improved supplies made by the manufacturers still being reported as unsatisfactory by one of the indentors, it was considered necessary, in the interests of the Indian industry, to make further investigations and the officer who carried out the original investigations was again deputed for the purpose. The additional technical data collected by him was supplied to the manufacturing concern and further tests with the improved indigenous material are now being carried out.

40. *Erection at site orders.*—Thirty one orders of this class were dealt with during the year aggregating in value Rs. 16,18,185. Some of the more important of these are mentioned below :—

	Rs.
1. Twin screw steam tug for Vizagapatam Harbour ..	5,09,385
2. Switchgears and transformers for the electrification of 13 towns in the Punjab .. .. .	3,37,799
3. Electric quay cranes for Vizagapatam Harbour ..	1,27,470
4. Forty seven complete tin tents 62'-6" long × 25' wide for the Ordnance Officer, Bombay .. .. .	1,23,845
5. Oil engine driven generating sets for Drigh Road, Karachi	54,975

41. *Sample Room.*—This section of the Inspection Branch at Headquarters dealt with 9,890 samples during the year.

42. *Drawing Office.*—During the year 128 drawings, 187 tracings and approximately 45,000 square feet of ferro and other prints were made in the Drawing Office at Headquarters as against 180,263, and 72,000 respectively during the previous year.

43. *Technical publications.*—In paragraph 44 of the last year's Report it was mentioned that the second edition of the book entitled 'Heavy Oil Engines, Classification, Origin and Development' and the handbook for departmental use on 'General Instructions for Inspecting Officers of the Indian Stores Department' were under print. These publications were issued during the year under review.

The work connected with the preparation of technical publications, standardizing methods of inspection for each class of stores, which was begun in 1931-32, was continued during the year. The intention underlying the preparation of these publications is to preserve for the use of the technical staff of the Department such knowledge and experience as may from time to time be gained in connection with the inspection of stores.

The following pamphlets were issued during the year :—

- (1) Inspection instructions regarding galvanised sheets,
- (2) General instructions regarding inspection and tests at site of engineering plant and machinery.

Two other pamphlets, namely—

- (1) Inspection instructions regarding textile stores,
- (2) Inspection instructions regarding padlocks and locks,  
have also been compiled and will be issued shortly.

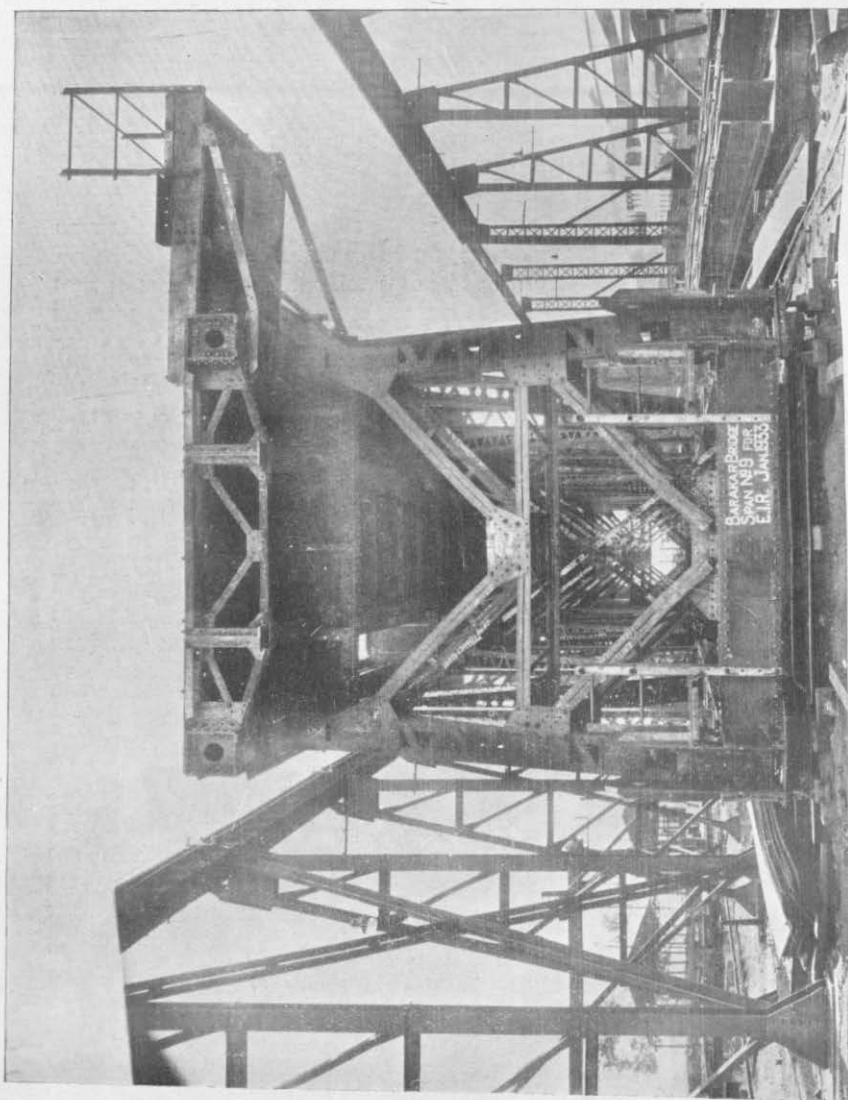
#### PROVINCIAL INSPECTION CIRCLES.

44. *Work done by the Provincial Inspection Circles.*—Full details of the work done and fees earned by the several Inspection Circles are given in the following paragraphs and in Appendices XII, XIII and XIV. The total value of stores inspected and passed by the provincial Inspectorates during the year and charged on value aggregated Rs. 3,48,70,740 and the tonnage of material charged on weight amounted to 11,655 tons as against Rs. 4,81,20,378 and 1,14,093 tons during the preceding year. The value of stores inspected against orders placed by the Department declined by Rs. 11,88,518, namely from Rs. 2,65,83,845 to Rs. 2,53,95,327 and the value of orders placed by other authorities the inspection of which was entrusted to this Department declined by Rs. 1,20,61,120, that is from Rs. 2,15,36,533 to Rs. 94,75,413.

Although the aggregate value of the stores inspected was less than the preceding year, there was an increase in the number of orders received for inspection which rose to 40,713 as against 33,266 in the previous year.

The value of stores inspected on behalf of Railway Administrations decreased from Rs. 2,08,98,201 to Rs. 91,15,933, and the material charged on weight fell from 1,10,584 to 10,948 tons.





*Barakar Bridge Span-150 feet for the East Indian Railway.*

*(Vide paragraph 45.)*



45. *The Calcutta Inspection Circle.*—The continued general depression and consequent curtailment of demands by using departments of Government and others, seriously affected work in the Circle during the year under review. The value of stores inspected against orders placed by the Department showed an increase as compared with the previous year but this was set off by a large decrease in the value of stores inspected on behalf of other purchasing authorities during the year. The total fees earned (both on orders placed by this Department and by other purchasing authorities) were Rs. 2,11,864 as against Rs. 4,50,544 in the preceding year. This large falling off was due to the decrease in the fees earned on non-departmental orders which only amounted to Rs. 1,06,787 as compared with Rs. 3,48,969 in the preceding year. This was mainly due to the decrease in the value of rolling stock, bridge and structural work and sleepers inspected on behalf of Railway Administrations which formed the main sources of revenue in previous years. The fees earned on the inspection of wagons fell from Rs. 1,42,300 in the previous year to Rs. 40,500. Similarly as regards orders inspected on a tonnage basis there was a large decrease, the total during the year being 11,394 tons against 1,11,595 tons in the preceding year; the number of sleepers inspected being 43,630 compared with 8,22,700 in the previous year.

The total number of orders received for inspection was 19,845 as against 15,154 received in the year 1931-32 and this is considerably higher than the numbers received in previous years. The corresponding value of orders received was Rs. 2,76,34,275 as against Rs. 2,58,73,878 in the preceding year.

The following are some of the more important orders received for inspection during the year.

	Approximate Value.
	Rs.
1. 3,037 wagons and underframes against orders placed by the Railway Board and Railway Administrations..	1,01,15,000
2. Jumna Bridge steelwork for the N. W. Railway ..	11,74,000
3. M. S. bearing plates for the N. W. Railway ..	4,70,000
4. Barakar Bridge steelwork for the E. I. Railway ..	4,39,000
5. Dog-spikes for the N. W. Railway .. ..	3,62,000
6. C. I. plate sleepers for the N. W. Railway .. ..	2,22,000
7. 300 tons Hopper barge for Vizagapatam Harbour ..	1,67,000
8. 304 bridge girders for the Bombay, Baroda and Central India Railway .. .. .	1,48,000
9. Passenger and vehicular paddle ferry for Vizagapatam Harbour .. .. .	1,02,000
10. 30" bore M. S. discharge pipes for Vizagapatam Harbour	67,000
11. C. I. pot sleepers for the G. I. P. Railway ..	59,000
12. Admiralty pattern buoys for Vizagapatam Harbour ..	24,000

A photograph of one of the 150 feet spans for the Barakar Bridge faces this page.

The works and business premises of 51 firms were inspected and reported on during the year of which 26 were recommended for registration as 'Approved Contractors'.

46. *The Bombay Inspection Circle.*—The work of this Circle was also affected during the year by the general trade depression. Although there was an increase in the number of orders received from 8,419 to 9,055 the aggregate value of stores inspected was less than in the previous year. The major portion of the work on which this Inspectorate was employed was in respect of orders placed by the Department itself, and the number of such orders rose from 8,269 to 8,978. The value of work inspected against these orders decreased from Rs. 58,08,713 to Rs. 57,08,531. The number of demands received for inspection from other purchasing authorities dropped from 150 to 77, and the value of work inspected against these orders decreased from Rs. 8,81,924 to Rs. 7,06,163. The tonnage of material inspected also decreased from 2,496 tons to 261 tons. The decrease in the work was clearly due to the fact that no large orders were received for inspection from Railway Administrations.

The following orders of importance were dealt with during the year :—

	Rs.
1. 47 tin tents 62'-6" × 25'-0" for the Ordnance Officer, Bombay .. .. .	1,23,845
2. Structural steelwork for B. B. & C. I. Railway ..	1,02,022
3. Structural steelwork for G. I. P. Railway ..	45,123

During the year, textile goods valued at Rs. 7,23,031 were inspected against Rs. 9,44,615 in the previous year. Five 'erection at site' orders for plant and machinery to the value of Rs. 43,754 were dealt with, the most important being a 65 K.W. generating set for Military Engineer Services, Deolali, valued at Rs. 21,117. A 15 ton 'Marshall' road roller, valued at Rs. 9,000 was inspected and tested on behalf of the District Board, Jalaon. The works and business premises of 11 firms were inspected before these were recommended for registration as 'Approved Contractors'.

47. *The Karachi Inspection Circle.*—The bulk of the work on which this Circle was engaged was the inspection of articles ordered by the Department itself. As usual, hardware and miscellaneous engineering stores formed the major part of the work during the year, although a number of orders for locally manufactured plant and machinery such as steel motor launch, sliding sluice gates, water tanks, lift bridge and lock gates, etc., were also inspected.

The number of orders received for inspection was 5,074 as against 5,538 during the previous year. The number and value of stores inspected amounted to 4,762 and Rs. 33,48,090 against 5,333 and Rs. 42,63,092 respectively for the year 1931-32. Demands for inspection from the Department declined from 5,528 to 5,069 and those from outside authorities decreased from 10 to 5. Three orders for plant and machinery were inspected at site after erection; these were :—

- (i) Two portable floodlight sets for the Karachi Aerodrome costing Rs. 39,761 ;

- (ii) Accessories for Fullagar engines at the Sukkur Power House amounting to Rs. 11,910; and
- (iii) Manual operated telephone system across the Sukkur Barrage valued at Rs. 3,890.

48. *The Upper India Circle.*—The Upper India Inspection Circle with its headquarters at Lahore, covers a wide area extending over the whole of the Northern India, comprising the Punjab, N. W. F. and Delhi Provinces.

The total number of orders received for inspection during the year rose from 1,627 to 2,091, *i.e.*, by about 28%. The number and value of orders actually inspected were 2,011 and Rs. 30,59,618 as compared with 1,477 and Rs. 37,85,681 respectively in the year 1931-32.

It will be observed that the value of work handled is somewhat lower than in the previous year although there has been a decided increase in the number of orders actually inspected during the year. This means that the average value of orders has decreased as compared with the average value of orders in the previous year and is considered to be due to a decrease in orders of comparatively high value (*i.e.*, plant and machinery) and to an increase in orders against rate and running contracts.

This Circle deals mainly with the inspection of plant and machinery at site. In addition, it handles inspection of textile and other stores at firms' factories in various places in the Punjab, such as Amritsar, Dhariwal, Ludhiana, Sialkot, Multan, etc. The total value of textile materials inspected amounted to Rs. 3 lakhs approximately, the chief items being woollen jerseys, socks, putties, kullahs, flannel and cotton reels for Police, Medical and Railway authorities. The value of hardware and engineering miscellaneous stores inspected amounted to Rs. 12 lakhs approximately. During the year 50 'erection at site' orders were dealt with as against 42 orders in 1931-32.

Some of the important inspections made during the year were—

	Rs.
1. Seven A. C. and D. C. generating sets for M. E. S. Delhi Fort, Allahabad Fort, and Peshawar and N. W. Railway, Lodhran, Lyallpur and P. W. D. Jaipur .. .. .	2,77,331
2. Cells and batteries for train lighting and other purposes .. .. .	2,19,910
3. Pumping sets air lift and centrifugal, motor or oil engine driven, for M. E. S. Delhi Fort, Kohat and Cawnpore and P. W. D., Punjab .. .. .	1,35,198
4. Pressure pipes for M. E. S., Lahore .. .. .	90,000
5. Salt handling plant with motors and switchgear for Khewra Salt Mines .. .. .	50,000
6. Steam road rollers for M. E. S. Agra and Pathankote	25,212

The services of the Inspectorate were utilised to a considerable extent by other provincial Inspectorates for inspection and investigation of minor

complaints received from consignees within its area. Thirty seven such investigations and inspections were made during the year under review.

The works of 50 firms were inspected out of which 25 firms were recommended for registration as 'Approved Contractors'.

49. *The Cawnpore Inspection Branch.*—During the year this Inspectorate received 1,868 orders for inspection and inspected and passed stores to the value of Rs. 14,64,723 against 1,153 and Rs. 20,76,382 respectively in 1931-32. The number of orders actually inspected rose from 1,145 to 1,825.

This Inspectorate is concerned principally with the inspection of textile and leather goods manufactured at Cawnpore and hardware and miscellaneous engineering stores such as locks and handcuffs manufactured at Aligarh. Inspections during the year included textile stores valued at Rs. 9,10,267 and hardware and miscellaneous stores of the value of Rs. 5,54,456.

The chief items of work dealt with were :—

1. Disinfecting fluid.
2. Castor oil.
3. Linseed oil.
4. Soap.
5. Handcuffs.
6. Cotton waste, white, coloured.
7. Putties.
8. Drill, cotton.
9. Cardigan jackets.
10. Jerseys.

Inspections were carried out on behalf of other departments among which may be mentioned tents for Palestine Government amounting to Rs. 8,958.

The premises of 37 firms were inspected out of which 11 were recommended for registration as "Approved Contractors".

50. *The Madras Inspection Branch.*—There was a very marked increase both in the number and in the value of the orders received for inspection by this Inspectorate during the year. The former rose from 1,375 to 2,780 and the latter from Rs. 7,61,770 to Rs. 13,27,245. The value of the stores inspected for State and Company-worked Railways and ordered through the Indian Stores Department increased from Rs. 1,91,281 to Rs. 3,80,914 while the value of stores inspected against purchases made on behalf of public bodies and Indian States increased from Rs. 20,629 to Rs. 1,20,420. The activities of this Inspectorate in respect of inspection of engineering and hardware stores have been expanding year by year. The total value of this class of stores inspected during the year was Rs. 7,54,785 as against Rs. 3,37,098 in 1931-32 and Rs. 2,08,320 in 1930-31. The value of textile goods inspected during the year was Rs. 5,72,460 against Rs. 4,24,672 in the preceding year.

The increase in the inspection of stores other than textile goods is mainly due to the fact that this organisation was entrusted with the inspection of additional classes of miscellaneous and hardware stores such as oils fuel, lubricating oils, paints, etc.

## CHAPTER V.

## THE METALLURGICAL INSPECTORATE, TATANAGAR.

51. *Work done.*—The bulk of the work on which this Inspectorate was employed during the year 1932-33 comprised inspection of rails and fishplates on behalf of the Railway Board and the structural and other steel materials manufactured by Messrs. The Tata Iron and Steel Co., Ltd.

The effects of the diminution of the demands of the Railway Board for rails and fishplates and the wide-spread economic depression were seriously felt and every endeavour was made to reduce expenditure to a minimum. The total value of materials of various descriptions handled during the year, namely, rails, fishplates, structural steel, sleepers, ammonium sulphate, agricultural implements, cables, wires, etc., amounted to Rs. 242 lakhs as compared with Rs. 327 lakhs in 1931-32. The table given below shows the quantity and the approximate value of the most important materials inspected and passed during the year.

*Quantity and approximate value of the most important stores inspected and tested by the Metallurgical Inspectorate, Tatanagar, during the year 1932-33.*

Description of stores.	Quantity.	Approximate value.
	Tons.	Rs.
Rails, ordinary .. .. .	35,063	38,56,930
Rails, medium, manganese .. .. .	2,116	3,07,020
Rails, medium (experimental) .. .. .	77	
Rails, chrome .. .. .	513	82,080
Fishplates, 1st class .. .. .	2,077	3,07,396
Fishplates, specially normalised .. .. .	10	1,800
Structural steel .. .. .	1,23,333	1,72,68,130
Sleepers .. .. .	7,788	8,32,597
Sheets, galvanized .. .. .	171	38,413
Sheets, black .. .. .	179	30,377
Pig iron .. .. .	1,535	94,063
Ammonium sulphate .. .. .	5,237	4,50,960
Barbed wire .. .. .	101	27,551
Steel wire .. .. .	22	4,263
Copper wire (hard drawn) .. .. .	268	3,66,654
Clips .. .. .	350 sets	180
Implements .. .. .	20,171 pieces	20,526
Cables .. .. .	23,47,732 yards	5,48,593

Full details of the work done on behalf of the various authorities during the year as compared with the three preceding years are given in Appendices XII to XV.

The Railway Board's demands for the year under review totalled 34,327 tons of rails with 1,671 tons of fishplates, as against 79,550 tons of rails with 3,037 tons of fishplates ordered during the previous year. The Railway Board also placed orders for experimental purposes for medium manganese rails and the Bengal Nagpur Railway for normalised fishplates. Every possible assistance was rendered to the Tata Iron and Steel Company by the Metallurgical Inspector

and his staff during the manufacture of these special materials. In addition to the above demands, orders for 1,826 tons of rails with 66 tons of fishplates were placed by Railways worked by Indian States, and by the Madras Government.

The quantity of structural steel certified during the year showed a substantial decrease as compared with that in the previous year, the figures being 1,23,000 tons during 1932-33 as against 1,81,000 in 1931-32. Approximately 7,790 tons of sleepers were pressed, and very careful supervision during the process of manufacture in all its stages was necessary in order to obtain a satisfactory finished product. Orders were placed by Railways with Messrs. The Tata Iron and Steel Company, Ltd., for track tools such as beaters, hammers, phowrahs, kadalis, etc., all of which were subjected to inspection and tests by this Inspectorate. The quantity of such material inspected was greater than in any previous year.

During the year Messrs. The Indian Steel Wire Products put into operation machinery for manufacture of barbed wire and the Army authorities placed trial orders. The product was inspected at various stages of manufacture.

The Indian Cable Co., Ltd., were fully employed during the year. In addition to orders placed by the Indian Stores Department 22,32,782 yards of cable of various descriptions were certified involving 8,400 electrical tests as against 17,61,637 yards involving 6,850 tests during the year 1931-32. Approximately 1,14,950 yards of cables were certified this year against the orders placed by the Department. Among the special cables inspected the following are worthy of mention :—

Submarine, Telephone, Iconite, Signalling, Flameproof and cables for Railway carriage couplers.

52. *Tests and estimations.*—During the year under review the number of estimations of carbon, silicon, manganese, sulphur, phosphorus, chromium and zinc slightly increased from 10,346 in 1931-32 to 10,566. The number special tests, however, decreased from 6,345 to 1,164 in 1932-33. These figures do not include estimations on sulphate of ammonia. Forty six samples of sulphate of ammonia were tested during the year involving 157 estimations as against 49 samples involving 147 estimations in 1931-32. The total shipments of this chemical were 5,237 tons against last year's figure of 6,422 tons.

The number of physical tests effected was 23,479 against 27,799 in 1931-32. The decrease was due to the curtailment in the orders for rails with consequent reduction in the number of drop tests which fell from 2,259 to 1,348. There was, however, a slight increase in the number of tensile tests, the figures being 6,144 against 4,252 in the previous year.

53. *Investigations.*—The total number of investigations undertaken during the year was 60 as against 45 in the previous year. These investigations involved 408 tests and analyses yielding a revenue of Rs. 2,315 as against 512 tests and analyses yielding Rs. 3,084.

Among the special investigations carried out the following may be mentioned :—

1. Ordinary and chrome steel rails of foreign manufacture.
2. Samples from members of underframes.
3. Fire box rivets.
4. Worm wheel for radial sluice gates.
5. Investigation in samples of imported steel bars for customs classification purposes.
6. Plate to plate, tube to tube welds for Air craft.
7. Wire and wire nails of foreign and Indian manufacture.
8. Galvanised iron wire.
9. Propeller shaft.

The investigation on the effect of tropical conditions on rubber insulated cables mentioned in paragraph 55 of the last year's Report was concluded.

54. *Technical papers.*—An article entitled 'Tests on rail joints with new design fishplates' contributed by the staff of the Metallurgical Inspectorate was published in the Railway Board Technical Bulletin.

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## CHAPTER VI.

## THE GOVERNMENT TEST HOUSE, CALCUTTA.

55. *General.*—The number of samples tested and reported during the year was 7,046 compared with 7,892 in the previous year. The fees earned totalled Rs. 1,60,846 as against Rs. 1,78,564 during the preceding year.

A large number of samples were in hand at the end of the year and this number exceeded the number in hand on the 1st April 1932, by 339. Taking this factor into consideration and also allowing for the large amount of special work carried out during the year and not represented in the returns of samples tested, the total volume of work actually dealt with was not less than that of the previous year. The year under review has been a period of severe curtailment of expenditure on technical stores both by Government departments and by others and it is clearly this factor which has accounted for the smaller number of samples tested. In view of the magnitude of the slump the maintenance of work at the level indicated must be considered as satisfactory.

The number of samples tested on behalf of the Indian Stores Department was 3,847 against 3,561 in the previous year. The number of samples tested for Company-worked railways was also higher, 217 against 129. Decreases occurred in the case of Provincial Governments, the Army authorities, State Railways and private firms and individuals. A comparison of the work done during the year with the record of the three preceding years is shown in Appendices XII and XV and a list of the materials tested during the year is given in Appendix XVI.

56. *Physical Section.*—The number of samples tested was 3,750 against 4,484 in 1931-32. The falling off was shown in the work of all the sub-sections of the Physical Branch with the exception of light mechanical sub-section for which the figures were approximately the same, and the textiles sub-section, which, after the considerable fall experienced last year showed an appreciable increase. The position is shown in the comparative statement, given below, which indicates the number of samples tested in different sub-sections:—

Sub-section.	Nature of main items.	No. of samples tested.	
		1932-33.	1931-32.
1. Textiles .. .. .	Yarns and fabrics .. .. .	819	624
2. Electrical .. .. .	Miscellaneous .. .. .	590	736
3. Cement .. .. .	Cement and limes .. .. .	608	680
4. Light mechanical .. .. .	Automatic Vacuum Brake fittings.	458	464
5. Heavy mechanical .. .. .	Tensile and compression tests	773	1,213

57. *Chemical Section.*—During the year the Chemical Section carried out tests on 3,296 samples as compared with 3,408 samples tested in 1931-32. This decrease affected only the general chemical laboratory with 2,098 samples against 2,333 in the previous year while the oil laboratory showed an increase



from 1,075 to 1,198. The decrease of work in the general chemical laboratory was due to smaller receipts of samples of paint and varnish which were 505 against 692 in the previous year.

The number of coal samples handled was 220 against 216 for the last year.

58. *Exposure tests on paints and varnishes.*—During the year exposure tests were started on 170 steel panels painted with paints or enamels, 11 wood panels painted with paints and enamels and 13 wood panels varnished with body varnish.

Exposure tests were also continued on a large number of steel and wood panels exposed prior to 1932-33. The total number of panels now exposed is 500 which must represent one of the largest collections of experimental panels anywhere in the world. The steel panels measure 2'-0" × 2'-0" and the wooden panels 4'-0" × 1'-0".

59. *Special investigations.*—The following special investigations were carried out during the year :—

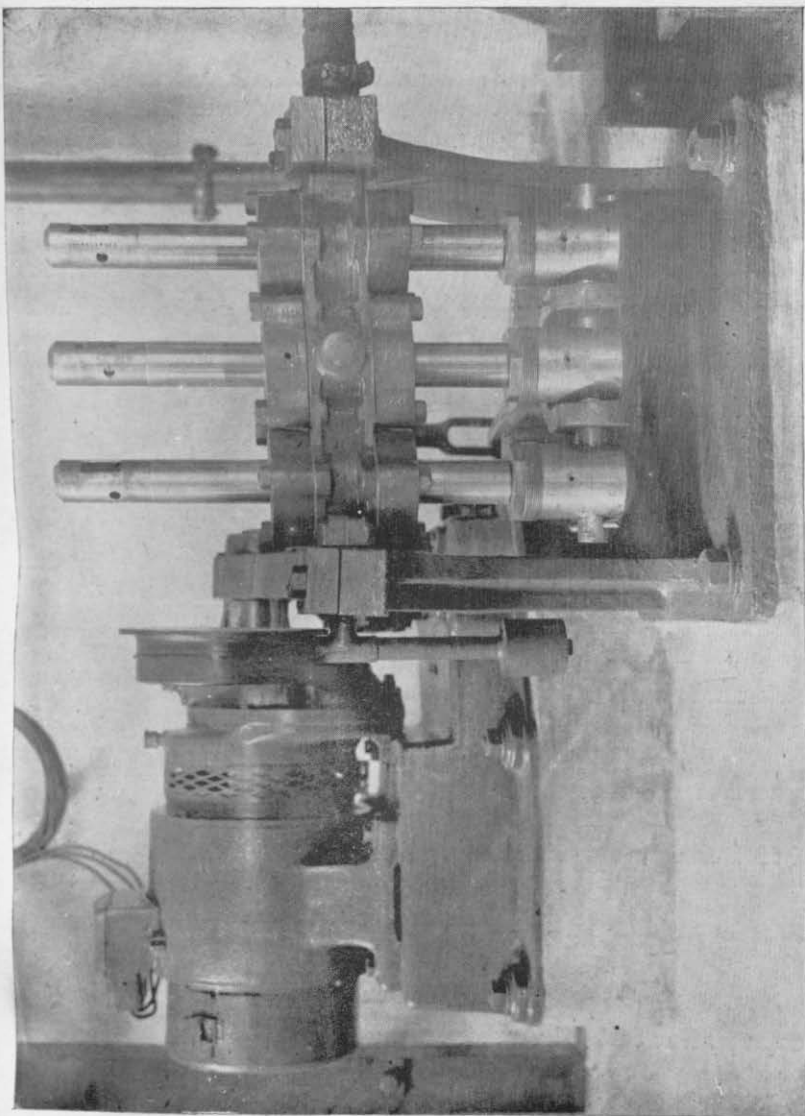
- (1) Investigation of methods of testing of internal combustion engine oils with special reference to oxidation test—a lengthy investigation.
- (2) Investigation of the cause of corrosion of galvanised tanks and pipes.
- (3) Investigation of the determination of the acidity of ether.
- (4) Further investigation of failures experienced with white lead used on one of the Railways.
- (5) Investigation of various paint formulæ required for coach painting of one of the Railways.
- (6) Determination of the characteristics of canvas fire hoses.
- (7) Investigation of the effects of storage on the insulation resistance of electric cables.
- (8) Investigation of the relative abrasive action of various types of steel-sleeved and brass-coated piston rods used in automatic vacuum brakes for railway rolling stock.

60. *Specifications.*—The following specifications were framed during the year :—

- (1) Specification for chalk for marking purposes,
- (2)     "     "     refined saltpetre,
- (3)     "     "     carbon dioxide,
- (4)     "     "     caustic soda, commercial, for cleaning purposes and also for use in accumulators,
- (5)     "     "     bottles for drugs and chemicals.
- (6)     "     "     high melting tropical compound,
- (7)     "     "     black insulating varnish, air drying and stoving.

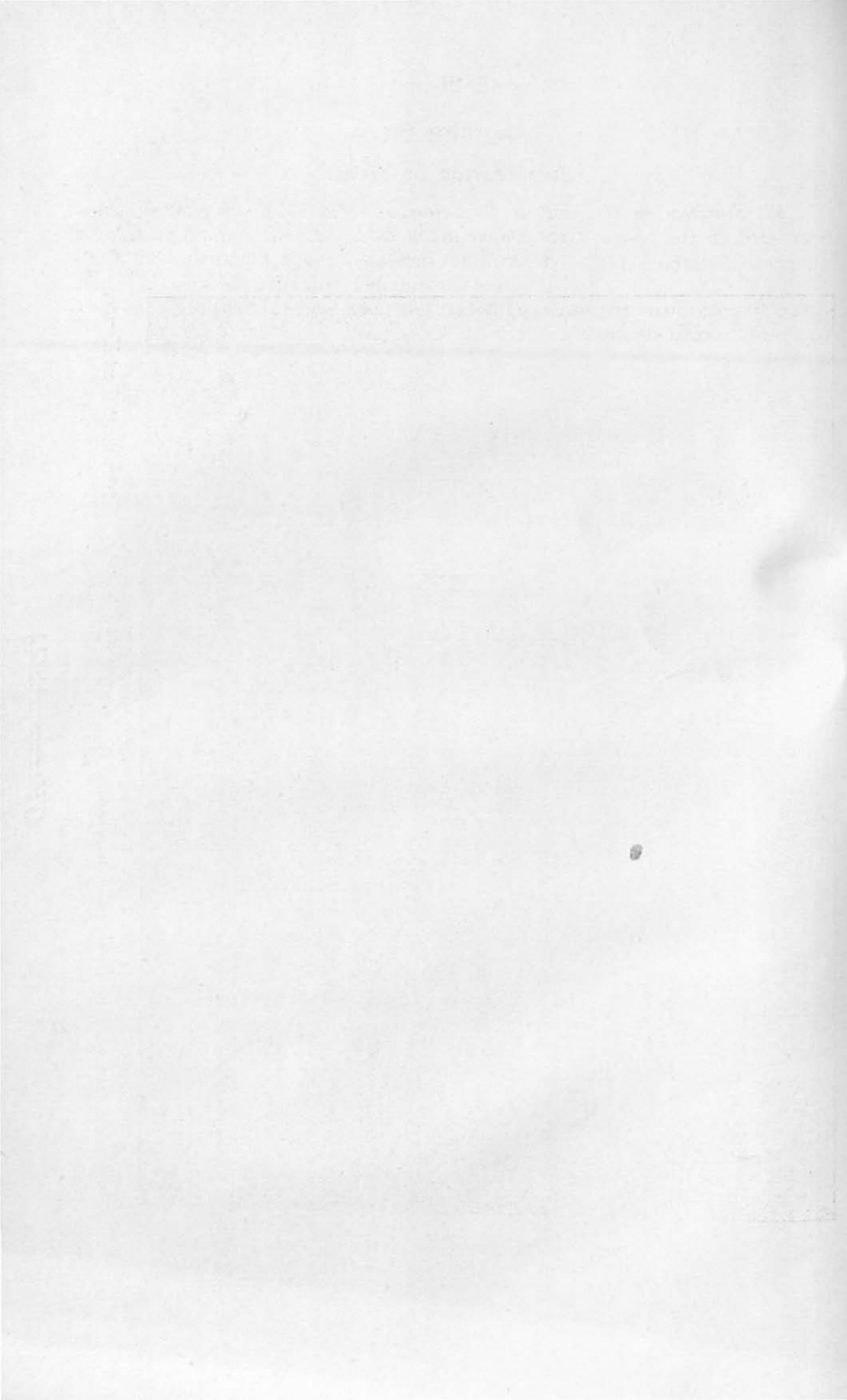
61. *Plant and apparatus installed during the year.*—The following additional appliances were purchased and installed during the year :—

1. Automatic vacuum brake piston rod gland packing ring testing machine.  
A photograph of this machine faces this page.
2. A set of Hoke precision gauge blocks.
3. One Budenberg hydraulic pressure gauge, reading from 0-1,500 lbs. per square inch.
4. Dynamometer type double range recording voltmeter.
5. High-sensitivity Cambridge moving coil galvanometer.
6. One Lummer-Brodhun contrast type and one Simmance-Abdy flicker type photometer head.
7. 50" photometer cube and stand.
8. Torsion test apparatus for testing the adhesion of electric lamp caps.
9. One Weston voltmeter, one ammeter and one wattmeter.
10. One 10 ohm Crompton standard resistance.
11. Stepless current regulating transformer for meter testing.
12. Phase shifter and accessories for A. C. meter testing.
13. Zeiss-Ikon camera  $9 \times 12$  cm.
14. Oven for oxidation-test provided with adjustable pulley and gear.



*Automatic vacuum brake piston rod gland packing ring testing machine at the Government Test House,  
Alipore.*

*(Vide paragraph 61.)*



## CHAPTER VII.

## REGISTRATION OF FIRMS.

62. *Registration of firms at Headquarters Office.*—The number of firms registered on the books of the Department as approved manufacturers or suppliers of stores of various descriptions increased from 3,123 at the end of the year 1931-32 to 3,291. Full details of this number indicating the areas in which they are located and the classes of stores they manufacture or supply are given in the sub-joined statement.

Description of stores.	Bengal.													Total.	
	Bengal.	Bombay.	Karachi.	Madras.	Punjab.	United Provinces.	Delhi.	Bu.ma.	Bihar and Orissa.	Central Provinces.	Assam.	N. W. F. P.	Other than British possessions in India.		Firms outside India.
Stores falling under rule 4 of the Rules for the supply of articles required to be purchased for the public service, viz. :—															
(a) Important plant and machinery ..	3	2	..	1	..	..	..	2	..	..	..	..	..	1,001	1,009
(b) Important Iron and Steel work ..	29	13	4	7	3	4	..	6	2	1	..	..	..	66	135
Other stores.															
Railway materials .. .. .	80	53	5	12	14	4	9	8	5	..	1	..	..	60	251
Mechanical equipment .. .. .	184	144	23	35	32	17	24	32	4	..	1	..	7	190	693
Electrical equipment .. .. .	119	86	17	25	24	13	18	15	3	..	1	1	10	129	461
Structural engineering .. .. .	21	6	3	1	4	1	4	3	..	..	..	..	1	..	44
Hardware .. .. .	110	83	22	23	34	38	18	13	4	1	1	1	10	35	393
Implements and tools .. .. .	69	49	9	16	19	14	12	11	..	..	2	1	3	29	234
Metals .. .. .	96	66	16	17	22	10	16	15	5	1	..	1	3	16	284
Oils .. .. .	59	37	3	14	11	11	5	8	1	..	2	..	7	11	169
Paints .. .. .	62	49	13	17	7	3	6	8	2	1	2	..	4	12	186
Chemicals excluding medicines and drugs	53	29	10	7	10	6	7	9	..	..	..	..	3	4	138
Textiles.															
(i) Cotton materials .. .. .	90	77	4	10	36	33	16	10	..	3	..	..	8	9	296
(b) Woollen materials .. .. .	26	21	2	6	13	21	5	2	..	..	..	1	9	..	106
(c) Jute, flax and hemp materials	65	26	6	2	17	8	2	5	1	1	..	..	3	7	143
(d) Silk goods .. .. .	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
Leather goods .. .. .	20	9	2	3	8	17	5	3	..	..	..	..	..	4	71
Miscellaneous stores .. .. .	309	233	45	57	90	74	61	41	6	10	3	3	17	80	1,029
Scientific instruments and Laboratory equipment.	31	16	1	5	11	4	2	2	..	1	..	..	..	17	90
Total .. .. .	1,426	999	185	258	355	279	210	193	33	19	13	8	85	1,670	5,733
* Overlapping figures for firms registered for more than one item.	875	569	102	129	152	111	121	119	10	5	9	3	30	207	2,442
Net Total .. .. .	551	430	83	129	203	168	89	74	23	14	4	5	55	1,463	3,291

63. *Registration of firms at local purchase circles.*—In addition to the numbers mentioned in paragraph 62, forty-six firms were added to the local lists of approved suppliers maintained by the Provincial organisations of the Department. Of these 27 are located in the Bengal Presidency, 12 in the Bombay Presidency (excluding Sind) and 6 in the Karachi area. The total number of firms registered on local lists in various territories on the 31st March 1933 was as follows :—

Territory.	Registered on the list of the C. P., Calcutta Circle.	Registered on the list of the C. P., Bombay Circle.	Registered on the list of the C. P., Karachi Circle.	Total.
Bengal .. .. .	241	..	..	241
United Provinces .. .. .	1	..	..	1
Bombay Presidency .. .. .	..	145	..	145
Sind .. .. .	..	..	83	83
Madras Presidency .. .. .	12	12	..	12
Bangalore (Civil and Military Station).	1	1	..	1
Bangalore City (Mysore State)	1	1	..	1
	256	159	83	484

64. The number of firms registered under Rule 4 of the Rules for the supply of articles required to be purchased for the public service stood at 1,144 at the end of the year of which 1,009 firms were registered as manufacturers of important plant and machinery and 135 as suppliers of important iron and steel work. Full particulars of these firms and of their agencies in India are given in a list which is kept up to date by periodical revisions. Two editions of the list, complete with indices, were issued during the year on the 1st April 1932 and the 1st January 1933 respectively. These lists though mainly issued for the information of the purchasing officers of the Central Government have been adopted by several Local Governments and also appear to be considered of value by the commercial community. Copies of the lists can be obtained on payment from the Government of India Book Depot, 8 Hastings Street, Calcutta, the Manager of Publications, Civil Lines, Delhi, and the office of the High Commissioner for India, India House, Aldwych, London, W. C. 2.

## CHAPTER VIII.

## ENCOURAGEMENT OF INDIAN INDUSTRIES, LOCAL PURCHASES AND OTHER ACTIVITIES OF THE DEPARTMENT.

65. *Advice to manufacturers and encouragement to Indian industries.*—Work was continued during the year to assist manufacturers in India to improve the quality of their products. The means adopted included technical advice and suggestions. Every endeavour was made to substitute supplies of indigenous manufacture, wherever possible, without sacrifice of economy and efficiency. A few notable instances are given in the following paragraphs.

66. *The Textile industry.*—The following textile products received special attention during the year :—

(1) *Pugri cloth, khaki.*—A mill in the Bombay Presidency submitted a sample of pugri cloth and asked to be informed as to whether it complied with the specification. Tests were arranged by this Department at the Government Test House, Alipore, and the Army Inspectorate, Shahjahanpur. The sample was approved as acceptable against the Army standard sample and it proved much the best pugri cloth yet submitted by any indigenous manufacturer.

The Police Department of a local Government had previously purchased imported khaki pugri cloth. Samples of Indian make cloth as used by the Army and Railways, together with quotations, were furnished and the indenting officer was advised that indigenous cloths were better than imported qualities hitherto purchased by him. In consequence he agreed to accept indigenous qualities for future requirements.

(2) *Greatcoat cloth.*—The Inspector General of Police of a local Government had previously purchased imported greatcoat cloth. A sample of indigenous cloth of the quality used by the Army was forwarded. The particulars of imported and indigenous cloths were given and he was advised that the latter was better. The indenter in consequence agreed to purchase this cloth and a contract for approximately 2,300 yards was placed on his account.

(3) *Sheets, linen finish.*—An indenter required annually a number of sheets, cotton with linen finish, supplies of which had hitherto been imported. Investigations were made into the possibility of manufacturing such sheets in India. One firm was able to submit a sample, but this had not the same gloss as the imported material. Further work was carried out by the manufacturer and subsequently two further samples were supplied the finish of which was as good as might be expected in cotton fabrics but still not equal to the imported article which was of linen. The indenting officer approved one of these samples and stated that his future requirements would be to that sample.

(4) *Waterproof cloth.*—This Department purchases annually about 3,000 yards and 6,000 made up garments of waterproof cloth which was imported. Manufacturers in India were approached with a view to undertake manufacture and one succeeded in producing an acceptable quality. The firms who generally quote to this Department for made up waterproof garments were informed of this indigenous source of supply. This Department had also purchased this material direct for the use of inferior servants of the Govern-



ment of India. Some firms in Calcutta are now using considerable quantities of this indigenous material against certain contracts with this Department for waterproof garments.

(5) *Silicia cloth, black*.—The estimated annual requirements of a Railway Administration were 10,000 yards of cloth, silicia, black, 54" wide, for lining of garments. Supplies up to 1932-33 were made of imported cloth.

During the year this Department addressed twenty-two manufacturing firms in India with a view to their undertaking manufacture of this cloth. One firm succeeded in producing a material acceptable to the Railway concerned at a price which compared favourably with imported material and an order for 8,000 yards has been placed for 1933-34 requirements.

67. *The Engineering Industry*.—(1) *Castings*.—In paragraph 69 of the Report for the year 1931-32 it was mentioned that arrangements had been made to inspect the entire output of castings at the works of a well known firm in Bombay. The inspection work continued during the year under review and the Inspectorate continued to render all possible help by means of technical advice and suggestions. Another firm in Bombay also asked for similar inspection as they experienced considerable difficulty in casting pipes which complied with the prescribed specification. As a result of inspection of their products and at the suggestion of the inspecting officers the firm carried out certain important changes in the method of manufacture which satisfactorily overcame their difficulties.

(2) *Cables*.—It was brought to the notice of this Department that an order for Indian made cables placed by an Executive Engineer had been cancelled on the ground that these cables were not manufactured by a member of the Cable Makers' Association. This Department took up the matter with the Chief Engineer of the local Government concerned and necessary instructions were issued by him to his Executive Engineer to the effect that Indian made articles were to be used.

(3) *Handcuffs, flexible and adjustable*.—These handcuffs were being obtained from abroad by an indenting department. This Department informed the indenting officer concerned that handcuffs of suitable quality and of indigenous make were obtainable in India. A standard sample of the quality hitherto used by the indenter was obtained so that a countersample could be made by Indian manufacturers. A satisfactory sample of Indian manufacture was furnished to the indenter and accepted by him. Twelve pairs were then ordered for purposes of trial. These proved satisfactory and a demand for 1,000 pairs was subsequently placed and complied with. The manufacturing firm concerned was given every technical assistance by the Indian Stores Department to turn out satisfactory supplies.

(4) *Piston rods*.—Two firms in Calcutta were manufacturing piston rods on behalf of other contractors. At first great trouble was experienced mainly in respect of threads being badly cut, sleeves porous and uneven, and poor finish generally. Assistance and advice given by this Department enabled them to improve their products so that their piston rods now equal imported supplies.

(5) *Glass globes.*—Against an indent received from a Railway Administration for glass globes, quotations were invited from Indian manufacturers as well as from importers. Quotations for locally made globes were lower than those of importers, but the quality of the former was not up to the required standard. The matter was therefore taken up with the Indian manufacturers with a view to improve the quality of their products. The defects found therein were intimated to the firm for rectification. The firm eventually improved their products sufficiently for supplies to be accepted by the Railway Administration.

(6) *Roof fittings for train lighting.*—A firm in Bombay secured an order from this Department for locally made roof fittings for train lighting. Advice and suggestions were given to the firm at every stage of manufacture and the fittings ultimately produced compared not unfavourably with the imported products.

(7) *Light structures.*—At the request of a firm in Bombay their works were visited from time to time by the technical officers of the Indian Stores Department. Advice and suggestions were offered on organisation, machinery and quality of work turned out. In consequence, the firm was considered fit for inclusion in the list of approved contractors maintained by this Department, and registered for supply of light structures and bridge spans up to 20 feet.

(8) *Brushes.*—An order for 5,000 sweeping brushes was placed with a firm in the United Provinces. The firm was instructed in up-to-date methods of manufacture of such brushes and the assistance and suggestions made led to considerable improvements in the quality of their products.

68. Among other articles to which special attention was devoted during the year for the purpose of developing their manufacture in India or their utilisation in preference to imported articles, the following may be mentioned :—

Undervests, metal polish, oil cleaning, road barrier lamps, crockery, enamelware, glassware, white lead, bedsteads, steel tanks, electric insulators, Kent couplers, earthenware jars, earthenware troughing, link clips, wire and wire nails, hurricane lanterns, safes and target apparatus.

69. *Exhibition of Indian manufactures.*—Mention has already been made in the previous Reports of the arrangements made in the Imperial Secretariat Buildings, New Delhi, for exhibiting articles of indigenous manufacture. During the year the following exhibits were received :—

Acids, chemicals, paints, oils, cement, ropes and cordage, crockery, locks, soaps, polishes metal and silver, electric table fans, tube well strainer, and models of a tank and of a steel transmission tower.

70. *Important purchases of articles of Indian manufacture.*—The Department continued its efforts to substitute, wherever possible and without sacrifice of efficiency or economy, articles of indigenous manufacture for the imported products. The following is a list of the more important contracts placed

during the year for products which were wholly or partially manufactured in India :—

<i>Textile materials.</i>	Amount. Rs.
Drill, khaki, coloured, white and grey .. .. .	10,29,000
Blankets, woollen .. .. .	10,22,000
Pugree cloths, muslin, Calico, etc. .. .. .	4,21,000
Socks, cotton, and woollen .. .. .	4,16,000
Tents and Tent components .. .. .	3,59,000
Cotton waste .. .. .	3,10,000
Yarn, cotton, and woollen .. .. .	2,92,000
Jackets, cardigan, jerseys, etc. .. .. .	2,67,000
Rugs, horse and <i>lohis</i> .. .. .	1,95,000
Serges .. .. .	1,60,000
Durries, cotton .. .. .	1,28,000
Flannelette .. .. .	1,20,000
Sheets, barrack and hospital .. .. .	1,12,000
Greatcoats, greatcoat cloth, cloth drab mixture, etc. .. .. .	1,09,000
Wool cotton, absorbent .. .. .	1,06,000
Ropes, head and heel, and picketting .. .. .	1,01,000
Bags, Postal, Jute, flax, leather, etc. .. .. .	99,000
Putties, cotton and woollen .. .. .	80,000
Garments, made up .. .. .	72,000
Dhotie cloth and long cloth .. .. .	63,000
Twill .. .. .	60,000
Garments and covers, waterproof .. .. .	59,000
Boots, chappals, sandals, etc. .. .. .	59,000
Tape and webbing .. .. .	66,000
Hessians and gunnies .. .. .	55,000
Paulins .. .. .	54,000
Cloths, domestic, jaconet, Dungri, Mandapalam, etc. .. .. .	50,000
Jean cloth and gaberdine .. .. .	47,000
Cordage, Manilla, Hawser, Hemp, coir and cotton .. .. .	44,000
Twine .. .. .	44,000
Flannel .. .. .	32,000
Gauze, absorbent .. .. .	32,000
Cordages and line cotton .. .. .	31,000
<i>Kullas, lungies and kamarbands</i> .. .. .	30,000
Dosuti and sheeting .. .. .	26,000
Cloth, table, tea, tray, Napkins, dusters, etc. .. .. .	25,000
Bandage cloth .. .. .	23,000

<i>Textiles materials.</i>					Amount.
					Rs.
Towels and towelling cloth	..	..	..	..	22,000
Bags, kit, ration, nose, etc.	..	..	..	..	17,000
Blanket coats	..	..	..	..	16,000
Canvas, jute	..	..	..	..	16,000
Cloth, bunting, red and green	..	..	..	..	12,000
Cases, pillow, mattresses, bolsters, etc.	..	..	..	..	12,000
Chaguls, covers, tank, mule, net, loading, etc.	..	..	..	..	12,000
Felt and cloth, woollen	..	..	..	..	11,000
Wool, stuffing, wiggings, carpets, etc.	..	..	..	..	10,000
Cloth, collar, bandages, horse, etc.	..	..	..	..	10,000
<i>Engineering and allied stores.</i>					
Cement	..	..	..	..	9,52,000
Road dressing materials	..	..	..	..	9,51,000
Mild steel sections	..	..	..	..	7,84,000
Oil, kerosene	..	..	..	..	7,59,000
Paints including dry pigments	..	..	..	..	6,33,000
Oil, axle, all-weather	..	..	..	..	6,00,000
Oil, castor	..	..	..	..	3,68,000
Pig iron	..	..	..	..	2,84,000
Oil, linseed, raw and double boiled	..	..	..	..	2,71,000
Enamels, and varnishes	..	..	..	..	1,89,000
Oxygen gas	..	..	..	..	1,71,000
Pipes and specials, cast iron	..	..	..	..	1,34,000
Cables, electric	..	..	..	..	1,30,000
Tin tents and components	..	..	..	..	1,28,000
Wire, copper	..	..	..	..	1,18,000
Turpentine, genuine and substitute	..	..	..	..	92,000
Creosote	..	..	..	..	86,000
Petrol	..	..	..	..	78,000
Firebricks and fireclay	..	..	..	..	67,000
Insulators, porcelain	..	..	..	..	59,000
Steel structures, such as shelving racks, almirahs, cabinets	..	..	..	..	55,000
Tanks, steel	..	..	..	..	48,000
Fans, electric	..	..	..	..	47,000
Acids	..	..	..	..	46,000
Soaps	..	..	..	..	45,000
Oil, mineral, cleaning	..	..	..	..	37,000
Vacuum brake fittings	..	..	..	..	37,000
Oil, gas-making	..	..	..	..	36,000

<i>Engineering and allied Stores.</i>	Amount. Rs.
Oils and greases .. .. .	36,000
Disinfecting fluids .. .. .	36,000
Padlocks .. .. .	32,000
Timber and scantlings .. .. .	28,000
Cords flexible .. .. .	23,000
Coal tar for painting purposes .. .. .	20,000
Sulphate of alumina .. .. .	18,000
Point rodding .. .. .	17,000
Structural steel .. .. .	17,000
Dissolved acetylene gas .. .. .	16,000
Motor launch .. .. .	15,000
Cells, electric, and accessories <i>e.g.</i> , primary cells, zinc elements and jars .. .. .	14,000
Bituminous solution, black .. .. .	11,000
Shellac .. .. .	10,000
Gates, sluice .. .. .	10,000
Track tools .. .. .	10,000

71. *Certification of material for exemption of customs duty.*—The Metallurgical Inspector, Tatanagar who has been entrusted with the duty of issuing certificates for exemption of customs duty in regard to certain items of raw material used by Messrs. the Indian Cable Company Limited, and Indian Steel Wire Products, carried on the certification work during the year under review, and certificates covering the following quantities of imported materials were issued :—

	Tons.
Electrolytic copper rod .. .. .	1001
Copper weld rod .. .. .	25
Mild steel rod .. .. .	5684

For the purpose of imposition of duty on the quantity sold as scrap by the above companies, the Metallurgical Inspector is also required to do certification work.

During the year the Karachi Inspection Circle was also entrusted with similar duty of issuing certificates in connection with the importation, free of duty, of wire rod for the manufacture of wire and wire nails by Messrs. Devidas Jethanand, Karachi. No charges are made by this Department for these services.

## CHAPTER IX.

## FINANCE.

72. *Statistics of revenue and expenditure.*—The financial statement showing the earnings and expenditure of the Department for the four years ending with the year 1932-33 will be found in Appendix XVII. The figures for the year under review are, however, subject to further adjustments through supplementary accounts. The figures shown on the credit side of the financial statement include the recoveries from non-Government departments, which are adjusted as Revenue as well as those from Government departments, treated as Reduction of Expenditure; also a *pro-forma* credit, calculated at schedule rates, for work done on behalf of the non-commercial Civil departments of the Central Government against which no actual charges are made. The figures on the debit side include the gross direct expenditure chargeable to Revenue account as well as indirect charges usually incorporated in the Profit and Loss accounts of commercial undertakings.

73. *Financial position.*—The preliminary account for the year 1931-32, as presented in paragraph 74 of the Report for that year, showed that the revenue of the department amounted to Rs. 13,75,212 and the total direct and indirect expenditure amounted to 24,48,004 showing a net deficit of Rs. 10,72,792. The final accounts which were subsequently compiled and have been incorporated in the statement in Appendix XVII to this report close with a total revenue of Rs. 13,84,370 and expenditure of Rs. 24,89,699 showing a net deficit of Rs. 11,05,329. The increase of Rs. 41,695 in the debit side of the accounts which is responsible for the net increase of Rs. 32,537 in the deficit on the working of the year, is almost entirely due to the adjustment in the Supplementary accounts of a debit of Rs. 40,916 representing Government contribution on the Provident Fund accounts of the Technical staff for the year 1932-33, in addition to the debit for the year 1931-32 already included in the preliminary figures. This double adjustment was necessitated by the introduction of the new Contributory Provident Fund Rules under which Government contribution is added in the accounts of March instead of in the following April as was the case under the old rules.

The expenditure of the year under review, as shown in the provisional accounts, amounted to Rs. 21,67,056. This figure is Rs. 3,22,643 (or Rs. 2,81,727 if the double adjustment of provident fund contributions is excluded) less than the expenditure of the year 1931-32 and Rs. 4,27,499 less than that of the year 1930-31, in spite of the normal growth of expenditure from year to year due to annual increments estimated at Rs. 40,000 per annum. It will thus be appreciated that the savings in expenditure which were anticipated were more than fully realised. There was, however, a heavy deterioration in the credit side of the account, the total earnings amounting to Rs. 10,14,439 only as against Rs. 13,84,370 during the preceding year. As a result the net deficit on the working of the year 1932-33 exceeded the corresponding figures for the year 1931-32 by Rs. 47,288, or Rs. 88,204, taking into account the double adjustment in the accounts for 1931-32 referred to above. The recoveries from purchase and inspection of orders placed by the Department itself show a small

decline, amounting to Rs. 29,745 only. Most of this can be attributed to continued drop in market prices, rather than to any real reduction in the value of business transacted. The chief cause of the depletion of the earnings of the Department however was a further heavy reduction in the demands for inspection of stores ordered by other Departments direct, mainly in the orders for rails and fishplates, cast iron sleepers, rolling stock and bridge and structural work received from Railway Administrations, due to the world-wide financial stress and trade depression prevailing during the year.

SIMLA ;

J. S. PITKEATHLY,

*Dated the 17th July 1933.*

*Chief Controller of Stores,*

*Indian Stores Department.*

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## APPENDIX I.

(Vide paragraph 8).

*Hints for the guidance of authorities in India desirous of utilising the services of the Indian Stores Department.*

1. *Authorities for which the Indian Stores Department is permitted to act.*—The Indian Stores Department is authorised to arrange for the purchase and inspection of stores on behalf of all Government Departments, Central as well as Provincial, State and Company Railways, Indian States and *quasi*-public bodies in India. It must be understood, however, that the department acts merely as an agent in this connection and is not any way responsible as principal either to the seller or to the buyer.

2. The services of the Department can be utilised for the inspection of stores, orders for which are placed by the consuming authorities direct, and for the testing and analysis of materials at the Government Test House and the Metallurgical Inspectorate, by Government departments, Company Railways, *quasi*-public bodies and Indian States, as well as by private parties.

3. *Classes of stores which can be purchased through the Indian Stores Department.*—The Indian Stores Department undertakes to arrange for the supply of all classes of stores except :—

- (1) Foodstuffs and forage.
- (2) Lethal stores.
- (3) Stationery stores, printing stores and office machinery and appliances as detailed in the appendix to the Rules for the Supply of Printing and Stationery stores for the Public service.
- (4) Medical stores.
- (5) Mathematical instruments, which under standing orders are to be obtained from the Mathematical Instrument Office.
- (6) Scientific instruments and accessories of a special character which involve a departure from standard.
- (7) Straw, firewood and charcoal.
- (8) Road metal, bricks, stone, marble and similar building materials, lime, sand and chalk.
- (9) Country made wooden furniture.

4. *Organisation of the Purchase Branch.*—Besides a purchase branch in the Headquarters office, divided into a number of sections dealing with different classes of stores, which is located at Simla from the middle of April to the middle of October and at the Imperial Secretariat Building, New Delhi, during the rest of the year, Provincial Purchase

Circles are located at Calcutta, Bombay and Karachi. The Postal and Telegraphic addresses of these Circles and their scope of operations are given below :—

Postal Address.	Telegraphic Address.	Territory within which allowed to operate (a).
Controller of Purchase, Calcutta Circle, Indian Stores Department, 6, Esplanade East, Calcutta.	Storechase Calcutta.	Bengal, United Provinces, Assam Bihar and Orissa, Madras Presidency (Northern parts) and Burma.
Controller of Purchase, Bombay Circle, Indian Stores Department, Hararwala Building, Wittet Road, Ballard Estate, Bombay.	Storechase Bombay.	Bombay Presidency (except Sind) the Central Provinces, the Madras Presidency (Southern parts) and Cawnpore (for textiles only).
Controller of Purchase, Karachi Circle, Indian Stores Department, Satsarup Building, Karachi.	Storechase, Karachi.	Sind, Baluchistan, the Punjab and Cawnpore (for textiles only).

(a) This has reference to the market in which the order is placed and not to the headquarters of the indenting officer.

5. The Controller of Purchase, Calcutta Circle, is authorised to receive indents direct upto Rs. 15,000 in any one case. The Controllers of Purchase, Bombay and Karachi Circles are authorised to receive direct indents for any item (or inter-connected items) of which the estimated cost does not exceed Rs. 2,500 and indents for a number of items the estimated total cost of which does not exceed Rs. 10,000. The Controller of Purchase, Calcutta Circle, is also authorised, as a special case, to deal direct with indents for the purchase of jute goods up to Rs. 50,000 ; the Controller of Purchase, Bombay Circle, for cotton yarn for the Jail Department, Bombay Presidency, up to Rs. 25,000 and for stores for the Royal Indian Marine up to Rs. 15,000 ; and the Controller of Purchase, Karachi Circle, for mild steel sections, for which orders have to be placed elsewhere than at Calcutta or Bombay, up to Rs. 15,000. Indents for stores the estimated cost of which is within these limits should be addressed direct to the appropriate provincial purchasing officer and those exceeding these limits should be forwarded to the Headquarters office.

6. *Instructions for the preparation of indents.*—Indents should be submitted on the standard Indian Stores Department indent form (ISD-28) supplies of which can be obtained on application from the office of the Chief Controller of Stores or from any of the Purchase Circles at Calcutta, Bombay and Karachi. The items indented for should be described in sufficient detail and any additional information should be given which will assist in the disposal of the indent, *e.g.*, references to catalogues or to previous supplies. The purpose for which stores are required should always be stated and reference to previous supply should be made when duplicates are required.

7. As different classes of stores are dealt with in different sections of the Purchase Branch of the Indian Stores Department, separate indents should, as far as practicable, be prepared for stores falling under various classes, namely :—

- (1) Power plant and spares, sewage plant, radio and wireless stores, equipment for lighthouses, air-route lighting equipment, train lighting equipment, disinfectors, boilers, cranes, capstans, Fairleads, lifts, refuse destructors, salt crushing and screening plant and weighing machines.
- (2) Pumping plant, boring plant, steam, gas and oil engines, motors, ice plant and, refrigerators, punkha motor sets, excavators, oxy-acetylene plant, condensing and distilling plant, fire engines, fire extinguishers, road rollers and spares, chlorinating and water-softening plant.
- (3) Engineering plant and machinery, motor vehicles, tractors, workshop equipment including spares, ball and roller bearings, Agricultural machinery, textile machinery, sea and river craft, testing machines, belting (all kinds), locomotives, wagons, trucks, nightsoil, refuse and sanitary carts, welding plant and electrodes.

- (4) Electrical stores (including transmission and distribution materials) and measuring instruments, telephone and telegraph equipment and electric fittings for railway carriages.
- (5) Structural steel work of all kinds, steel axles, tyres, wheels, girder spans, tanks and stagings, tin tents, shelving racks, gates for canal regulators, wire ropes, and target apparatus.
- (6) Water supply stores, including pipes (all kinds), water meters, venturi meters, sluice valves and pig lead.
- (7) Hoses (canvas and rubber), tubes (boiler, etc.), superheater flues, metals, such as pig iron, Zinc ingots, antimony, wire gauze and wires of all kinds other than electrical.
- (8) Steel sections, steel sheet piling, metal sheets of all kinds, steel door and window frames, door and window fittings, asbestos cement sheets, bearing metals, hair and leather belting.
- (9) Miscellaneous engineering and hardware stores ; rubber goods including tyres and tubes, glassware, enamelware, oil lamps and lampware, crockery, cutlery, locks, safes, chests, cooking ranges, buttons, badges, clocks and watches, buckets, bicycles, steel furniture firebricks and fire clay, handcuffs, enamel sign boards, scales and weights and Posts and Telegraphs requirements, etc.
- (10) Oils and greases, petrol, tallow candles, creosote, and road-dressing materials.
- (11) Chemicals, gases, soaps, explosives, graphite, foundry, disinfectants, and photographic materials.
- (12) Cement, timber, coal, coke, tools, vacuum brake fittings and brushes.
- (13) Paints and painters' materials (including linseed oils, turpentine and methylated spirits, gold leaf, paint remover).
- (14) Textile, leather and allied stores.

Each separate indent should show items of a like description grouped together.

8. Indents for the purchase of plant and machinery should provide the fullest information possible and particular care should be taken to see that all peculiar local or special conditions, which might involve departures from normal standards, are mentioned.

9. Indents for spare parts should be compiled from makers' spare parts catalogues, where available, and care should be taken to quote the correct symbol, number and nomenclature or code word applicable to the particular type of plant. The makers' number of the machine should also be stated. Failing this, the date and source of original supply should be given. In dealing with demands of this kind drawings are frequently essential.

10. Sufficient time should be allowed to the department for arranging the purchase of stores. Additional expenditure is frequently involved in arranging purchases at short notice.

A specific date should be stated in the indents by which the stores are required, and expressions such as 'immediately', 'as early as possible', or 'urgent' should be avoided. These expressions are constantly used, but they defeat their own object by making it impossible for the Indian Stores Department to differentiate between the degree of urgency of the various indents.

Indenting officers are also requested to spread the demands made on the Indian Stores Department evenly over the whole year as far as possible. The concentration of a large number of orders towards the close of the year not only tends to entail extra expenditure and inconvenience but makes for difficulties in the efficient disposal of the business connected with the purchase and inspection of stores.

11. Indentors should clearly state whether the goods are to be booked by goods or passenger train, whether at 'Owner's' or at 'Railway' Risk and whether they are to be insured on rail.

12. It is desirable that wherever possible the Stores Department should be made aware of the approximate amount which the indentors expects to pay for the stores indented for. To this and against each item the last price paid should be entered in the 'estimated cost' column in the indent form. The estimated cost of freight and the Indian Stores Department charges should be added to the total. If information as to the latest price paid is not available, a rough estimate should be given.

13. In the case of authorities with whom adjustments are made through the Exchange account the appropriate certificate of availability of funds on page 4 of the indent form should be completed on all indents, and in the case of others the treasury receipt or bank deposit receipt must accompany or follow the indents, *vide* paragraph 18.

14. *Disposal of indents.*—The Indian Stores Department holds no stocks of stores of any kind. On receipt of an indent supply is arranged, either by placing a separate order for the stores demanded or by combining the demand with others for compliance under a general contract, or, where convenient, under a 'running' or 'rate' contract. Copies of all orders are endorsed to indenting officers and consignees (if other than indenting officers).

15. In the event of the quotation which it is proposed to accept being considerably higher than the amount estimated by the indentor, a reference is made to him before the order is actually placed. In the absence of any special instructions on this point, the practice is to refer to the indentor if his estimate of the total cost of the stores demanded in any one indent is likely to be exceeded by 10 per cent. of Rs. 10,000 excepting when the total cost is not more than Rs. 1,000 in which case no reference to the indentor is made.

16. A list of the items for which Rate and Running contracts were entered into during the year 1932-33 is given in Appendix VIII. A list of the contracts in force, or copies for those in which an intending indentor may be interested, will be furnished on application. Arrangements can be made to enable Government officers, intending to avail themselves of the facilities, to requisition against such contracts direct from firms.

17. *Adjustment of accounts.*—Debits for the cost of stores purchased through the Indian Stores Department by Government officers and for the departmental charges for purchase (and inspection) levied by the Indian Stores Department are raised by the Audit Officer, Indian Stores Department, against the Accounts Officer of the consignee in the account of the month in which the suppliers' bills are paid, and exchange accounts showing all such transactions are sent by the Audit Officer, Indian Stores Department, to the accounts officer concerned in the beginning of the second month after that to which the transactions pertain. Advance intimations of payments are sent to the consignees by the Audit Officer, Indian Stores Department, after a week of the date of payment, to keep the former informed of their liabilities and expenditure in respect of bills paid direct and certification by Inspectorates or in cases in which amounts passed by consignees are altered in audit.

18. In the case of authorities against whom book debits cannot be raised, *e.g.*, quasi-public bodies and Indian States, the indenting officers have the option either—

(a) of placing a sum equivalent to the estimated cost of the stores, *plus* the departmental charges payable for the services of the Indian Stores Department, to the credit of the Audit Officer, Indian Stores Department, in a Government treasury, forwarding the treasury receipt with the indent; or

of depositing in a branch of the Imperial Bank of India in the name of the Audit Officer, Indian Stores Department, a sum of money sufficient to cover the estimated cost of the stores, *plus* departmental charges, with instructions to the bank that the sum should be strictly reserved for the purpose of meeting demands from the Audit Officer, Indian Stores Department, which should be complied with by the transfer of the amount to the Government account. The deposit receipt granted by the Bank should be forwarded with the indent.

The latter alternative has been introduced to avoid large sums of money being locked up without interest.

19. *Inspection, Tests and Chemical Analyses.*—The inspection and testing staff of the Indian Stores Department is located at places noted below. The principal items of work dealt with in each organisation are also indicated :—

Postal Address.	Telegraphic Address.	Class of inspection work undertaken.
The Controller of Inspection, Calcutta Circle, Indian Stores Department, 6, Esplanade Road, Calcutta.	Storspect Calcutta.	Structural railway and General engineering stores, wagons, underframes, castings and textile stores. Inspectors are stationed at Asansol and Kulti to facilitate the inspection of wagons, castings, etc., manufactured at those places.
The Assistant Controller of Inspection, Bombay Circle, Indian Stores Department, Hararwalla Building, Wiltet Road, Ballard Estate, Bombay.	Storspect Bombay.	Steel work such as bridges and roof trusses, railway and general engineering and textile stores.
The Inspector-in-charge, Karachi Circle, Indian Stores Department, Satsarup Building, Victoria Road, Karachi.	Storspect Karachi.	Structural and general engineering stores.
The Inspector-in-Charge, Upper India Circle, Indian Stores Department, Attar Singh Building, The Mall, Lahore.	Storspect Lahore.	Plant and machinery, structural, railway, general engineering and textile stores.
The Inspector-in-Charge, Cawnpore Inspection Branch, Indian Stores Department, 254, Nawabganj, Cawnpore.	Storspect Cawnpore.	Textile and general engineering stores.
The Inspector-in-Charge, Madras Branch, Indian Stores Department, Old High Court Buildings, Madras.	Storspect Madras.	All kinds of textile stores.
The Metallurgical Inspector, Indian Stores Department, Burma Mines, Tatanagar.	Metalspect Tatanagar.	Rails, structural and general engineering stores and all kinds of material manufactured by the Tata Iron and Steel and other Companies at Tatanagar and in that area.
The Superintendent, Government Test House, 30 Judge's Court Road, Alipore, Calcutta.	Testhouse, Calcutta.	Chemical, physical, mechanical and electrical testing and analyses of materials of all kinds.

20. These organisations undertake the analyses, tests and investigations of chemicals and other stores, and inspection of material purchased by the Indian Stores Department, or by any other purchasing authorities. Where necessary, inspection in the country of origin is also arranged through the Director General, India Stores Department, London. No additional charges are levied by the Department for the cost of such inspection.

21. Requests for inspection of purchases not made through the Indian Stores Department should be addressed to the nearest Inspectorate, or to the Chief Controller of Stores, Indian Stores Department, Inspection Branch, on form I. S. D.-40, copies of which can be obtained from him or any inspectorate free of charge. Requests for tests or analyses should be addressed to the Superintendent, Government Test House, Alipore, Calcutta, or the Metallurgical Inspector, Tatanagar, as the case may be.

22. *Complaints.*—In the event of serious complaints in regard to quality or price of stores, or delay in supply, full details should be furnished to the Chief Controller of Stores, Indian Stores Department, when they will be carefully investigated. Minor complaints should, however, be referred to the supplying firms direct, and, if necessary, a copy of the complaint endorsed to the inspecting officer concerned in cases where the stores have been inspected by the Indian Stores Department. Complaints regarding adjustment of account

ould be addressed to the Audit Officer, Indian Stores Department, New Delhi. If the matter is not satisfactorily settled, it should be referred to the Chief Controller of Stores.

23. All complaints should be made as promptly as possible, as delay may prejudice the chances of obtaining redress, particularly if arbitration or legal proceedings are involved.

24. *Rejections and disposal of rejected stores.*—In the case of orders placed by the Indian Stores Department, this Department is the contracting party, and the final rejection of stores lies within its competence alone. Therefore, it is not permissible for an indenting officer or consignee to reject stores which have been accepted by the Department. In cases in which an indenting officer considers that grounds for the rejection of such stores exist, a full report should be forwarded immediately to the Indian Stores Department Inspectorate concerned, and the goods complained of should be carefully stored to avoid loss or deterioration, pending investigation by the Department and the issue of final instructions as to their disposal. Should it be decided that the stores should be rejected, intimation to this effect will be furnished immediately to the contractor by the Indian Stores Department, and he will be informed that the stores lie at his risk from the date of such rejection, and that if not removed within a fortnight of rejection the purchaser will have the right to dispose of the stores as he thinks fit at the contractor's risk and on his account.

25. Cases occasionally occur in which stores are despatched to their destination after merely visual examination at the contractor's premises, works or godowns on the understanding that their final acceptance or rejection shall depend on the results of the tests carried out at the Government Test House. In such cases if the stores are rejected, the contractor will be informed at once, and the stores will lie at the consignee's depot at the contractor's risk from the date of such rejection, and if not removed within a fortnight of rejection, the consignee will have the right to dispose of them as he thinks fit at the contractor's risk on and his account.

26. Similarly, stores, which are rejected, by the inspecting officer appointed by the Indian Stores Department, after delivery, under the terms of the contract for inspection at the consignee's Depot, will lie at the consignee's depot at the contractor's risk from the date of such rejection, and if not removed within a fortnight of rejection, the consignee will have the right to dispose of them as he thinks fit at the contractor's risk and on his account.

27. Stores rejected in the circumstances indicated above and not removed by the contractor within the period allowed for such removal should be disposed of by the consignee, either by return to the contractor or in such other manner as he considers most suited to the circumstances in each case.

28. *Departmental charges.*—Under the orders of the Government of India the Indian Stores Department levies a charge of 1 per cent. for purchase and 1 per cent. for inspection of the total cost of orders placed through its agency, on behalf of authorities in India, except in the case of orders placed on behalf of non-commercial Civil Departments of the Central Government.

The charge of 1 per cent. for inspection includes all sampling and testing before the contract is concluded, and also, where necessary, sampling and testing during the currency of the contract. These charges are adjusted by the Audit Officer, Indian Stores Department with the cost of stores.

29. The charges for analyses and tests of chemicals and other stores, and for inspection of purchases made by other purchasing authorities, carried out at the Government Test House, the Metallurgical Inspectorate or any other organisation under the Inspection branch of the Department are given in detail in the schedules prescribed by the Government of India, Department of Industries and Labour, copies of which can be obtained from the Manager of Publications, Civil Lines, Delhi. Bills for these charges are prepared by the heads of inspection or testing organizations and forwarded to the parties concerned for acceptance and adjustment through exchange account in the case of Government departments (including State and Company Railways having exchange accounts) and payment in cash, either direct or into the nearest Government treasury, in the case of other authorities and private concerns.

30. No charge is made for services rendered by any branch of the Department (including the Government Test House and Metallurgical Inspectorate) to non-commercial Civil departments of the Central Government.





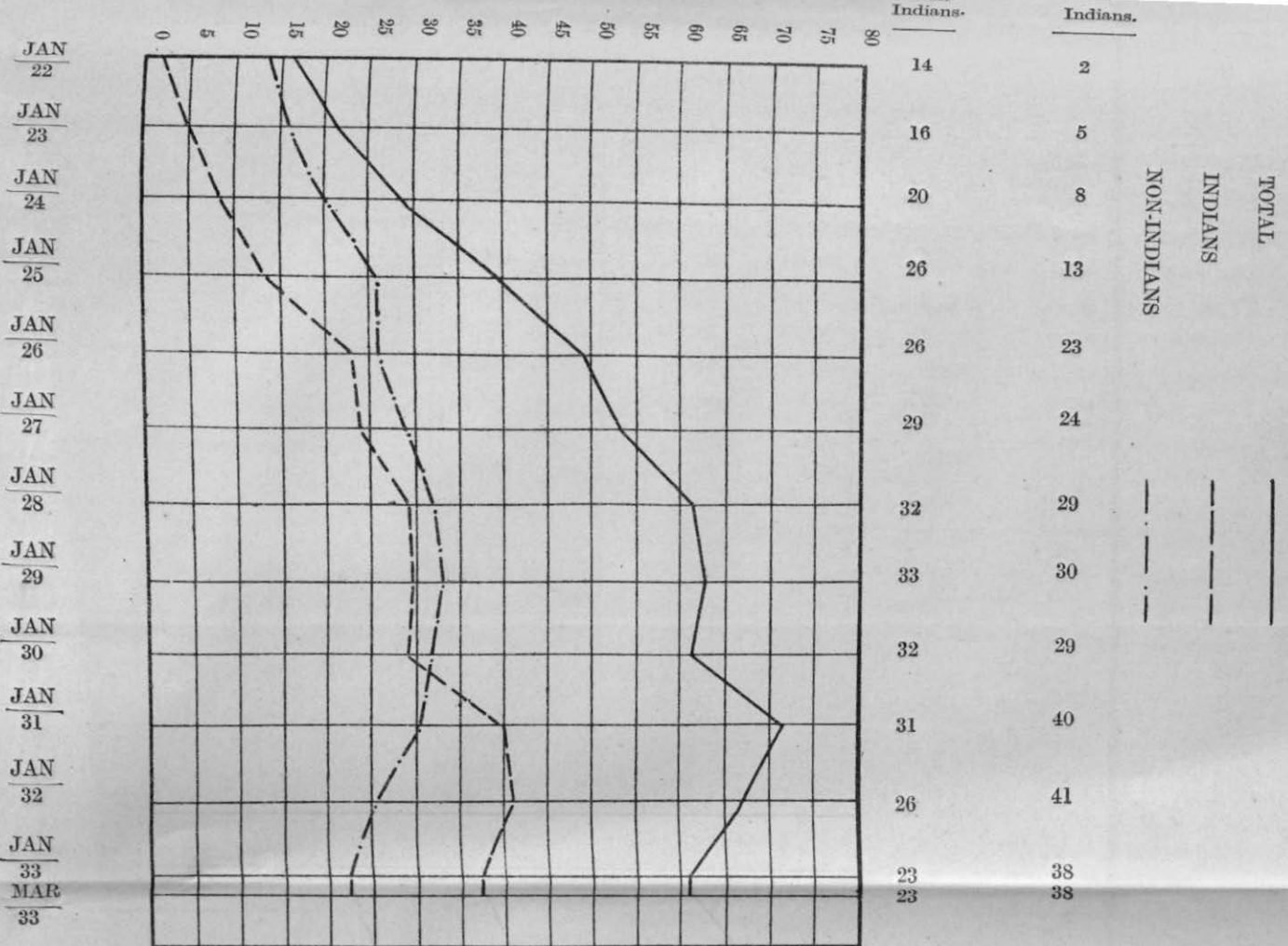


APPENDIX III.  
INDIAN STORES DEPARTMENT.

GAZETTED STAFF.

Up to 31st March 1933.

(Vide paragraph 14 of the report.)





## APPENDIX IV.

*Value of stores purchased and fees earned (vide paragraphs 16 and 29 of the Report).*

	Year.	Calcutta.	Bombay.	Karachi.	Total Provincial Circles.	Headquarters.	Grand Total.
Textiles .. .. .	1929-30 ..	4,87,072	1,09,457	81,166	6,77,695	1,06,58,597	1,13,36,292
	1930-31 ..	4,43,673	2,37,686	43,227	7,24,586	91,12,571	98,37,157
	1931-32 ..	4,07,095	1,50,997	28,103	5,86,195	1,00,28,783	1,06,14,978
	1932-33 ..	4,58,992	2,50,455	11,452	7,20,899	70,91,256	79,12,155
Engineering and Miscellaneous Stores ..	1929-30 ..	14,45,584	8,79,966	19,38,726	45,64,276	2,70,25,133	3,15,89,409
	1930-31 ..	21,32,027	13,22,451	14,25,490	48,79,968	2,29,65,571	2,78,45,539
	1931-32 ..	19,08,802	11,89,315	10,57,096	41,55,213	2,12,29,815	2,53,85,028
	1932-33 ..	22,07,781	12,54,104	8,56,025	43,17,910	2,08,60,838	2,51,78,748
Total .. .. .	1929-30 ..	22,32,656	9,89,423	20,19,892	92,41,971	3,76,83,730	4,29,25,701
	1930-31 ..	25,75,700	15,60,137	14,68,717	56,04,554	3,29,78,142	3,76,82,696
	1931-32 ..	23,15,897	13,40,312	10,85,199	47,41,408	3,12,58,598	3,60,00,006
	1932-33 ..	26,66,773	15,04,559	8,67,477	50,38,809	2,80,52,094	3,30,90,903
Fees earned .. .. .	1929-30 ..	22,327	9,924	29,199	52,450	3,76,837	4,29,287
	1930-31 ..	25,757	15,601	14,707	56,065	3,20,781	3,76,846
	1931-32 ..	23,159	13,403	19,862	47,424	3,12,586	3,60,010
	1932-33 ..	26,669	15,046	8,675	50,390	2,80,520	3,30,940

## APPENDIX V.

Statement showing the value of stores purchased on behalf of various authorities utilizing the services of the Indian Stores Department during the year 1932-33 and three preceding years. (Vide paragraph 16 of the Report.)

Serial No.	Organization.	Purchases made during 1932-33.			Total for the year.		
		Textiles and Leather.	Engineering, hardware and miscellaneous stores.	Total for the year.	1931-32.	1930-31.	1929-30.
<i>Central—Army.</i>							
1	Quartermaster General in India (including M. T.).	20,083	7,02,994	7,23,077	23,16,378	4,18,370	2,63,040
2	Master General of Ordnance	41,91,208	1,78,348	43,69,556	69,24,472	34,74,219	46,62,646
3	Military Engineer Services	10,957	35,80,174	35,91,131	41,45,814	56,99,268	64,09,311
4	Royal Indian Marine ..	66,949	2,88,514	3,55,463	3,01,928	8,34,024	4,54,327
5	Royal Air Force ..	8,514	14,119	22,633	1,16,692	1,00,881	1,02,494
6	Other Military Authorities ..	197	7,186	7,383	18,204	948	412
	Total Central—Army ..	42,97,908	47,71,335	90,69,243	1,38,23,488	1,05,28,210	1,18,92,230
<i>Central—Civil.</i> (including minor Administrations).							
7	Government of India Secretariat and attached offices ..	33,233	1,706	34,939	45,242	74,317	69,611
8	Superintendent, Viceregal Estates ..	593	18,178	18,771	13,490	12,449	3,623
<i>Authorities subordinate to the Department of Industries and Labour.</i>							
9	Indian Posts and Telegraphs Department ..	6,00,788	7,77,746	13,78,534	21,02,991	40,57,441	38,68,485
10	Printing and Stationery Department (India) ..	71,415	12,593	84,008	1,24,112	33,083	34,607
11	Central Public Works Department ..	13,611	3,62,785	3,76,396	4,42,966	10,81,123	9,16,397
12	Civil Aviation Department ..	..	44,747	44,747	7,567	1,59,297	3,15,721
13	Other authorities ..	1,901	11,092	12,993	24,880	65,222	20,468
	Total.—Authorities subordinate to the Department of Industries and Labour ..	6,87,715	12,08,034	18,96,678	27,02,516	53,96,166	51,55,678
14	Authorities subordinate to the Commerce Department ..	10,387	10,09,034	10,19,421	1,49,734	2,37,928	10,822
<i>Authorities subordinate to the Finance Department.</i>							
15	Salt Department ..	13,690	2,20,230	2,33,920	96,912	96,071	1,17,787
16	Other authorities ..	34,644	25,147	59,791	72,403	1,37,040	1,63,885
	Total.—Authorities subordinate to the Finance Department ..	48,334	2,45,377	2,93,711	1,69,315	2,33,111	2,81,672

Serial No.	Organization.	Purchases made during 1932-33.			Total for the year.		
		Textiles and Leather.	Engineering, hardware and miscellaneous stores.	Total for the year.	1931-32.	1930-31.	1929-30.
	<i>Authorities subordinate to the Department of Education, Health and Lands.</i>						
17	Survey of India ..	33,296	3,599	36,895	41,168	97,076	1,04,610
18	Director-General, Indian Medical Service ..	1,84,513	3,850	1,88,363	2,15,462	2,91,809	43,953
19	Other authorities ..	7,435	58,777	66,212	33,034	1,47,408	87,323
	<i>Total.—Authorities subordinate to the Department of Education, Health and Lands ..</i>	2,25,244	66,226	2,91,470	2,89,664	5,36,293	2,35,886
20	Authorities subordinate to the Foreign and Political Department ..	47,130	1,39,240	1,86,370	1,69,302	98,658	40,490
	<i>Minor Local Administrations.</i>						
21	Baluchistan Administration ..	47,771	20,540	68,311	50,007	12,265	1,96,036
22	Coorg Administration ..	4,315	3,763	8,078	6,326	16,520	41,158
23	Ajmer-Merwara Administration ..	5,215	323	5,538	6,943	1,103	149
24	Delhi Administration ..	14,364	4,111	18,475	27,386	18,115	27,190
25	Andamans Commission ..	22,948	1,65,669	1,88,617	1,92,777	3,21,066	6,05,174
	<i>Total.—Minor Local Administrations</i>	94,613	1,94,406	2,89,019	2,83,439	3,69,069	8,69,707
	Total Central—Civil	11,47,249	28,83,130	40,30,379	38,22,712	69,57,991	66,67,489
	<i>Railways—State-worked.</i>						
26	North Western Railway ..	3,20,905	38,87,506	42,08,411	32,08,178	38,79,230	33,59,217
27	Eastern Bengal Railway ..	1,76,055	15,84,029	17,60,084	14,64,946	8,73,917	14,13,813
28	East Indian Railway ..	5,12,677	44,76,773	49,89,450	40,94,173	41,74,226	52,81,668
29	Great Indian Peninsula Railway ..	2,74,137	30,71,149	33,45,286	25,76,856	17,28,379	31,92,968
30	Burma Railways ..	24,835	3,53,102	3,77,937	4,59,066	10,38,489	5,51,036
31	Central Publicity Bureau, State Railways ..	..	3,583	3,583	4,843	13,336	7,162
32	Railway Clearing Accounts Office ..	..	10	10	..	471	..
	<i>Total.—State-worked Railways ..</i>	13,08,609	1,33,76,152	1,46,84,761	1,18,08,062	1,17,08,048	1,38,05,564

Serial No.	Organization.	Purchases made during 1932-33.			Total for the year.		
		Textiles and Leather.	Engineering, hardware and miscellaneous stores.	Total for the year.	1931-32.	1930-31.	1929-30.
	<i>Railways—Company-worked.</i>						
33	Assam-Bengal Railway ..	3,104	40,780	43,884	51,621	77,807	2,74,158
34	Bombay, Baroda and Central India Railway ..	..	..	..	261	..	9,037
35	South Indian Railway ..	..	2,80,719	2,80,719	3,53,045	3,85,050	3,78,714
36	Bengal Nagpur Railway ..	411	12,329	12,740	5,756	44,955	1,25,688
37	Madras and Southern Mahratta Railway ..	..	1,17,572	1,17,572	3,68,898	5,75,189	4,39,776
38	Bengal and North-Western Railway. Calcutta Chord Railway ..	14,509	..	14,509	..	..	..
39	Indian Railway Conference Association ..	..	179	179	6,845	..	..
40	Indian Railway Conference Association ..	..	..	..	763	..	..
	<i>Total.—Company-worked Railways</i>	18,024	4,51,579	4,69,603	7,87,189	10,83,001	12,27,333
	<i>Railways—worked by Indian States.</i>						
41	Mysore Railways ..	..	..	..	..	..	2,637
42	Jodhpur Railway ..	1,219	67,202	68,421	8,095	6,793	10,715
43	H. E. H. The Nizam's State Railway ..	15,500	39,193	54,693	10,706	..	..
	<i>Total.—Railways worked by Indian States</i>	16,719	1,06,395	1,23,114	18,801	6,793	13,242
	<b>GRAND TOTAL.—Railways</b>	13,43,352	1,39,34,126	1,52,77,478	1,26,14,052	1,27,97,842	1,50,46,429
	<b>PROVINCIAL. Madras.</b>						
44	Public Works Department ..	190	3,37,501	3,37,691	2,95,222	4,60,553	4,28,100
45	Police Department ..	23,176	10,473	33,649	81,842	1,43,099	1,736
46	Jail Department ..	3,445	25,202	28,647	11,193	28,185	9,418
47	Other Departments ..	16,456	37,388	53,844	29,825	83,894	10,465
	<i>Total—Madras ..</i>	43,267	4,10,564	4,53,831	4,18,082	7,15,731	4,49,719
	<b>Bombay.</b>						
48	Public Works Department ..	9,476	6,59,100	6,68,596	13,10,767	17,58,887	25,73,803
49	Police Department ..	1,89,293	2,206	1,91,559	1,60,615	2,01,103	1,30,439
50	Prisons Department ..	1,48,490	5,310	1,53,800	1,24,055	1,86,459	2,07,044
51	Other Departments ..	31,505	35,002	66,507	54,850	89,279	84,814
	<i>Total.—Bombay ..</i>	3,78,764	7,01,698	10,80,462	16,50,287	22,35,728	29,96,100

Serial No.	Organization.	Purchase <sup>a</sup> made during 1932-33.			Total for the year.		
		Textiles and Leather.	Engineering, hardware and miscellaneous stores.	Total for the year.	1931-32.	1930-31.	1929-30.
	<i>PROVINCIAL—contd. Bengal.</i>						
52	Public Works Department.	38	1,10,190	1,10,228	1,17,985	30,516	51,868
53	Police Department	829	6,534	7,363	1,66,820	10,107	11,194
54	Jail Department ..	1,38,643	664	1,39,307	57,441	2,440	5,135
55	Other Departments	12,299	17,011	29,310	21,403	16,711	17,280
	<i>Total.—Bengal ..</i>	<i>1,51,809</i>	<i>1,34,399</i>	<i>2,86,208</i>	<i>3,63,649</i>	<i>59,774</i>	<i>85,477</i>
	<i>United Provinces.</i>						
56	Public Works Department.	238	1,23,140	1,23,378	1,58,431	2,00,283	62,627
57	Other Departments	..	7,803	7,803	5,906	8,395	5,547
	<i>Total.—United Provinces.</i>	<i>238</i>	<i>1,30,943</i>	<i>1,31,181</i>	<i>1,64,337</i>	<i>2,08,678</i>	<i>68,174</i>
	<i>Punjab.</i>						
58	Public Works Department.	9,334	14,17,338	14,26,672	20,46,157	20,27,212	25,01,551
59	Other Departments	1,05,002	75,025	1,80,027	1,10,998	4,20,406	6,78,201
	<i>Total.—Punjab ..</i>	<i>1,14,336</i>	<i>14,92,363</i>	<i>16,06,699</i>	<i>21,57,155</i>	<i>24,47,618</i>	<i>31,79,752</i>
	<i>Bihar and Orissa.</i>						
60	Public Works Department.	1,983	58,540	60,523	83,233	1,06,979	74,201
61	Other Departments	6,506	81,999	88,505	23,013	68,904	15,290
	<i>Total.—Bihar and Orissa.</i>	<i>8,489</i>	<i>1,40,539</i>	<i>1,49,028</i>	<i>1,06,246</i>	<i>1,75,883</i>	<i>89,491</i>
	<i>Burma.</i>						
62	Public Works Department.	..	3,940	3,940	2,997	1,089	16,482
63	Police Department..	1,49,145	80	1,49,225	1,69,419	1,82,745	50,828
	Jail Department ..	77,691	..	77,691	24,046	4,382	3,244
65	Other Departments	..	214	214	595	4,153	13,270
	<i>Total.—Burma ..</i>	<i>2,26,836</i>	<i>4,234</i>	<i>2,31,070</i>	<i>1,97,057</i>	<i>1,92,369</i>	<i>83,824</i>
	<i>Central Provinces.</i>						
66	Public Works Department.	50	66,827	66,877	41,205	75,015	1,67,127
67	Other Departments	2,427	9,032	11,459	13,856	23,573	14,735
	<i>Total.—Central Provinces.</i>	<i>2,477</i>	<i>75,859</i>	<i>78,336</i>	<i>55,061</i>	<i>98,588</i>	<i>1,81,862</i>

Serial No.	Organisation.	Purchases made during 1932-33.			Total for the year.		
		Textiles and Leather.	Engineering, hardware and miscellaneous stores.	Total for the year.	1931-32.	1930-31.	1929-30.
68	PROVINCIAL—concl'd. <i>Assam.</i> Public Works Department.	597	26,572	27,169	8,347	18,419	1,74,640
69	Police Department	65,212	2,046	67,258	1,43,502	59,612	70,155
70	Jail Department ..	16,475	815	17,290	11,931	11,633	11,190
71	Other Departments	121	2,198	2,319	2,937	7,800	16,179
	<i>Total.—Assam ..</i>	82,405	31,631	1,14,036	1,66,717	97,464	2,78,164
72	North-West Frontier Province ..	59,219	10,775	69,994	71,703	2,68,680	1,51,802
73	Provincial Unclassified Items ..	29,375	..	29,375	11,407	16,277	29,529
	<i>Total Provincial ..</i>	10,97,215	31,33,005	42,30,220	53,61,701	65,16,790	75,93,894
	<i>Indian States.</i>						
74	Jaipur .. ..	..	28,820	28,820	1,02,857	6,84,277	14,19,946
75	Mysore .. ..	..	6,732	6,732	650	..	..
76	Bahawalpur .. ..	..	38,782	38,782	39,229	41,209	1,35,185
77	Hyderabad .. ..	..	1,732	1,732	4,813	6,963	2,834
78	Jamkhandi .. ..	..	2,976	2,976	3,332	1,849	1,063
79	Indore .. ..	..	81	81	1,185	795	..
80	Gwalior .. ..	32	14,256	14,288	4,954	18,438	..
81	Patiala .. ..	..	11	11	288	247	..
82	Jodhpur .. ..	..	8,608	8,608	35	..	..
83	Khairpur .. ..	6	13,932	13,938	..	..	..
	<i>Total.—Indian States.</i>	38	1,15,930	1,15,968	1,57,343	7,53,778	15,58,578
	<i>Quasi public bodies.</i>						
84	City Board, Mussoorie,	..	34,830	34,830	1,28,513	16,816	15,413
85	Municipal Committee, Simla.	..	18,227	18,227	10,106	39,888	85,095
86	Other Municipalities and District Boards.	994	2,77,271	2,78,265	66,897	51,266	43,263
87	Port Commissioners	..	7,254	7,254	11,069	16,119	6,666
88	Other Local Bodies	21,236	1,608	22,844	2,042	180	2,757
	<i>Total.—Quasi-Public Bodies.</i>	22,230	3,39,190	3,61,420	2,18,627	1,24,269	1,53,194
	<i>British and Colonial Governments.</i>						
89	Royal Airship Base, Karachi.	..	2,032	2,032	2,083	3,816	7,947
90	Air Ministry Works, Aden.	..	..	..	..	..	5,940
91	Singapore Straits Settlements.	4,163	..	4,163	..	..	..
	<i>Total British and Colonial Governments.</i>	4,163	2,032	6,195	2,083	3,816	13,887



Serial No.	Organization.	Purchases made during 1932-33.			Total for the year.		
		Textiles and Leather.	Engineering, hardware and miscellaneous stores.	Total for the year.	1931-32.	1930-31.	1929-30.
	<i>Abstract.</i>						
	Central—Army ..	42,97,908	47,71,335	90,69,243	1,38,23,488	1,05,28,210	1,18,92,230
	Central—Civil ..	11,47,249	28,83,130	40,30,379	38,22,712	69,57,991	66,67,489
	Railways—State-worked	13,08,609	1,33,76,152	1,46,84,761	1,18,08,062	1,17,08,048	1,38,05,864
	Railways—Company-worked ..	18,024	4,51,579	4,69,603	7,87,189	10,83,001	12,27,323
	Railways worked by Indian States.	-16,719	1,06,395	1,23,114	18,801	6,793	13,242
	Total.—Railways ..	13,43,352	1,39,34,126	1,52,77,478	1,26,14,052	1,27,97,842	1,50,46,429
	Provincial Governments	10,97,215	31,33,005	42,30,220	53,61,701	65,16,790	75,93,894
	Indian States ..	38	1,15,930	1,15,968	1,57,343	7,53,778	15,58,578
	Quasi-Public Bodies ..	22,230	3,39,190	3,61,420	2,18,627	1,24,269	1,53,194
	British and Colonial Governments ..	4,163	2,032	6,195	2,083	3,816	13,887
	GRAND TOTAL ..	79,12,155	2,51,78,748	3,30,90,903	3,60,00,006	3,76,82,696	4,29,25,701

## APPENDIX VI.

Statement showing the value of the various classes of purchases (indigenous and imported) during 1932-33 and three preceding years. (vide paragraph 25 of the Report.)

Class of stores.	1932-33.		1931-32.		1930-31.		1929-30.	
	Total.	Per-centage.	Total.	Per-centage.	Total.	Per-centage.	Total.	Per-centage.
<b>I.—TEXTILES AND LEATHER.</b>								
<i>(a) Stores purchased in the Indian market.</i>								
<i>(i) Cotton—</i>								
Indigenous	37,06,628	95·4	37,69,231	92·2	51,11,441	94·8	56,76,743	97·4
Imported	1,79,581	4·6	3,17,409	7·8	2,78,346	5·2	1,53,252	2·6
<i>(ii) Woollen—</i>								
Indigenous	23,60,761	97·9	30,81,671	92·3	34,84,458	95·6	39,09,782	92·7
Imported	49,711	2·1	54,241	1·7	1,59,592	4·4	3,05,959	7·3
<i>(iii) Jute, hemp, etc.</i>								
Indigenous	4,88,972	81·9	7,38,849	86·1	6,72,083	94·2	12,31,202	97·7
Imported	1,08,146	18·1	1,20,225	13·9	41,558	5·8	29,144	2·3
<i>(iv) Leather—</i>								
Indigenous	1,01,671	99·4	1,15,045	99·7	65,387	90·7	23,506	86·7
Imported	662	·6	300	·3	6,676	9·3	3,595	13·3
Total { Indigenous	66,58,032	95·2	77,04,796	94	93,33,369	95	1,08,41,233	95·7
Imported	3,38,100	4·8	4,92,175	6	4,86,172	5	4,91,950	4·3
Total stores purchased in the Indian market.	69,96,132	..	81,96,971	..	98,19,541	..	1,13,33,183	..
<i>(b) Stores purchased from Government Departments or Depots: Indigenous.</i>								
Cotton ..	6,351	..	2,343	..	3,997	..	2,561	..
Woollen ..	80,542	..	1,60,660	..	13,281	..	504	..
Jute, hemp, etc.	26	..	..	..	..	..	44	..
Leather ..	..	..	..	..	338	..	..	..
Total ..	86,919	..	1,63,003	..	17,616	..	3,109	..
<i>(c) Stores purchased direct from outside India: Imported.</i>								
Cotton ..	1,39,838	..	9,42,259	..	..	..	..	..
Woollen ..	6,05,153	..	9,62,345	..	..	..	..	..
Jute, hemp, etc.	1,84,113	..	3,50,400	..	..	..	..	..
Leather ..	..	..	..	..	..	..	..	..
Total ..	8,29,104	..	22,55,004	..	..	..	..	..
Total { Indigenous	67,44,951	85·2	78,67,799	74·2	93,50,985	95·2	1,08,44,342	95·7
Imported	11,67,204	14·8	27,47,179	25·8	4,86,172	4·8	4,91,950	4·3
Total—Textiles and Leather	79,12,155	..	1,06,14,978	..	98,37,157	..	1,13,36,292	..
<b>II.—ENGINEERING AND MISCELLANEOUS STORES.</b>								
<i>(a) Stores purchased in the Indian market ..</i>								
Indigenous	2,51,49,998	..	2,53,51,149	..	2,77,86,082	..	3,15,76,652	..
<i>(b) Stores purchased from Government Departments or Depots.</i>								
Indigenous	10,731	..	2,207	..	2,493	..	12,757	..
<i>(c) Stores purchased direct from outside India ..</i>								
Engineering and Miscellaneous stores.	18,019	..	31,672	..	56,964	..	..	..
Total—Engineering and Miscellaneous stores.	2,51,78,748	..	2,53,85,028	..	2,78,45,539	..	3,15,89,409	..
<b>GRAND TOTAL</b> ..	3,30,90,903	..	3,60,00,006	..	3,76,82,696	..	4,29,25,701	..

## APPENDIX VII.

Value in rupees of stores purchased in each province during the year 1932-33 and three preceding years.

(Vide paragraphs 16 and 26 of the Report.)

Class of material and province in which purchased.	1932-33.	1931-32.	1930-31.	1929-30.
<i>Cotton Materials.</i>				
United Provinces .. .. .	13,64,233	14,78,764	20,06,836	27,80,063
Bombay .. .. .	8,66,972	9,32,757	15,34,877	12,01,524
Madras .. .. .	8,77,825	6,83,173	8,45,715	9,09,350
Bengal .. .. .	6,10,074	8,14,237	6,61,909	6,16,830
Punjab .. .. .	82,438	34,413	2,22,471	98,192
Central Provinces .. .. .	44,120	7,005	3,125	..
Delhi .. .. .	40,122	1,36,291	1,11,601	2,23,005
Indore .. .. .	425	..	..	..
Burma .. .. .	..	..	3,150	..
Jaipur .. .. .	..	..	103	..
Bihar and Orissa .. .. .	..	..	1,031	..
Total—Cotton Materials ..	38,86,209	40,86,640	53,89,787	58,29,995
<i>Woollen Materials.</i>				
Madras .. .. .	8,24,852	7,32,924	7,40,986	10,40,313
United Provinces .. .. .	5,54,196	10,51,185	17,20,446	7,46,597
Punjab .. .. .	3,64,280	8,68,826	5,59,242	6,52,791
Bombay .. .. .	3,18,586	3,59,189	3,32,494	10,91,841
Bengal .. .. .	3,07,420	1,18,805	2,81,600	5,43,239
Delhi .. .. .	36,848	..	..	2,058
Kashmir .. .. .	3,465	4,943	..	1,38,902
Indore .. .. .	825	..	..	..
Mysore .. .. .	..	..	9,282	..
Total—Woollen Materials ..	24,10,472	31,35,912	36,44,050	42,15,741
<i>Jute, Hemp and Flax Materials.</i>				
Bengal .. .. .	4,99,815	7,38,137	6,34,942	11,76,276
Bombay .. .. .	49,176	47,826	50,993	67,630
United Provinces .. .. .	23,024	67,526	12,399	4,144
Punjab .. .. .	18,423	239	10,209	1,590
Delhi .. .. .	5,732	4,492	5,098	10,076
Madras .. .. .	948	854	..	630
Total—Jute, Hemp and Flax Materials	5,97,118	8,59,074	7,13,641	12,60,346
<i>Leather goods.</i>				
United Provinces .. .. .	78,815	89,464	35,030	21,070
Bengal .. .. .	13,707	21,593	18,885	3,253
Bombay .. .. .	5,598	1,222	3,438	4,409
Punjab .. .. .	2,321	1,836	92	—2,014 (a)
Madras .. .. .	1,209	1,230	12,332	383
North-West Frontier Province ..	438	..	1,800	..
Gwalior .. .. .	244	..	486	..
Total—Leather goods ..	1,02,333	1,15,345	72,063	27,101

(a) Adjustment owing to cancellations of previous year's orders.

Class of material and province in which purchased.	1932-33.	1931-32.	1930-31.	1929-30.
<i>Engineering, Hardware and Miscellaneous stores.</i>				
Bengal .. .. .	1,23,93,782	1,10,42,688	1,11,81,095	1,50,31,422
Bombay .. .. .	83,69,813	92,40,894	1,14,14,108	1,20,74,685
Punjab .. .. .	18,71,313	27,46,878	18,01,754	19,86,318
Madras .. .. .	8,73,500	7,36,535	10,09,347	3,40,438
Delhi .. .. .	5,92,574	5,54,345	4,58,387	3,53,232
United Provinces .. .. .	5,82,211	6,35,396	8,26,440	7,36,335
Burma .. .. .	2,78,050	3,39,127	8,53,617	4,03,108
Bihar and Orissa .. .. .	84,122	15,960	15,472	2,33,323
Mysore .. .. .	77,815	16,595	87,529	3,56,604
Central Provinces .. .. .	20,339	22,204	19,206	61,187
Assam .. .. .	6,118	488	1,17,600	..
Indore .. .. .	314	..	..	..
North-West Frontier Province .. .. .	47	..	..	..
Aundh State .. .. .	..	39	..	..
Hyderabad .. .. .	..	..	889	..
Ajmer-Merwara .. .. .	..	..	368	..
<b>Total—Engineering, Hardware and Miscellaneous stores.</b>	<b>2,51,49,998</b>	<b>2,53,51,149</b>	<b>2,77,86,082</b>	<b>3,15,76,652</b>
<i>Total.</i>				
Bengal .. .. .	1,38,24,798	1,27,35,460	1,27,78,431	1,73,71,020
Bombay .. .. .	96,10,145	1,05,81,888	1,33,35,910	1,44,40,089
United Provinces .. .. .	26,02,480	33,22,335	46,00,151	42,88,209
Madras .. .. .	25,78,334	21,54,716	26,08,380	22,91,114
Punjab .. .. .	23,38,775	36,52,192	25,93,768	27,36,877
Delhi .. .. .	6,75,276	6,95,128	5,75,086	5,88,371
Burma .. .. .	2,78,050	3,39,127	8,56,767	4,03,108
Bihar and Orissa .. .. .	84,122	15,960	15,742	2,34,354
Mysore .. .. .	77,815	16,595	96,811	3,56,604
Central Provinces .. .. .	64,459	29,209	22,331	61,187
Assam .. .. .	6,118	488	1,17,600	..
Kashmir .. .. .	3,465	4,983	..	1,38,902
Indore .. .. .	1,564	..	..	..
North-West Frontier Province .. .. .	485	..	1,800	..
Gwalior .. .. .	244	..	486	..
Aundh State .. .. .	..	39	..	..
Hyderabad .. .. .	..	..	889	..
Ajmer-Merwara .. .. .	..	..	368	..
Jaipur .. .. .	..	..	103	..
<b>Total .. .. .</b>	<b>3,21,46,130</b>	<b>3,35,48,120</b>	<b>3,76,05,623</b>	<b>4,29,09,835</b>

## APPENDIX VIII.

*Lists of Items of Stores purchased on "Rate" and "Running" contracts.*

(Vide paragraph 28 of the Report.)

A. *Items of stores for which "Rate" and "Running" contracts were entered into by Headquarters Office during the year 1932-33.*

*Textile and Leather stores.*

## COTTON.

1. Bags, Postal.
2. Bags, kit, waterproof.
3. Bags, ration, waterproof.
4. Bandage cloth.
5. Bunting cloth, red and green.
6. Cloth, jaconet.
7. Cloth, grey, domestic.
8. Cloth, madapalam.
9. Cloth, sheeting.
10. Capes, waterproof, Indian and Burman, with and without hoods.
11. Cotton waste, white, teased and unteased.
12. Cotton Waste, coloured.
13. Dosuti.
14. Drill, blue, grey, khaki and white.
15. Durries.
16. Dusters.
17. Flags, bunting, red and green.
18. Fringes, blue.
19. Gauze, absorbent, cotton, white.
20. Haversacks, khaki.
21. Holland cloth.
22. Long cloth, bleached, grey.
23. Mosquito cloth.
24. Pugri cloth, khaki, red and blue.
25. Pugri cloth, white.
26. Putties, cotton, blue.
27. Sheets, bed.
28. Silicia cloth, Black.
29. Tapes.
30. Thread, sewing.
31. Turbans, red.
32. Twill, cotton, khaki.

## COTTON—contd.

33. Twine.
34. Wool cotton, absorbent.

## WOOLLEN.

35. Blankets.
36. Caps, balaclava.
37. Drawers woollen.
38. Felt, white.
39. Flannel, fine.
40. Jerseys.
41. Jackets, cardigan.
42. Putties, woollen.
43. Serge, blue and white.

## JUTE, HEMP AND MISCELLANEOUS.

44. Bags, mail, postal.
45. Bags, nose.
46. Coir yarn.
47. Cordage, manilla.
48. Lace, gold.
49. Paulins, flax and jute.
50. Ropes, Manilla.

## LEATHER.

51. Bags, cash, delivery.
52. Belts, waist and pouch.
53. Portfolios, R. M. S.

*Engineering and Miscellaneous stores.*

54. Acids, sulphuric, nitric and Hydrochloric.
55. Alumina Ferric.
56. Antimony (white). 99% purity.
57. Bearings, Ball, Roller and Tapered Roller.
58. Belting, train lighting, of sizes.
59. Boards, Plywood, backing.

LEATHER—*contd.*

60. Boards, sign and letter box plates, enamel for P. & T.
61. Boards, sign and Notice, iron for P. & T.
62. Boxes, tin, for insurance seals and trays, tin, for letter (for postal use).
63. Bricks, fire and clay, fire.
64. Cables, V. I. R., insulated, braided, Single core, 250 volts, 600 megohm grade, of sizes.
65. Cables, V. I. R. insulated, tough rubber sheathed, single core, 250 volts, 600 megohm grade, of sizes.
66. Cables, V. I. R., insulated, lead sheathed, single core and two core, flat, 250 volts, 600 megohm grade, of sizes.
67. Cables, V. I. R., insulated, special metal alloy, sheathed, single core and two core, flat, 250 volts, 600 megohm grade, suitable for the Henley Wiring System, of sizes.
68. Cables, rubber, insulated, lead sheathed, two core flat, 250 volts, 600 megohm grade, with Bonding wire, of sizes.
69. Cables, 300 megohms, Non-association and 2500 megohm grade.
70. Cables, vulcanised, rubber insulated, super tropical, 600 megohm grade, size 1/064.
71. Cables, Flameproof, single core, V. I. R. insulated, 600 megohm grade, of sizes.
72. Calcium carbide.
73. Candles, wax.
74. Ceiling Roses.
75. Cells, Caustic Soda, Edison type, 500 ampere hour capacity.
76. Cells, dry, Inert.
77. Cells, dry and Inert, of different makes and sizes.
78. Cells, dry, for electric torches.
79. Cells, Train lighting, Edison, Spares for.
80. Cells, Train Lighting, Lux, Spares for.
81. Cells, Train Lighting, Nife, Spares for.

LEATHER—*contd.*

82. Cells, Train Lighting, Tonum, Sections, positive, 15 and 21 plated.
83. Cells, Train Lighting, Tonum, Sections positive, 21 plated for P. & G. Cells.
84. Cells, Wet, A. D., Carbon and Zinc elements.
85. Cement, ordinary and rapid hardening.
86. Charpoys, galvanised iron, for M. E. S.
87. Clasp knives.
88. Conduit pipes and fittings, of sizes.
89. Connectors, Porcelain.
90. Cooking ranges.
91. Cords, flexible, twin core, cotton and silk braided, 600 megohm grade.
92. Cords, flexible, twin core, workshop finish, 600 megohm grade.
93. Cords, flexible, two and three core, Tough rubber sheathed, 600 megohm grade.
94. Creosote.
95. Disinfectants.
96. Fans, electric, ceiling, A. C. and D. C.
97. Fans, electric, table, A. C. and D. C.
98. Feed pipes, I. R.
99. Files.
100. Fire extinguishers (Soda Acid and Foam Types) and refills.
101. Fittings, Carriage, electric such as glass globes, lampholders, shades, for G. I. P. Railway.
102. Fittings, Vacuum Brake (both rubber and non-rubber for railways).
103. Gas, acetylene, dissolved.
104. Gas, carbonic.
105. Graphite.
106. Hose, Canvas, flax, for E. B. Railway.
107. Hose, I. R., armoured.
108. Insulating materials :—
  - (a) Cotton tape, Egyptian, of sizes.
  - (b) India rubber strip, pure para. of sizes.
  - (c) Tape, Adhesive, black, of sizes.
  - (d) Varnish, insulating, air drying and stoving.
109. Jars, earthenware, for Leclanche Cells (for N. W. Railway).

LEATHER—*contd.*

110. Jars, glass, for Leclanche and Minotti batteries (for the Indian Telegraph Department).
111. Lampholders.
112. Lamps, electric, automobile.
113. Lamps, electric, carbon filament.
114. Lamps, electric, locomotive and cab-lights.
115. Lamps, electric, metal filament, gas-filled, general lighting.
116. Lamps, electric, metal filament, vacuum type, general lighting.
117. Lamps, electric, metal filament, Train lighting, gasfilled type.
118. Lamps, electric, metal filament Train lighting vacuum type.
119. Lamps, oil and tin lanterns for P. & T.
120. Lanterns, Hurricane and chimneys.
121. Letter boxes for P. & T.
122. Lignum Vitae Blocks for AR, CR, AZ, and CZ Train lighting dynamos.
123. Liquid chlorine.
124. Locks.
125. Meters, electric, house service, alternating current, watt hour, single phase, two wire.
126. Meters, electric, house service, direct current, ampere hour, two wire.
127. Meters, water (Siemens, Tylor's Leeds and Glenfield).
128. Oil, castor.
129. Oil, cocoanut.
130. Oil, fuel.
131. Oil, gas making.
132. Oil, kerosene.
133. Oil, Linseed (raw and double boiled).
134. Oils, lubricating and greases.
135. Paint, grey for carriage roofing.
136. Paints, enamels, varnishes, etc.
137. Petrol.
138. Pig iron, machine, Grade No. I.
139. Pig iron, machine, cast No. III.
140. Pig iron, sand cast, charcoval.
141. Pig iron, sand cast, charcoal No.
142. Pig iron, sand cast, charcoal No. II and III

LEATHER—*contd.*

143. Pipes, asbestos, cement pressure and detachable joints.
144. Pipes and Specials, cast iron.
145. Pipes, mild steel and fittings, wrought iron and malleable.
146. Pipes and specials, stoneware.
147. Points, rodding.
148. Poles, Steel, tubular :—
  - (a) Mannesman type, of sizes.
  - (b) Hercules Reinforced type, reduced and shrunk, of sizes.
149. Polish, metal.
150. Road Dressing materials.
151. Roofing materials for railway carriages, etc.
152. Rosin.
153. Sac Elements for No. 1 Leclanche Cells.
154. Sac Elements for No. 2 Leclanche Cells.
155. Sac Elements for "Koda" Combined type for No. 1 laclanche Cells.
156. Safes, Burglar and Fire proof.
157. Sals, lead.
158. Shades, Enamelled Iron and Conic and Langham White Opal.
159. Sheets, Asbestos, wire insertion.
160. Sheets, Asbestos, corrugated and flat, tiles (Trafford) and fixing accessories, etc.
161. Shellac.
162. Signals, fog, detonating.
163. Soaps, soft and bar.
164. Spares for Train Lighting equipment, e.g., dynamos, cells, etc.
165. Spares for "Lux" type batteries (R. T. G. 7 Cells).
166. Spirit, methylated, denatured.
167. Standards, Table, electric, Bakelite and shades for them.
168. Steel sections.
169. Sulphate of Alumina.
170. Sulphate of copper.
171. Switches, Tumbler, Single and Double pole, House Wiring and Train Lighting.
172. Switches with fuses, iron clad, double pole.

LEATHER—*contd.*

173. Target Apparatus.
174. Tools, track, for railway.
175. Tubes, steel, solid, cold drawn.
176. Turpentine.
177. Tyres and tubes, rubber, for bicycles.
178. Valves, Sluice, Water (Glenfield and Kennedy's, Hattersley's Ham Baker's and Alley and Maclellan).
179. Vehicles and spare parts for the same :—
  - (a) Chevrolet Truck Chassis, passenger cars and spare parts.
  - (b) Ford Motor cars, Trucks, Chassis, etc., and Ford spare parts.
  - (c) Morris cars.
  - (d) Morris Commercial Vehicles.
  - (e) Woolseley cars.
  - (f) Spare parts for Morris cars, Wolseley cars and Morris Commercial vehicles for the Army and R. A. F. in India.
  - (g) Spare parts, as at (f) above, for the Civil Departments.
  - (h) Spare parts for Albion Six-wheeled 3 ton model I. O. 32.
- 179(i). Spare parts for Thornycroft 'A' 4 and 'A' 5 medium six wheeled lorries for the M. T.
180. Voltoids (Ammonium Chlorides).
181. Wall plugs and sockets, wooden, bakelite and iron clad.
182. Wire, copper, bare, annealed.
183. Wire, copper, bare, solid, cold drawn, of sizes.
184. Wire, copper, single and double cotton covered and double silk covered, of sizes, for winding purposes.
185. Wire, galvanised iron, bare, for Telegraph and Telephone purposes.
186. Wire gauze, galvanised iron.
187. Wire, mild steel, galvanised.
188. Wire, mild steel, round, black annealed.
189. Wire, signal, steel, galvanised.
190. Wire, signal, steel, solid.
191. Wire, steel, galvanised iron fencing.

LEATHER—*contd.*

192. Wire, steel, ordinary, round, galvanised.
  193. Wire, steel, round, annealed, black.
  194. Wire, wove, galvanised iron.
  195. Wood preservatives.
  196. Zines, cylindrical, cutaway pattern, for No. 2 Leclanche Cells.
  197. Zinc ingots P. H. Brand.
- B. *Contracts entered into by the Controller of Purchase, Calcutta.*

## TEXTILE STORES.

1. Bags, canvas, of sizes.
2. Bags, gunny 'B' twill, of sizes.
3. Bags, gunny 'Liverpool' twill, of sizes.
4. Bags, tool, with straps.
5. Bed sheets, bleached.
6. Belts, leather, waist.
7. Belts, sam brown, leather, with pouches.
8. Buttons 5/8" dia., covered with green Morocco leather.
9. Canvas, country, 42" wide.
10. Canvas, jute, of sizes.
11. Caps, black, Indian.
12. Caps, black, cherry top.
13. Caps, black forage, with leather peak.
14. Caps, blue cloth, with straight patent leather.
15. Caps, blue, with soft top.
16. Caps, dark blue, military pattern.
17. Caps, dark blue, military pattern.
18. Caps, dark blue, with patent leather.
19. Caps, drill, dark blue.
20. Caps, Fez, red.
21. Caps, forage, blue.
22. Caps, forage, khaki.
23. Caps, serge, black.
24. Caps, serge, blue, with patent leather.
25. Caps, straw bond, with blue muslin.
26. Caps, velvet, black.
27. Cloth, bondage.
28. Cloth, brattice.
29. Cloth, dungaree.



LEATHER—*concl.*

30. Cloth, dasuti.
31. Cloth, hessian.
32. Cloth, mulmul.
33. Cloth, muslin, white.
34. Cloth, nainsock.
35. Cloth, selvyh.
36. Cloth, sheeting, unbleached.
37. Cloth, table, white, cotton, damask.
38. Coir fibre, loose
39. Cord laid, hemp.
40. Cotton waste, white, teased.
41. Covers, long cloth, bleached.
42. Drill, cotton, khaki.
43. Fish line.
44. Flags, hand signal, made up from red and green bunting cloth.
45. Hats, Gurkha.
46. Hats, sola.
47. Hats, sola, khaki (pigsticker)
48. Helmets, pith, khaki and white.
49. Helmets, white, cork.
50. Helmets, white, military shape.
51. Jute combings.
52. Jute, gasketting, 8 and 18 ply.
53. Line, log, country.
54. Long cloth, bleached.
55. Nets, mosquito, 7' x 3' 6".
56. Netting mosquito.
57. Newar, khaki.
58. Paulins, flax, canvas of sizes.
59. Pillows to fit, slip.
60. Pouches, leather, for linemen's tools.
61. Pugrees, cotton, khaki and white.
62. Putties, woollen, green.
63. Rope, jute.
64. Ropes, hemp, of sizes.
65. Ropes, manilla, 3" cir.
66. Ropes, manilla, of sizes.
67. Ropes, manilla, towing cable.
68. Tents, Pal, half and full.
69. Thread, linen, sewing, green 3 cord No. 40.

LEATHER—*cont.*

70. Thread, linen, whity brown, No. 40.
71. Topees, Curzon.
72. Topees, sola.
73. Twine, cobblers.
74. Twine, flax, seaming, 3 and 7 ply.
75. Twine, hemp, 2 ply.
76. Twine, jute, 3 ply.
77. Twine, sailmakers, 3 ply.
78. Wicks, cotton, castor oil.
79. Wool, worsted, trimmings, grey.
80. Yarn, spun.

## ENGINEERING AND MISCELLANEOUS STORES.

81. Accumulators.
82. Arms, rocking, for dynamos.
83. Asphalt.
84. Auger, spiral.
85. Axes, felling.
86. Badges, brass.
87. Ball bearing races.
88. Bases for terminal box.
89. Batten lamp holder.
90. Bell gong.
91. Bell pushes.
92. Belting, badata.
93. Belting, Gripoly.
94. Belting, leather.
95. Bicycles.
96. Bill hooks.
97. Blades, hacksaw.
98. Blocks, wood *Lignum vitæ*.
99. Blocks, wooden.
100. Boards, teakwood.
101. Borax.
102. Boxes, fuse.
103. Brackets, lamp.
104. Bra-lawals.
105. Bricks, fire.
106. Brooms, cocoanut.
107. Brushes, bannister.
108. Brushes, carbon.
109. Brushes, hard, for cleaning forme.

ENGINEERING AND MISCELLANEOUS  
STORES—*contd.*

110. Brushes, lettering.
111. Brushes, paint.
112. Brushes, sash tool.
113. Brushes, steelwire.
114. Brushes, stencil.
115. Brushes, varnish.
116. Buckets, galvanized iron.
117. Buckets, mild steel.
118. Bushes, bronze.
119. Cable, 5-core for Stones' Kent coupling.
120. Cable, signalling.
121. Cable, V. I. R.
122. Capping, teakwood.
123. Carbons, diaphragms.
124. Card boards, corrugated.
125. Cases, packing, venesta.
126. Casing, teakwood.
127. Cells, dry, inert.
128. Chalk in lumps.
129. Chisels, carpenter.
130. Chloride of lime.
131. Cleaners, vacuum.
132. Clips, link.
133. Coil resistance set.
134. Commutators for dynamos.
135. Composition for straight through boxes.
136. Compound, Chatterton.
137. Condenser, telephone.
138. Contact, plate, for dynamo.
139. Cords, telephone.
140. Covers, Bakelite, for switches.
141. Coupling, 3 way.
142. Cylinders, C. I. vacuum.
143. Disinfectant "Hycol".
144. Drill, hand miller.
145. Drill, twist.
146. Ear pieces for bell telephone receivers.
147. Earth borers.
148. Electrolite for Alconum cells.
149. Emery cloth.

ENGINEERING AND MISCELLANEOUS  
STORES—*contd.*

150. Empire cloth.
151. Enamel, black, motor air drying manders.
152. Enamel, old, gold colour.
153. Ferriet Amon Citras.
154. Files of sizes.
155. Fire bricks.
156. Fire clay.
157. Flour, fine.
158. Gauge, wire, bra
159. Gimlot augers.
160. Glass cloth.
161. Gloves, I. R.
162. Grease, machine.
163. Gum, mastic.
164. Guttering, G. I.
165. Hammers, hand.
166. Handles for chisels.
167. Handles for files.
168. Handles for hammers.
169. Handles for pick axes.
170. Heaters, wax, electric.
171. Hinges, butt, steel.
172. Hose, canvas.
173. Hose, I. R. Armoured.
174. Hose, pneumatic.
175. Hydrometers.
176. Insulators, bobbin, porcelain.
177. Indulators, shackle, porcelain.
178. Indulators, stalk, porcelain.
179. Jar, glass, for Leclanchi and Menotti batteries.
180. Lamp holders.
181. Lamp locks.
182. Lamps for C. B. switchboard.
183. Lead cover connecting studs and nuts.
184. Lead sleeves.
185. Locks, W. I.
186. Measuring chain.
187. Measuring tape.
188. Metal cleaner.

ENGINEERS AND MISCELLANEOUS  
STORES—*contd.*

189. Meters, telephone.
190. Mild steel sections.
191. Milliameters.
192. Mouthpieces, for telephones.
193. Nail pullers.
194. Nippers, wire.
195. Oil, airoline.
196. Oil, bicycle lamp.
197. Oil—C—707.
198. Oil, castor.
199. Oil, chloridol.
200. Oil, gargoyle, vaclory, heavy.
201. Oil, gargoyle, velocite ' B '.
202. Oil, kerosene.
203. Oil, lubricating.
204. Oil, Neatfoot.
205. Oil, shell, engine, BD-3.
206. Oil, watch.
207. Packing, Bedlam serpent.
208. Packing, square, crescent.
209. Paint, anti-corrosive.
210. Paint, anti-sulphuric.
211. Paint, black enamel.
212. Paint " Duco ".
213. Paint, enamel, gold old colour.
214. Paint, inertal.
215. Paint, moist, fast red.
216. Paint, lemon, chrome dry.
217. Paint, orange, chrome dry.
218. Paint, yellow, chrome dry.
219. Paint, red lead.
220. Paint, white, ready mixed.
221. Panes of glass.
222. Paper sleeves.
223. Petrol.
224. Phowrahs.
225. Pitch.
226. Plate, contact, for rocking arm of C. R. dynamos.
227. Pliers.
228. Plugs, Rawl.
229. Plugs, wall, without socket.

ENGINEERS AND MISCELLANEOUS.  
STORES—*contd.*

230. Plugs, wood.
231. Poles tubular.
232. Polish, peerless.
233. Powder, carbo.
234. Powder, disinfecting.
235. Pulleys, C. I. for C. Z. dynamos.
236. Recol, thinner, special varnish.
237. Refills, spare, " Firesnow ".
238. Renewal, electrolyte.
239. Resin, cord, solder.
240. Ribbons for calculagraphs.
241. Rings, I. R. rolling.
242. Rings, lamp holder brackets.
243. Rocking arms for dynamos.
244. Rods, round, copper.
245. Rubber insertions.
246. Rust removers.
247. Saws, hand.
248. Screw drivers.
249. Sections, positive.
250. Separators for cells.
251. Shackles, wire, for lead seal.
252. Sheets, asbestos.
253. Sheets, mica.
254. Sheets, wire, insertions.
255. Shovels, square nosed.
256. Shovels, stocking.
257. Soap, bar.
258. Soap, country.
259. Soap, Turkish bath.
260. Soda ash.
261. Soda caustic.
262. Soda, washing.
263. Soldering fluid.
264. Spanners.
265. Sponges.
266. Stallory diaphragms.
267. Staples, fibre threaded.
268. Strapping and Seals.
269. Studs and nuts, connecting, lead covered.
270. Sulphate of copper.

ENGINEERS AND MISCELLANEOUS  
STORES—*contd.*

271. Switches, knife.
272. Tape paper.
273. Tin sealholder.
274. Tubes, leading in, porcelain.
275. Tubing, rubber, armoured.
276. Tyes, India rubber.
277. Valves, Van, vacuum brake.
278. Varnish, black.
279. Vernilion, dry.
280. Voltmeters.
281. Watches, "Paradox".
282. Wax, paraffin.
283. Wind, tins, galvanized iron.
284. Wire, barbed, steel.
285. Wire, copper, bare, best annealed.
286. Wire, fencing, G. I.
287. Wire, flexible, silk-covered for Baudot.
288. Wire, galvanised iron, annealed.
289. Wire gauze, brass.
290. Wire-gauze, galvanized iron.
291. Wire, jumper.
292. Wire, maconite.
293. Wire, mild steel, galvanized.
294. Wire, steel, spring.
295. Wire, wove, galvanized iron.
296. Wrenches, sliding.

C. *Contracts entered into by the Controller  
of Purchase, Bombay.*

TEXTILES STORES AND LEATHER.

1. Cloth, blue.
2. Cloth, long, bleached and unbleached.
3. Coconut husks.
4. Coir yarn, malabar, thick and thin.
5. Cotton balls.
6. Kapas.
7. Serge, blue.
8. Suits, drill, white, uniform.
9. Suits, serge, uniform.

ENGINEERING AND MISCELLANEOUS STORES.

10. Bees-wax.

ENGINEERS AND MISCELLANEOUS  
STORES—*contd.*

11. Blades for fans, of sizes.
  12. Blocks, rubbing.
  13. Bolts, mild steel, of sizes.
  14. Bolts, mushroom head, of sizes.
  15. Brooms, Goa, large.
  16. Brushes, of sizes.
  17. Buckets, galvanized iron.
  18. Camphor, Japan.
  19. Cartridge, Z type, of sizes.
  20. Cells, unit, Ever ready.
  21. Charcoal.
  22. Clocks.
  23. Files, of sizes.
  24. Guards and stay tubes for fans.
  25. Nails, wire, iron, of sizes.
  26. Nuts, mild steel, of sizes.
  27. Nuts, mushroom head, of sizes.
  28. Oil, B. O. C. No. 4.
  29. Parsonia and thinner.
  30. Paste, filling.
  31. Powder, plate.
  32. Rounds, mild steel, 2½" dia.
  33. Rounds, mild steel, stainless.
  34. Screws, wood, iron and brass, counter-sunk head, of sizes.
  35. Screws, wood, iron and brass, round head, of sizes.
  36. Sheets, expanded metal, of sizes.
  37. Sheets, rubber, of sizes.
  38. Squares, mild steel, 4".
  39. Steam fittings, brass and gun metal, of sizes.
  40. Time pieces.
  41. Washers, mild steel.
  42. Water fittings, brass and gun metal, of sizes.
  43. Wire, copper, pure, round, of sizes.
  44. Wire, steel, binding, tinned.
- D. *Contracts entered into by the Controller  
of Purchase, Karachi.*
1. Asbestos boiler door joints.
  2. Bolts and nuts hex. and washers, mild steel.

ENGINEERS AND MISCELLANEOUS  
STORES—*contd.*

3. Bolts tower, brass and iron.
4. Bolts door, iron Japanned and Brass.
5. Blades, hacksaw.
6. Brushes, paint.
7. Clamps ' U ' bolt.
8. Cocks, stop, G. I. and brass.
9. Cocks, bib, brass.
10. Crucibles.
11. Cups, grease.
12. Cloth, emery.
13. Files of sorts.

ENGINEERS AND MISCELLANEOUS  
STORES—*contd.*

14. Glass panes, plain and frosted.
15. Hinges, butt, W. I. and brass.
16. Nails, iron, wire.
17. Rivets, M. S.
18. Sand paper.
19. Screws, wood, brass and iron.
20. Spanners, S. E. and D. E.
21. Soda ash and soda caustic.
22. Thimbles, G. I.
23. Tubes, copper.
24. Valves, wheel, G. M.

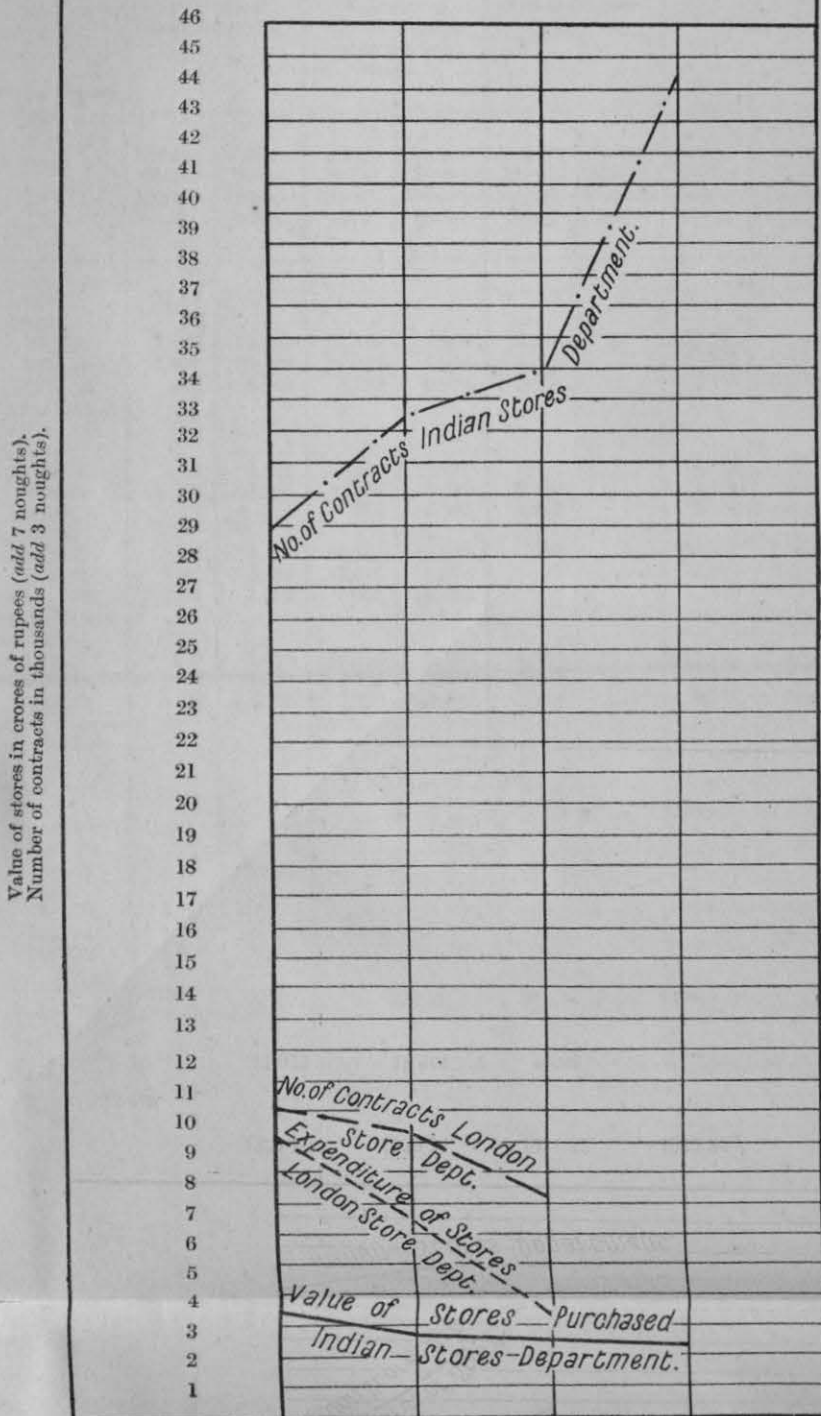
Date	Description	Amount	Date	Description	Amount
1890	Jan 1				
	Jan 2				
	Jan 3				
	Jan 4				
	Jan 5				
	Jan 6				
	Jan 7				
	Jan 8				
	Jan 9				
	Jan 10				
	Jan 11				
	Jan 12				
	Jan 13				
	Jan 14				
	Jan 15				
	Jan 16				
	Jan 17				
	Jan 18				
	Jan 19				
	Jan 20				
	Jan 21				
	Jan 22				
	Jan 23				
	Jan 24				
	Jan 25				
	Jan 26				
	Jan 27				
	Jan 28				
	Jan 29				
	Jan 30				
	Jan 31				

## APPENDIX IX.

VALUE OF STORES PURCHASED AND NUMBER OF CONTRACTS PLACED BY THE LONDON AND INDIAN STORES DEPARTMENTS.

(Vide paragraph 33 of the report.)

The London Stores Department figures represent expenditure on stores and freight converted into Indian currency at a uniform rate of 1s. 6d. to the rupee. The Indian Stores Department figures represent the value of contracts placed.



	1929-30.	1930-31.	1931-32.	1932-33
<i>No. of contracts.</i>				
London Store Department.	11,053	10,257	8,096	—
Indian Stores Department.	29,767	33,311	34,928	44,045
<i>Value in thousands of Rupees.</i>				
London Store Department.	1,00,943	75,277	40,218	—
Indian Stores Department.	42,326	37,682	36,000	33,090

## APPENDIX IX

VALUE OF STONE PRODUCTS AND FUELS BY COUNTY, 1900-1910

(This graph is of the same type as that on page 69.)

The graph shows the value of stone products and fuels by county for the years 1900-1910. The value is shown in thousands of dollars. The graph shows a general increase in value over the period, with some fluctuations. The highest values are shown for the counties of Adams, Boone, and Hancock.

1900  
1901  
1902  
1903  
1904  
1905  
1906  
1907  
1908  
1909  
1910

Admission to the State of West Virginia  
and the State of Maryland in the year 1900



## APPENDIX X.

Comparative statement of purchases made by the London and Indian Stores Department.

(The figures are in thousands of rupees.)

(Vide paragraph 33 of the Report.)

Indenting Departments.	Textiles and Leather stores.		Engineering, Hardware and miscellaneous stores.		Other classes of stores. (a)		Total.	
	London Stores Department.	Indian Stores Department.	London Stores Department.	Indian Stores Department.	London Stores Department.	Indian Stores Department.	London Stores Department.	Indian Stores Department.
1. Central Departments.—								
Army—								
1929-30	3,567	4,492	23,310	7,400	3,576	..	30,453	11,892
1930-31	3,640	3,494	16,028	7,034	5,719	..	25,387	10,528
1931-32	978	6,968	6,723	6,855	2,828	..	10,529	13,823
2. Central Departments.—								
Civil—								
1929-30	63	1,402	1,208	5,417	3,180	..	4,451	6,819
1930-31	18	1,205	976	6,020	2,310	..	3,304	7,225
1931-32	7	816	787	3,007	1,252	..	2,046	3,823
3. Railways.—								
1929-30	20	4,117	24,253	10,929	380	..	24,653	15,046
1930-31	37	3,824	13,147	8,974	127	..	13,311	12,798
1931-32	4	1,692	307	10,922	2	..	313	12,614
4. Provincial Governments.—								
1929-30	140	1,319	16,186	6,123	1,366	..	17,692	7,442
1930-31	72	1,311	4,183	4,938	1,193	..	5,448	6,249
1931-32	98	1,138	7,720	4,224	858	..	8,676	5,362
5. Indian States, Foreign Governments and Quasi-Public bodies.—								
1929-30	..	6	..	1,721	..	..	..	1,727
1930-31	..	3	..	880	..	..	..	883
1931-32	..	1	..	377	..	..	..	378
Total—								
1929-30	3,790	11,336	64,957	31,590	8,502	..	77,249	42,926
1930-31	3,767	9,837	34,334	27,846	9,349	..	47,450	37,683
1931-32	1,087	10,615	15,537	25,385	4,940	..	21,564	36,000

N.B.—The figures of the India Store Department, London, have been converted at the rate of 1s. 6d.=Re. 1/-.

(a) Stores not dealt with by the Indian Stores Department, e.g., Medical stores, munitions, stationery and printing, stamps, currency, foodstuffs, etc.

## APPENDIX XI.

List of specifications framed by the Indian Stores Department current at the end of the year 1932-33.

(Vide paragraphs 3 and 36 of the Report.)

## INDEX.

Section No.	Name of stores.		Classification reference.
	Main head.	Sub-head.	
1	Bridgework .. ..	....	A.
2	Engineer's plant (excluding petty tools).	....	B.
3	Workshop machinery and heavy tools.	....	C.
4	Ballast and permanent-way materials.	....	D.
5	Rolling stock .. ..	....	E.
6	Station materials and fencing ..	....	F.
7	Tools and stores .. ..	(a) Tools .. ..	G/Tools.
		(b) Stores—	
		(i) Chemicals .. ..	G/Chemicals.
		(ii) Lamps and lamp fittings ..	G/Lamps.
		(iii) Leather and India rubber goods .. ..	G/Leather.
		(iv) Metals .. ..	G/Metals.
		(v) Miscellaneous .. ..	G/Miscellaneous.
		(vi) Painters' stores (oils and paints) .. ..	G/O. P.
		(vii) Timber .. ..	G/Timber.
		(viii) Hardware, copper, tin and zinc ware .. ..	G/Ware.
		(ix) Waterworks stores .. ..	G/W. W.
		(x) Building materials .. ..	G/Buildings.
		(xi) Cloth, clothing and equipment .. ..	G/Textiles.
		(xii) Stationery .. ..	G/Stationery.
		(xiii) Drawing, mathematical and surveying instruments .. ..	G/Instruments.
		(xiv) Printing presses and materials .. ..	G/Prints.
		(xv) Sanitary Stores .. ..	G/Sanitary.
		(xvi) Fuel .. ..	G/Fuel.
		(xvii) Furniture .. ..	G/Furniture.
8	Electrical plant and materials	....	H.
9	Power and industrial plant ..	....	P. I.

*List of Indian Stores Department General Specifications Current at the end of the year  
1932-33.*

Basic number.		Current edition.
<b>BRIDGEWORK A.</b>		
A-33	Steel work .. .. .	A-33 J
A-34	Steel sheet piling with clutch (Joist pattern) ..	A-34 C†
A-40	Bridgework .. .. .	A-40 D
A-48	Tank and staging .. .. .	A-48 E†.
A-49	Steel welded tanks with staging welded or rivetted .. .. .	A-49 A†
A-52	Aeroplane hanger .. .. .	A-52
<b>ENGINEERS PLANT B.</b>		
B-45	Vertical boilers .. .. .	B-45 B†
B-50	Locomultitubular boiler .. .. .	B-50 D†
B-51	Portable hand 5-ton operated crane for 5'-6" gauge railway track .. .. .	B-51
B-52	Scotch hand derrick crane constructed of steel	B-52
B-53	Head operated overhead travelling and traversing crane .. .. .	B-53 B†
<b>WORKSHOP MACHINERY AND HEAVY TOOLS. C.</b>		
C-29	Machine tools .. .. .	C-29 B†.
<b>BALLAST AND PERMANENT WAY MATERIALS. D.</b>		
D-1	Steelwork for light railway track for construction work .. .. .	D-1 D†.
D-2	Tip trucks for 1'-6", 2'-0" and 2'-6" gauge railway contractors type .. .. .	D-2 C
D-6	Built-up points and crossings complete with wing rails, lever boxes and all other fittings .. .. .	D-6
D-15	Steel fishbolts and nuts .. .. .	D-15
D-16	Steel dog spikes .. .. .	D-16
D-17	Steel round spikes for rail chairs .. .. .	D-17
D-18	Steel screw spikes for permanent way .. .. .	D-18
<b>ROLLING STOCK E.</b>		
E-28	Weigh-bridge .. .. .	E-28
E-29	Engine turntable .. .. .	E-29 A
E-32	Steam locomotive crane .. .. .	E-32
E-37	Laminated springs .. .. .	E-37 B
E-38	Cast steel wheels with axles 2'-6" gauge .. .. .	E-38
E-42	M. S. rivets .. .. .	E-42 D
E-47	M. S. bolts, nuts and washers, black and galvanized .. .. .	E-47 B

Basic number.

Current edition.

ROLLING STOCK. E.—*contd.*

E-48	Cast steel wheels and axles for light tip trucks and unimportant works .. .. .	E-48
E-49	Cast iron superheater headers for locos, for railways .. .. .	E-49 A
E-50	Steel tyres for locomotives, tenders, carriages and wagons .. .. .	E-50 B
E-53	Axle boxes, cast steel for railway rolling stock ..	E-53
E-54	Pulley block for wire and manilla rope .. ..	E-54
E-55	Vacuum Gauge 6" Single .. .. .	E-55

## TOOLS. G.

G/Tools-1	Tools for earthwork, etc. (picks and beaters, kodalies, powrahs, mamooties, or hoes, sledge and other hammers, jumper and drill steel) .. .. .	G/Tools-1
" 2	Anvils .. .. .	" 2
" 3	Shovels .. .. .	" 3A†

## CHEMICALS. G.

G/Chemicals-9	Nitric acid, commercial .. .. .	G/Chemicals-9 B†
" 11	Hydrochloric acid, commercial .. .. .	" 11 A†
" 12	Hydrochloric acid, pure .. .. .	" 12 A†
" 14	Sulphuric acid, concentrated, for accumulators ..	" 14 A†
" 15	Sulphuric acid, commercial .. .. .	" 15 A†
" 16	Alumino ferric .. .. .	" 16 A†
" 17	Sulphate of alumina .. .. .	" 17 A†
" 18	Copper sulphate .. .. .	" 18 C†
" 19	Potassium cyanide for surface hardening of tools ..	" 19 A†
" 20	Acetylene gas (dissolved) for industrial purposes .. .. .	" 20
" 22	Chlorine of lime (bleaching powder) .. .. .	" 22 A†
" 23	Calcium carbide .. .. .	" 23
" 24	Voltoids (Ammonium Chloride) .. .. .	" 24*
" 25	Carbonic acid gas (Carbon dioxide) .. .. .	" 25*
" 26	Caustic Soda .. .. .	" 26*

## LEATHER AND INDIA RUBBER GOODS G.

G/Leather-39	Solid tyres for cycles .. .. .	G/Leather-39 A
" 40	Solid tyres and tyre bands for tractors, lorries, etc. .. .. .	" 40 D†
" 41	Pneumatic tyres, and outer covers and inner tubes, for motor cycles, cars and lorries ..	" 41 E†
" 42	Pneumatic tyres, outer covers and inner tubes, for cycles .. .. .	" 42 A
" 43	Leather, buffalo and cow and sheep skin .. ..	" 43 A†
" 46	Leather belting .. .. .	" 46

Basic number.		Current edition.
LEATHER AND INDIA RUBBER GOODS G.— <i>contd.</i>		
G/Leather-48	Boots, ammunition, No. 5 quality .. .. .	G/Leather-48 B†
" 59	Beltings, leather .. .. .	" 59*
METALS. G.		
G/Metals- 9	Manganese steel castings .. .. .	G/Metals- 9
" 16	Mild steel rods for ferro-concrete work .. .. .	" 16 E†
" 17	Case hardening and welding quality steel bars and billets .. .. .	" 17
" 40	Tinned plates .. .. .	" 40 A
" 41	Sheets, mild steel, galvanised, flat, corrugated, and ridging .. .. .	" 41 F†
" 45	Sheets, milled, lead .. .. .	" 45 A
" 46	Pig, lead .. .. .	" 46 A†
" 48	Pig, iron .. .. .	" 48
" 52	Copper alloy for carriage and wagon axle-box brasses .. .. .	" 52
" 53	Soft solder .. .. .	" 53 A
" 54	Tin sticks for tinning, cooking pots and similar purposes .. .. .	" 54 A
" 55	Tin in ingots .. .. .	" 55
" 56	Copper in ingots .. .. .	" 56
" 57	Antifriction metal for locomotive, carriage and wagon purposes .. .. .	" 57 A
" 58	Copper sheets, annealed for spinning or cold working .. .. .	" 58 A
" 59	Brass sheets, annealed, for spinning or cold working .. .. .	" 59 A
" 60	Zinc sheets .. .. .	" 60
" 61	Bearing metal for axles of railway rolling stocks .. .. .	" 61
" 62	Brazing solder .. .. .	" 62
" 63	Silver solder .. .. .	" 63
" 67	Balls and rollers, steel, and ball and roller bearings .. .. .	" 67
" 68	Brass bars for screwing and machining .. .. .	" 68
" 69	High tensile brass bars and sections, grade 'B', 35 tons per sq. in. quality .. .. .	" 69
" 70	High tensile brass bars and sections, grade 'A', 30 tons per sq. in. quality .. .. .	" 70
" 71	Antimony ingot .. .. .	" 71 A
MISCELLANEOUS G.		
G/Misc.- 1	Padlocks and locks, box, drawers, etc. .. .. .	G/Misc.-1-E
" 15	Safes, burglar resisting, non-fire resisting .. .. .	" 15-A†
" 25	Buttons, hollow, and badges, brass, gilding metal, nickel silver, german silver, white metal, silver and 'bronzed.' .. .. .	" 25-A†

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MISCELLANEOUS. G.—*contd.*

G/Misc.-30	Hand chemical fire extinguisher	.. ..	G/Misc.-30-A
.. 32	Lead seals for general purposes	.. ..	.. 32-D†
.. 35	Liquid metal polish	.. ..	.. 35-A
.. 36	Lead yarn for caulking	.. ..	.. 36-A†
.. 37	Buckets, iron, galvanised	.. ..	.. 37-C†
.. 38	Fire bricks	.. ..	.. 38-A
.. 39	Fire clay	.. ..	.. 39
.. 40	Candles, wax, long	.. ..	.. 40-A†
.. 41	Candles, wax, carriage	.. ..	.. 41-A†
.. 48	Roofing felt	.. ..	.. 48
.. 51	Enamelled sheet steel gauges	.. ..	.. 51*
.. 52	Feeders, oil, spring (one pint and half pint capacity)	.. ..	.. 52*
.. 55	Fire extinguishers, foam type	.. ..	.. 55*
.. 56	Fire extinguishers, soda acid type	.. ..	.. 56*
.. 57	Hose, unlined, flax canvas, fire	.. ..	.. 57*
.. 58	Hose, unlined, flax canvas, water delivery for ordinary purposes	.. ..	.. 58*
.. 59	Hose, unlined, flax canvas, water column	.. ..	.. 59*
.. 69	Hose, India rubber, compressed air delivery	.. ..	.. 69*
.. 70	Hose, India rubber, cold water for ordinary purposes	.. ..	.. 70*

## PAINTS, PAINTER'S MATERIALS AND OILS. G.

G/O. P.- 1	Castor seed	.. ..	G/O. P.-1 A†
.. 3	Shellac	.. ..	.. 3 C†
.. 4	Spirits, denatured, methylated	.. ..	.. 4 B†
.. 13	Oil, air-craft, medium	.. ..	.. 13
.. 14	Oil, aircart, heavy	.. ..	.. 14
.. 20	Oil, lubricating, axle, for use during hot weather	.. ..	.. 20 A
.. 21	Oil, lubricating, axle, for use during cold weather	.. ..	.. 21 A
.. 33	Creosote	.. ..	.. 33 C†
.. 38	Petrol aviation	.. ..	.. 38
.. 60	Soap, hard	.. ..	.. 60 C†
.. 61	Soap, soft	.. ..	.. 61 C†
.. 64	Tar coal for road making	.. ..	.. 64 A†
.. 65	Crude tar	.. ..	.. 65 A†
.. 66	Pitch, coal tar, medium	.. ..	.. 66 A†
.. 68	Oxidized (blown) petroleum bitumen	.. ..	.. 68 A†
.. 69	Steam refined petroleum bitumen	.. ..	.. 69 A†
.. 95	} Paints and painter's materials. (Pamphlet)	.. ..	.. 95
to 150		to	.. 150
.. 157	Goldsize	.. ..	.. 157 A
.. 158	Gold leaf	.. ..	.. 158

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Current edition.

## OILS, FUEL, LUBRICANTS, ETC.

Basic number.		Current edition.
G/O. P. 301	Oil, spindle, extra light .. .. .	G/O. P. 301
" 302	Oil, spindle, light .. .. .	" 302
" 303	Oil, spindle, for electric dynamos .. .. .	" 303
" 304	Oil, machinery, light .. .. .	" 304
" 305	Oil, machinery, medium, for ordinary machinery .. .. .	" 305
" 306	Oil, engine, light .. .. .	" 306
" 307	Oil, engine, medium .. .. .	" 307
" 308	Oil, engine, heavy .. .. .	" 308
" 311	Oil, internal-combustion, engine, light .. .. .	" 311
" 312	Oil, internal-combustion, engine, medium .. .. .	" 312
" 313	Oil, internal-combustion, engine, heavy .. .. .	" 313
" 314	Oil, internal combustion, engine, extra heavy .. .. .	" 314
" 321	Oil, turbine, light .. .. .	" 321
" 322	Oil, crank-chamber .. .. .	" 322
" 323	Oil, crank-chamber, heavy .. .. .	" 323
" 324	Oil, compressor, compounded .. .. .	" 324
" 331	Oil, cylinder, pure mineral, ordinary .. .. .	" 331
" 332	Oil, cylinder, compounded, ordinary .. .. .	" 332
" 333	Oil, cylinder, pure mineral, superheat .. .. .	" 333
" 334	Oil, cylinder, compounded, superheat .. .. .	" 334
" 335	Oil, cylinder, filtered, pure mineral .. .. .	" 335
" 336	Oil, cylinder, filtered, compounded .. .. .	" 336
" 341	Oil, non-freezing, extra light .. .. .	" 341
" 342	Oil, non-freezing, for use with refrigerators .. .. .	" 342
" 343	Oil, lubricating, common dark .. .. .	" 343
" 344	Oil, lubricating, axle .. .. .	" 344
" 345	Oil, gear, extra heavy .. .. .	" 345
" 351	Petrol .. .. .	" 351
" 352	Kerosene, first quality, for wick lamps .. .. .	" 352
" 353	Kerosene, second quality .. .. .	" 353
" 354	Kerosene, third quality .. .. .	" 354
" 355	Oil fuel, first quality .. .. .	" 355
" 356	Oil fuel, second quality .. .. .	" 356
" 357	Oil, mineral, colza .. .. .	" 357
" 361	Oil, transformer and switch .. .. .	" 361
" 362	Oil, sealing .. .. .	" 362
" 371	Oil, castor .. .. .	" 371
" 372	Oil, cocoanut .. .. .	" 372
" 373	Oil, mustard (rape) .. .. .	" 373
" 374	Oil, olive .. .. .	" 374

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Current edition.

OILS, FUEL, LUBRICANTS, ETC.—*contd.*

G/O. P.	375	Oil, neat's foot	..	..	..	..	G/O. P. 375
"	376	Oil, whale	..	..	..	..	" 376
"	377	Tallow	..	..	..	..	" 377
"	381	Grease, cup	..	..	..	..	" 381
"	382	Grease, graphite	..	..	..	..	" 382
"	383	Mineral jelly	..	..	..	..	" 383
"	395	Temporary rust preventive	..	..	..	..	" 395
"	397	Grease for driving journals and side rod in which <i>hard grease lubrication is adopted</i>	..	..	..	..	" 397*

## TIMBERS. G.

G/Timbers-30		Deodar sleepers	..	..	..	..	G/Timbers 30 A
"	34	Tea, squares	..	..	..	..	" 34 A
"	35	Teak scantlings	..	..	..	..	" 35
"	36	Chir or dhup squares ( <i>pinus longifolia</i> )	..	..	..	..	" 36 A
"	37	Toon squares or scantlings ( <i>cedrela toon</i> )	..	..	..	..	" 37

## HARDWARE, COPPER, TIN AND ZINC WARE.

G/Ware-30		Wire, ordinary steel, black and galvanized	..	..	..	..	G/Ware-30 C†
"	31	Iron and steel hoops	..	..	..	..	" 31 B†
"	32	Barbed wire	..	..	..	..	" 32 D†
"	33	Wire, ordinary steel, round, either black or galvanized, for making mattress cases for boulder filling for flood protection or similar work	..	..	..	..	" 33 C†
"	35	Brass wire gauge, mosquito proof	..	..	..	..	" 35 A
"	36	Wire, galvanized, strand, fencing, (3 ply and 7 ply)	..	..	..	..	" 36 A
"	37	Short link chains (iron welded) for all services except marine	..	..	..	..	" 37
"	38	Small ropes or cords of steel wire	..	..	..	..	" 38
"	39	Ropes, steel wire	..	..	..	..	" 39*

## WATERWORKS STORES. G/W/W.

G/W/W-27		Salt glazed earthenware pipes	..	..	..	..	G/W/W-27 B
"	34	Mild steel pipes and specials for water main and hydraulic power	..	..	..	..	" 34
"	35	Sluice valves	..	..	..	..	" 35 B†
"	43	Lead pipes for water	..	..	..	..	" 43 B
"	44	W. I. or M. S. pipes and fittings for gas, water and steam	..	..	..	..	" 44 B†

## ELECTRICAL PLANT AND MATERIALS. H.

H-23		Wall plugs and sockets, two pin, hand shield, side entry and face entry pattern	..	..	..	..	H-23 A†
H-24		Wall plugs and sockets, three pin, hand shield, side entry and face entry pattern (Two pin and earth type)	..	..	..	..	H-24 A†



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ELECTRICAL PLANT AND MATERIALS. H.—*contd.*

H-25	Plugs and sockets, reversible and non-reversible protected type, two-pin, for circuits up to 250 volts between poles with earthing connection	H-25 A†
H-26	Switches, tumbler, quick make and quick break (for use on circuits up to 250 volts) .. ..	H-26 A†
H-27	Cable, electric, dry core, paper insulated, telegraph, multiple, twin, telephone and composite .. .. .	H-27 A†
H-28	Cable, electric, dry core, paper insulated, telephone .. .. .	H-28 A†
H-29	Jointing sleeves, copper and bronze, for telegraph and telephone purposes .. .. .	H-29 A†
H-34	Insulators, porcelain, pin or shackle type, for low and medium tension electric transmission line .. .. .	H-34 A†
H-42	Condensors, metal cased, 1st grade, for telegraphs and telephones .. .. .	H-42
H-45	Poles, steel, tubular type, for electric power transmission .. .. .	H-45
H-46	Electrical flexible cords, single conductors, etc. ..	H-46 B
H-48	Fans, ceiling, alternating current, with regulators	H-48 F†
H-50	Bridge-megger testing set .. .. .	H-50 A†
H-51	Control panel direct current motor, iron clad ..	H-51 A
H-53	Lamp, carbon filament, electric .. ..	H-53
H-55	Fans, ceiling, and regulators (D. C.) .. ..	H-55 F†
H-56	Wire, copper, hard drawn, bare .. ..	H-56 D†
H-57	Cable, electric, single, V. I. R. .. ..	H-57 A
H-58	Wood casing and capping for electric wiring ..	H-58 B†
H-60	Wire, copper, hard drawn, for telegraph or telephones .. .. .	H-60 B†
H-64	Fans, electric, desk or pedestal, D. C. .. ..	H-64 C†
H-65	Fans, electric, desk or pedestal, A. C. .. ..	H-65 C†
H-67	Single core, V. I. R. flame proof cable, and fire resisting cable (250 volts 600 megohm grade) .. .. .	H-67 A
H-68	Two and four core twin and quad twisted rubber insulated lead covered and armoured under-water telegraph cable .. .. .	H-68 C†
H-69	Single core V. I. R. tropical grade insulated cable (250 volts, 600 megohm grade) .. ..	H-69
H-70	Cords, instrument (tropical finish) .. ..	H-70 A†
H-71	Wire, copper, silk covered .. ..	H-71 B†
H-72	Wire, copper, cotton covered .. ..	H-72 B†
H-73	Four core, rubber insulated, lead covered and under-water telegraph cable .. ..	H-73 A†

Basic number.

Current edition.

## MISCELLANEOUS. G.

H-77	Multicore telephone switchboard cable (tropical pattern with enamelled conductors) ..	H-77 A†
H-78	Lamps, tungsten filament, electric .. ..	H-78
H-79	Cell, Leclanche, sack type sizes 1 and 2 ..	H-79 A
H-80	Wire, steel, 7 strand, 450 lbs. per mile .. ..	H-80 A†
H-81	Internal wiring of buildings .. ..	H-81 A†
H-82	Wood casing and capping type for internal wiring of buildings .. ..	H-82 A†
H-83	Galvanized iron wires for telegraphs, telephones and cables .. ..	H-83
H-87	300-ampere hours capacity broad gauge train lighting alkaline type batteries .. ..	H-87 B†
H-90	220-ampere hours capacity broad gauge train lighting lead acid type batteries .. ..	H-90*
H-94	Glass battery jars .. ..	H-94*

## POWER AND INDUSTRIAL PLANT. P. I.

P. I. 19	Dragline excavator, light weight, oil engine operated .. ..	P. I. 19 B
P. I. 20	Dragline excavator, light weight, steam operated, coal firing .. ..	P. I. 20 A
P. I. 26	Jolly boat .. ..	P. I. 26
P. I. 35	Dragline excavator, light weight, steam operated, coal or oil firing .. ..	P. I. 35 B
P. I. 36	Electric hoists or winches .. ..	P. I. 36
P. I. 37	Dredgers (grab type) .. ..	P. I. 37
P. I. 38	Petrol paraffin engine .. ..	P. I. 38 C
P. I. 39	Belting for power drive .. ..	P. I. 39 A
P. I. 40	Motor boat .. ..	P. I. 40 A
P. I. 42	Steam pile driving plant .. ..	P. I. 42 A†
P. I. 43	Crude oil engine .. ..	P. I. 43 J†
P. I. 45	Dragline excavator, medium weight, steam operated, coal or oil firing .. ..	P. I. 45 B
P. I. 60	Centrifugal pumps .. ..	P. I. 60
P. I. 61	Stone breakers, etc., oil engine driven .. ..	P. I. 61 A†
P. I. 62	Mortar grinding mill .. ..	P. I. 62 A†
P. I. 65	Dragline excavator, special light weight, steam operated, coal or oil firing. .. ..	P. I. 65 B
P. I. 74	D. C. generators and motors .. ..	P. I. 74 A
P. I. 76	Electric power transformers .. ..	P. I. 76
P. I. 77	Alternators .. ..	P. I. 77 B
P. I. 81	D. C. switchboard .. ..	P. I. 81 C†
P. I. 82	D. C. generator, 3 wire type and static balancers	P. I. 82

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POWER AND INDUSTRIAL PLANT. P. I.—*contd.*

P. I. 95	Electrically operated, overhead travelling and traversing crane. . . . .	P. I. 95
P. I. 106	Road roller, steam operated, coal or wood fired . .	P. I. 106 G‡
P. I. 114	Supply of plant and machinery and their erection at site . . . . .	P. I. 114 D‡
P. I. 116	Supply of plant and machinery . . . . .	P. I. 116 A‡

## TEXTILES.

G/Tex/C-	1	Cotton twine 5/10s. . . . .	G/Tex/C-1
"	4	Cotton canvas, brown . . . . .	" 4
"	6	Boy messenger's bag . . . . .	" 6
"	7	Sheets, ground . . . . .	" 7
"	8	Paulins, cotton . . . . .	" 8
"	10	Bags, kit . . . . .	" 10 B‡
"	11	Bags, ration, waterproof . . . . .	" 11 A
"	13	Capes, waterproof, Indian, with hood . . . . .	" 13
"	14	Capes, waterproof, Burma . . . . .	" 14 A
"	15	Newar, grey . . . . .	" 15 B‡
"	16	Putties, cotton, of all shades . . . . .	" 16 D‡
"	24	Cotton yarn, grey . . . . .	" 24 D‡
"	28	Duster, cotton, hemmed . . . . .	" 28 C‡
"	30	Sheeting, unbleached . . . . .	" 30 B
"	33	Thread, cotton, sewing, of various sizes and colour . . . . .	" 33 D‡
"	34	Muslin (bleached) . . . . .	" 34
"	36	Bandage cloth (bleached) . . . . .	" 36 E‡
"	37	Black alpaca cloth . . . . .	" 37 B‡
"	39	Black paramatta cloth . . . . .	" 39 C‡
"	40	Twill, khaki . . . . .	" 40 D‡
"	42	Jean, cotton, bleached . . . . .	" 42
"	43	Lining cloths, cotton, satin . . . . .	" 43 D
"	45	Canvas, cotton, khaki proofed, for hoods . . . . .	" 45 F‡
"	48	Jaconet cloth, grey . . . . .	" 48
"	49	Waste, cotton, white, for axle box packing . . . . .	" 49 C
"	50	Waste, cotton, white No. 1 B . . . . .	" 50
"	51	Waste, cotton, coloured, for cleaning machinery . . . . .	" 51 A
"	52	Waste, cotton, white or coloured, for cleaning ordinary machinery . . . . .	" 52
"	53	Drill cotton, dyed, heavy, medium or light qualities . . . . .	" 53 G‡
"	54	Bleached drill, heavy, medium and light qualities . . . . .	" 54 E‡
"	55	Khaki drill, heavy, medium and light qualities . . . . .	" 55 D‡

Basic number.

Current edition.

TEXTILES—*contd.*

G/Tex/C-63		G/Tex/C-63
	Webbing cotton khaki .. ..	
" 64	Kullahs .. ..	" 64
" 65	Dosuti, bleached .. ..	" 65 A
" 67	Long cloth, bleached .. ..	" 67
" 68	Cloth, table, bleached, cotton .. ..	" 68 C‡
" 69	Sheeting, unbleached .. ..	" 69 A
" 70	Sheets, bed, unbleached .. ..	" 70 C‡
" 71	Lungies with headings of gold thread .. ..	" 71
" 73	Lungies, ordinary .. ..	" 73 B
" 75	Napkins, cotton, table, bleached .. ..	" 75 B‡
" 78	Gabardine cotton cloth, blue black shade .. ..	" 78 B‡
" 81	Pliable sheets of cotton canvas .. ..	" 81
" 83	Drill, cotton, grey .. ..	" 83 B‡
" 85	Towels, hand .. ..	" 85 C‡
" 87	Towels, bath, turkish .. ..	" 87 B‡
" 88	Tape, cotton, white, unbleached .. ..	" 88
" 89	Umbrellas .. ..	" 89
" 91	Capes with hood, waterproof .. ..	" 91 A
" 92	Canvas, cotton, green, proofed .. ..	" 92 B‡
" 93	Webbing, white and coloured .. ..	" 93 A
" 94	Cloth, ticking, grey .. ..	" 94 B‡
" 96	Coats, waterproof .. ..	" 96 A
" 98	Sheets, bed, bleached .. ..	" 98
" 99	Bags for carrying air mails .. ..	" 99
" 101	Jerseys, cotton, grey .. ..	" 101 D‡
" 102	Cloth, Bedford cord, khaki .. ..	" 102
" 105	Bleached muslin, white (cambric) .. ..	" 105
" 108	Curtains, mosquito .. ..	" 108
" 109	Stocking, cotton, dyed .. ..	" 109 A‡
" 110	Kharooa cloth .. ..	" 110
" 111	Canvas, cotton, white .. ..	" 111 B‡
" 112	Cotton canvas, khaki, waterproofed, for hoods (1st quality) .. ..	" 112 A‡
" 114	Wick, cotton, kerosene oil .. ..	" 114 A‡
" 124	Waste, cotton, white, superior, for axle box packing .. ..	" 124 B‡
" 125	Waterproof cape (ground sheet) with detachable hood .. ..	" 125 B‡
" 127	Wick, cotton, castor oil .. ..	" 127 B‡
" 129	Sponge cloth .. ..	" 122 B‡

Basic number.

Current edition.

TEXTILES—*contd.*

Basic number.		Current edition.
G/Tex/C-130	Twill, cotton, striped (bleached) .. .. .	G/Tex/C-130 A†
" 131	Cloth, cotton, waterproof, khaki, double fabric, interlined with rubber .. .. .	" 131 A†
" 132	Coir yarn 2 ply .. .. .	" 132
" 139	Netting, cotton, mosquito and sand fly .. .. .	" 139 B†
" 140	Cloth, cotton, plain grey .. .. .	" 140 B†
" 141	Durries .. .. .	" 141 A†
" 142	Gauze, absorbent, bleached .. .. .	" 142 A†
" 143	Gauze, absorbent, bleached, for first field dressing .. .. .	" 143 A†
" 144	Fringes, cotton, dyed .. .. .	" 144
" 145	Flanelette cloth for lining .. .. .	" 145 A†
" 146	Pugri cloths .. .. .	" 146 A†
" 149	Cotton, unginne (kapas) .. .. .	" 149*
" 150	Sheets, cotton, bleached (linen finished) .. .. .	" 150 A†
G/Tex/F-1	Superintendent's camp bag, flax canvas, single .. .. .	G/Tex/F-1
" 2	Superintendent's camp bag, flax canvas, double .. .. .	" 2
" 4	Bags, nose .. .. .	" 4 B
" 5	Buckets, canvas, for ponies .. .. .	" 5
" 6	Planter's bag with locking arrangements (unproofed) and planter's bag (proofed) and with locking arrangements .. .. .	" 6 B
" 7	Canvas, flax .. .. .	" 7 A
" 8	Threads and twines, sewing linen, for upholstery work .. .. .	" 8 E†
" 34	Canvas, French .. .. .	" 34 A
" 36	Canvas, flax 'C' grade .. .. .	" 36 A†
" 37	Canvas, white, unproof, flax hemp or all hemp, for carriage cushions and seats .. .. .	" 37 A
" 38	Canvas, staying .. .. .	" 38
" 45	Dowlas 54" wide .. .. .	" 45
" 46	Paulins .. .. .	" 46 E
" 49	Tape, stay, linen .. .. .	" 49A†
G/Tex/H-1	Head and heel, ropes, manilla .. .. .	G/Tex/H-1 B†
" 2	Cordages line, hemp .. .. .	" 2
" 3	Hemp, twine, English and Country .. .. .	" 3
" 6	Cash bags, tat putties .. .. .	" 6
" 7	Rope, manilla {special ordinary.} .. .. .	" 7 A†
G/Tex/J-1	Jute twine, 1 ply, 2 ply, 3 ply, 4 ply, 5 ply and 6 ply .. .. .	G/Tex/J. 1 A
" 12	Jute bags, unproofed for lineman's tools .. .. .	" 12 B

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TEXTILES—*contd.*

G/Tex/J-22	Flax or jute mail bags, proofed and unproofed ..	G/Tex/J-22 B
" 23	Jute paulins .. .. .	" 23 B
" 37	Jute bags, ' B Twill ', 44" × 26-1/2" ..	" 37 A†
" 38	Gunny cloth for oil pressing ..	" 38*
G/Tex/Misc.-7	Lace, gold .. .. .	G/Tex/Misc.-7
" 25	Braid, lace and fringes, gold ..	" 25
" 27	Cloth, leather, imitation ..	" 27 A
" 30	Carpets, Aixminister ..	" 30
" 41	Matting, coir .. .. .	" 41 B†
" 43	Garments, rubber, waterproof ..	" 43 A†
" 44	Stuffing materials for mattresses (coir, kopak, cotton) .. .. .	" 44*
G/Tex/T-1	General specification for tent components ..	G/Tex/T-1 A†
" 2	Swiss cottage tent, square ended ..	" 2
" 3	Hill tent .. .. .	" 3
" 4	Tehsildar's tent .. .. .	" 4
" 5	Raoti tent, single fly .. .. .	" 5
" 20	Tent necessary .. .. .	" 20 A
" 21	Miniature swiss cottage tent (round ended) ..	" 21
" 22	Indian officer's tent (double fly) ..	" 22
" 23	Kashmere tent, round ended .. .. .	" 23
" 24	Tents, square ended, forest officer, pattern ..	" 24
" 40	Servant's pals or shouldaries .. .. .	" 40
" 41	Light field service tents, 80 lbs. ..	" 41
" 42	Field officer's kabul pals .. .. .	" 42 A
" 43	General service tents .. .. .	" 43 A
" 44	Sowar pal .. .. .	" 44
" 45	Survey pal, square ended .. .. .	" 45 A
" 46	Half pal tents .. .. .	" 46 B
" 47	Mountain battery tents .. .. .	" 47
" 48	Sleeping pal .. .. .	" 48
" 49	Hudson Raoti tent .. .. .	" 49
" 50	Shooting pal (or double fly sleeping pal) with bathroom .. .. .	" 50
" 51	Tents d'abre .. .. .	" 51*
" 52	Light bath tent .. .. .	" 52*
G/Tex/W-1	Wool, black and mixed, for blankets ..	G/Tex/W-1
" 3	Drawers, woollen .. .. .	" 3 B†
" 4	Balaclava cap .. .. .	" 4 B†
" 5	Jackets, cardigan, woollen .. .. .	" 5 D†

Basic number.

Current edition.

TEXTILES—*concl.*

Basic number.		Current edition.
G/Tex/W-6	Putties, woollen, khaki or blue .. ..	G/Tex/W-6 D†
" 7	Bunting cloth, white and coloured .. ..	" 7 D†
" 8	Serge blue, medium quality and broad cloth .. ..	" 8 B
" 9	Serges of superior quality .. ..	" 9 B
" 11	Flannel, silver grey .. ..	" 11 B†
" 12	Mittens .. ..	" 12 C†
" 13	Packing woollen yarn for main motor and suspension bearings .. ..	" 13
" 16	Flannel, white .. ..	" 16 B
" 18	Serge blue for shore and sea service .. ..	" 18
" 19	Serge, khaki .. ..	" 19
" 20	Socks, woollen, blue grey .. ..	" 20 C†
" 21	Woollen yarns .. ..	" 21 D†
" 22	Serges of medium quality .. ..	" 22 B†
" 23	Broad cloth, woollen .. ..	" 23 B
" 24	Flannel, green, superior quality .. ..	" 24
" 25	Serges of various shades for lining .. ..	" 25
" 26	Flannel, Angola (union) grey .. ..	" 26
" 27	Irish Frieze for great coats .. ..	" 27 A
" 29	Blankets, saddle .. ..	" 29
" 30	Blankets, woollen, scarlet, grade 1 and 2 .. ..	" 30 C†
" 31	Blankets, woollen, ordinary .. ..	" 31 B
" 32	Blanket cloth for clothing staff of railways and civil departments .. ..	" 32 C
" 34	Yarn similar to Illingsworths Thrums for packing bearing boxes of axle generators on electric freight locomotives .. ..	" 34
" 36	Jerseys, woollen .. ..	" 36 D†
" 52	Felt .. ..	" 52 C†
" 53	Numdah, felt for saddles .. ..	" 53
" 55	Bannians, flannel, blue grey .. ..	" 55
" 56	Trimming worsted grey for use on all oil cups on locomotives .. ..	" 56 B
" 63	Cloth, great coat, woollen .. ..	" 63*
" 64	Yarn, packing, worsted, for electric locomotives .. ..	" 64*

\* Specifications framed during the year 1932-33.

† Specifications framed and revised during the year 1932-33.

‡ Specifications revised during the year 1932-33.

*List of Indian Stores Department Special Specifications current at the end of the year 1932-33.*

Basic number.		Current edition.
<b>BRIDGEWORK.</b>		
A-31	Standard mobilization steel hutting (M. W. Services) .. .. .	A-31
A-32	Steel and ironwork required by the Indian Public Works Department, Delhi, for the roofing of the Assembly, the Council of State and the Council of Princes' Chambers and Library of the New Legislative Buildings, Imperial Delhi .. .. .	A-32
A-36	Special construction quarters (portable hutting), for the Lloyd Barrage Project .. .. .	A-36
<b>ENGINEER'S PLANT.</b>		
B-48	Portable steam pumping engine equipment and hose pipe for the Bikaner Canal, Punjab .. .. .	B-48
B-49	Crane, one 7-ton Scotch hand derrick for the Irrigation Department, Punjab .. .. .	B-49
B-54	Steam boilers for M. E. S. .. .. .	B-54*
<b>BALLAST AND PERMANENT WAY.</b>		
D-3	Light railway track, turntables and trucks, for military purposes .. .. .	D-3
<b>ROLLING STOCK.</b>		
E-30	Metre gauge steam rail motor with goods truck and goods trailer truck for the Sutlej Valley Project, Punjab Public Works Department .. .. .	E-30
E-31	Steam locomotives, 2'-0" gauge, for the Sutlej Valley Project, Bikaner Canal, Punjab Public Works Department .. .. .	E-31
E-40	Steam locomotives, 2'-0" gauge, for the Sukkur Barrage Project .. .. .	E-40
<b>BUILDING.</b>		
G/Buildings-1	Ordnance Tin Tents .. .. .	G/Buildings-1*
<b>LAMPS AND LAMP FITTINGS.</b>		
G/Lamps-11	R. M. S. folding candle lantern for the Posts and Telegraphs Department .. .. .	G/Lamps-11
" 16	Brass sealing lamp for the Posts and Telegraphs Department .. .. .	" 16
" 23	Table lamps, hanging lamp and hurricane lantern, for Director-General, Posts and Telegraphs .. .. .	" 23
" 24	Incandescent hurricane or hanging lantern, petrol pressure type, for the Posts and Telegraphs Department .. .. .	" 24
<b>LEATHER AND RUBBER.</b>		
G/Leather-44	Waist, belt, leather, for P. W. D., Punjab .. .. .	G/Leather-44
" 45	Meshas .. .. .	" 45
" 47	Boots, ankle (followers) .. .. .	" 47-A



Basic number.		Current edition.
<i>LEATHER AND RUBBER—contd.</i>		
G/Leather-49	R. M. S. portfolio (G. pattern) .. .. .	G/Leather-49
" 50	Portfolio with lock, supervising officer (for P. & T. Department) .. .. .	" 50
" 51	R. M. S. leather portfolio fitted with compartments for stamps, seals, etc. .. .. .	" 51
" 52	Leather belts for G. I. P. Railway .. .. .	" 52
" 53	Derby shoes, black or brown, for E. I. Railway (Crew staff) .. .. .	" 53
" 56	Boots, ammunition, for police constables .. .. .	" 56 B†
" 57	Leather goods for Police Department .. .. .	" 57
" 58	Rubber pilot balloons for air observations for the Indian Meteorological Department .. .. .	" 58 A†

## METALS.

G/Metals-47	Antifriction metal, high grade and low grade, for the Military Engineer Services .. .. .	G/Metals-47
" 72	M. S. sheets for the Telegraph Department .. .. .	" 72

## MISCELLANEOUS.

G/Misc. 3	Kit boxes for sea service for M. E. S. .. .. .	G/Misc. 3 A
" 4	Double security bond boxes and stamp boxes for the Posts and Telegraphs Department .. .. .	" 4 A
" 4	Despatch boxes for the Postmaster General, Bombay .. .. .	" 5
" 6	Safes for the D. G. of Posts and Telegraphs .. .. .	" 6 A
" 7	Tin box for insurance seal types and tin box for stamp types for R. M. S. .. .. .	" 7 A
" 8	Lead seals for Posts and Telegraphs Department .. .. .	" 8
" 9	Clocks and time-pieces for the Posts and Telegraphs Department .. .. .	" 9 A
" 10	Tin trays to hold Rs. 1,000 and Rs. 500 for the Posts and Telegraphs Department .. .. .	" 10
" 11	Badges, brass, for the Posts and Telegraphs Department .. .. .	" 11 A
" 12	Letter box for the P. & T. Department .. .. .	" 12
" 13	Punching machine for the Posts and Telegraphs Department .. .. .	" 13
" 14	Spear head with brass bells for P. & T. Department .. .. .	" 14
" 16	Tin sheets for the Posts and Telegraphs Department .. .. .	" 16
" 17	Brush sweeping .. .. .	" 17
" 18	Brush for painting letter boxes .. .. .	" 18
" 19	Brush for cleaning stamps .. .. .	" 19 A
" 20	Wooden block for label for the Posts and Telegraphs Department .. .. .	" 20

Basic number.

Current edition.

MISCELLANEOUS—*contd.*

G/Misc. 21	Enamelled sheet, steel signboards, letter box plates, etc., for P. & T. Department .. ..	G/Misc. 21 A
" 22	Button, brass, for the Posts and Telegraphs Department .. ..	" 22 A
" 23	Tin seal holder for the Posts & Telegraphs Department. .. ..	" 23
" 26	Crumps, adjustable, proportional modules, for Irrigation Department, Punjab .. ..	" 26 B
" 33	Lead seals for the Controller of Currency .. ..	" 33
" 45	Brass padlocks, box locks, drawer or almirah locks for iron safes, and special locks, for the P. & T. Department .. ..	" 45
" 46	Scales and weights for the P. & T. Department .. ..	" 46
" 47	Fireclay for the N. W. Railway .. ..	" 47
" 49	Hoses, flax, canvas, for Railways .. ..	" 49
" 50	Hose, India Rubber, delivery, armoured, 2-1/2" bore, for E. I. Railway .. ..	" 50*

## OILS, LUBRICANT, ETC., AND PAINTER'S STORES.

G/O. P. 43	Oils for use of Government Telegraph Department .. ..	G/O. P. 43
" 67	Wood tar .. ..	" 67 A
" 152	Oil, lubricating, crank chamber, high speed steam engine No. 2, for Bengal Nagpur Railway .. ..	" 152
" 153	Kerosene Oil K-1 in bulk suitable for gas making for Bengal Nagpur Railway .. ..	" 153
" 396	Green paint, special, readymixed to E. B. Railway shade .. ..	" 396

## WATER WORKS STORES.

G/W. W. 31	Wrought iron or mild pipes for water for the Bikaner Canal .. ..	G/W. W. 31
" 51	89,000 c.ft. of rising main, specials, sluice valves, air valves, etc., from Ramgarh to Jaipur for the Water supply scheme for the Jaipur State P. W. D. .. ..	" 51 A
" 52	Distribution piping, specials, valves and accessories for the water supply scheme for Jaipur State P. W. D. .. ..	" 52
" 53	Piping specials, valves and accessories for water supply, P. W. D., New Delhi .. ..	" 53

## ELECTRICAL PLANT AND MATERIALS.

H-59	One switchboard generator panel for Ambala .. ..	H-59
H-61	Low and medium pressure, paper insulated, lead covered and steel tape armoured, 3 core and 2 core electric cables for the Indian Public Works Department, Delhi .. ..	H-61 A

Basic number.

Current edition.

ELECTRICAL PLANT AND MATERIALS—*contd.*

H-66	Composition Insulators for Posts and Telegraphs Department .. .. .	H-66 C ‡
H-74	Zinc, circular, special design, moulded for electric cells .. .. .	H-74 B ‡
H-76	Insulators, porcelain, screw pattern .. .. .	H-76 B ‡
H-88	Belting for train lighting dynamos for Indian Railways .. .. .	H-88
H-89	Broad and metre gauge carriage fans for Indian State Railways .. .. .	H-89 A ‡
H-91	Train lighting dynamos, broad and metre gauge, axle driven, for Indian State Railways .. .. .	H-91*

## POWER AND INDUSTRIAL PLANT.

P. I. 27	Heave up boat for the Lloyd Barrage Works, Sukkur .. .. .	P. I. 27
" 27	Heave up boat for the Lloyd Barrage Works, Sukkur .. .. .	" 28
" 41	Pile driver and frame for the Sutlej Valley Project .. .. .	" 41
" 46	Steam and exhaust piping for the Nalagarh Power House .. .. .	" 46
" 47	Two 25 K. W. oil engine driven generating sets and switch board for the British Infantry Barracks, Lahore .. .. .	" 47
" 48	Turbo-alternator set, condensing plant, cranes, boiler economiser pumps, steel chimney, steam and exhaust pipe work, switchboard motor converter set, rotary converters, sub-station plant, extra high tension feeder cables and auxiliaries, for the Public Works Department, Delhi .. .. .	" 48
" 50	Concrete mixers and prime movers, required for the Bikaner Canal, Sutlej Valley Project .. .. .	" 50
" 51	Stone breaker plant and screens for the Nalagarh Quarries, Sutlej Valley Irrigation Project .. .. .	" 51
" 52	Generating plant, transformers, switchgear, pump and motors, for the Nalagarh Quarries Power Plant, Punjab Irrigation Department .. .. .	" 52
" 53	Generating plant, transformers, switchgear, pump and motors, for the Ferozepore Division Power Plant, Punjab Irrigation Department. .. .. .	" 53
" 54	Concrete mixers with motors for the Sutlej Valley Project .. .. .	" 54
" 55	One 53, 4 K. V. A. oil engine driven A. C. generating set with exciter for the Northern India Salt Revenue-Department, Sambhar Lake .. .. .	" 55
" 56	Switchgear for the Northern India Salt Revenue Department, Sambhar Lake .. .. .	" 56
" 57	A. C. motor and control gear for the Government of India Press, Simla .. .. .	" 57

Basic number.

Current edition.

POWER AND INDUSTRIAL PLANT—*contd.*

P. I. 58	A. C. motors, controlgear, main switchpanel, cable work and wiring for the experiment spinning plant and Technological laboratory of the Indian Central Cotton Committee, Bombay ..	P. I. 58
„ 59	Two 4 K. W. oil engine-driven generating sets and switchboards for the Military Works Services, Nowshera Sub-District, Northern Command ..	„ 59
„ 63	Passenger, goods and service lifts, required by the Indian Public Works Department, for the New Legislative Buildings, Delhi .. ..	„ 63
„ 64	Passenger, goods and service lifts, required by the Indian Public Works Department, for Government House, Delhi .. .. .	„ 64
„ 66	Oil engine alternator set, water cooling plant, crane, switchgear and cables for power station; transformer switchgear and cables for a sub-station for the Lloyd Barrage Works, Sukkur .. .. .	„ 66
„ 70	Oil engine dynamo set, main fuel tank complete with pipework, water cooling plant, crane, switchgear and cables for power station and motors, controlgears and cables for the press machinery for the Government Postal Press, Aligarh .. .. .	„ 70
„ 78	Additional oil engine alternator sets, water cooling plant, transformers, switchgear and cables for the Power Station of the Lloyd Barrage Works, Sukkur .. .. .	„ 78
„ 79	Concrete blockyard plant for the Lloyd Barrage Project, Sukkur .. .. .	„ 79
„ 83	325K. W. oil engine alternator sets, water cooling plant, oil fuel storage tank complete with pipework, crane transformers, switchgear, and connecting cables, induction motors, E. H. T. feeder cables and accessories for Power Station and Miscellaneous plant, for Salt Mines, Khewra .. .. .	„ 83
„ 84	Goods lifts for Postal Press, Aligarh .. ..	„ 84
„ 85	Electrically driven pumping machinery mounted on pontoons for dewatering coffer dams for the Lloyd Barrage Works, Sukkur .. ..	„ 85
„ 86	Oil engine driven power plant for the New Power Station, Municipal Board, Mussooree ..	„ 86
„ 87	Plant for Hydro-electric scheme, Municipal Board, Mussoorie .. .. .	„ 87
„ 88	Oil engine driven power station for Jaipur ..	„ 88
„ 89	Pile driving plant mounted on pontoons for the Lloyd Barrage Works, Sukkur .. ..	„ 89
„ 90	Scotch derrick crane, motor driven, to lift 25 and 10 tons, on pontoons for the Lloyd Barrage Works, Sukkur .. .. .	„ 90

Basic number.

Current edition.

POWER AND INDUSTRIAL PLANT—*contd.*

P. I. 91	Steam driven paddle tugs for the Lloyd Barrage Works, Sukkur .. .. .	P. I. 91
" 92	Barges for the Lloyd Barrage Works, Sukkur ..	" 92
" 93	Oil engine driven (diesel) Bucyrus dragline excavators, 30-B, for the Lloyd Barrage Works, Sukkur .. .. .	" 93
" 94	Oil engine driven (diesel) Bucyrus dragline excavators, 50-B, for the Lloyd Barrage Works, Sukkur .. .. .	" 94
" 96	Electrical plant for Public Works Department, Punjab .. .. .	" 96
" 97	30-B, diesel engine driven Bucyrus dragline excavator for the Lloyd Barrage Works, Sukkur ..	" 97
" 99	Steel barges of capacity up to 100 tons of stone for the Lloyd Barrage Works, Sukkur ..	" 99
" 100	50-B, diesel engine driven Bucyrus dragline excavator for the Lloyd Barrage Works, Sukkur ..	" 100
" 101	Sluice gates for the Panjad Barrage on the river Sutlej, thirty three gates, clear width of opening 60'-0", 18'-6" deep for the Punjab Public Works Department .. .. .	" 101
" 102	Gates for the undersluices for the Weir across the River Damodar .. .. .	" 102
" 103	250 K. W. 2300 volts full diesel oil engine alternator sets for the Public Works Department, Simla .. .. .	" 103
" 104	One 600 K. W. 3,300 volts, oil engine alternator set, oil fuel service tanks, etc., for additional power station, Jaipur Public Works Department .. .. .	" 104
" 105	Steel barges of capacity up to 100 tons of stone for Lloyd Barrage Works, Sukkur .. .. .	" 105
" 107	Three 200 K. W. 400 volts water turbine alternator sets, etc., for the Sumera Hydro-Electric Pumping and Power Scheme for the P. W. D., United Provinces .. .. .	" 107
" 108	Radial gates for the head and cross regulators for main canal and branches of the Lloyd Barrage and Canal Construction, Sind .. .. .	" 108
" 109	Sluice gates, vertical sliding and radial types for small branches, distributions and minors of the Lloyd Barrage and Canal Construction, Sind .. .. .	" 109
" 115	Sea going steam lighter for Forest Department, Port Blair .. .. .	" 115
" 117	Pumping plant, oil engine driven, tube with turbine, for N. W. Railway .. .. .	" 117*
" 118	Pumping plant, oil engine driven, centrifugal, for N. W. Railway .. .. .	" 118*

Basic number.		Current edition.
POWER AND INDUSTRIAL PLANT— <i>concl.</i>		
P. I. 119	Pumping plant, oil engine driven, Air lift cum centrifugal, for N. W. Railway .. ..	P. I 119*
" 123	Pumping plant, electrically driven, Air-lift cum centrifugal, for N. W. Railway .. ..	" 123*
" 125	A. C. motor and controlgear for driving pumping plant for N. W. Railway .. ..	" 125*
" 126	Controlgear for the control of induction motors for N. W. Railway .. ..	" 126*
" 127	Pumps, centrifugal, A. C. motor driven, for N. W. Railway .. ..	" 127*
" 128	Pontoons, heave-up boat, lighters and buoys, for the Harbour Master, Port Blair .. ..	" 128*
" 129	Motor alternator set with testing transformer and induction regulator .. ..	" 129
TEXTILES.		
G/Tex/C-17	Capes with hoods, waterproof, for the Postal Department .. ..	G/Tex/C-17 B
" 18	Cotton wool for bandages for Medical Department .. ..	" 18 A †
" 19	Long cloth, bleached, for the Medical Department .. ..	" 19 B †
" 21	Bags, dosooti, postal, for the Indian Postal Department .. ..	" 21 D
" 25	File bundling sheet of blue drill for the Posts and Telegraphs Department .. ..	" 25
" 26	Khaki drill sacks, postman's for the Posts and Telegraphs Department .. ..	" 26 A †
" 27	Waterproof khaki drill, delivery bag, for the Posts and Telegraphs Department .. ..	" 27 B †
" 29	Clothing materials for the use of the Staff of the Posts and Telegraphs Department .. ..	" 29
" 32	Cape with hood, waterproof, for Bombay Police .. ..	" 32
" 72	Dosooti, grey, for Borstal Institute, Lahore .. ..	" 72
" 74	Turbans, khaki, for G. I. P. Railway staff .. ..	" 74
" 76	Dosooti, khaki, for N. W. Railway .. ..	" 76
" 77	Dosooti, grey, for E. I. Railway .. ..	" 77
" 79	Lungis, ordinary, for Sind Police .. ..	" 79 B
" 84	Grey drill, unbleached for Borstal Institute, Lahore .. ..	" 84
" 86	Sheeting, grey, for Borstal Institute, Lahore .. ..	" 86
" 97	Dosooti, grey (heavy quality) for Railways .. ..	" 97
" 103	Sheets, bed, bleached, for Indian State Railways .. ..	" 103 B
" 107	Flashes and belts for E. I. Railway .. ..	" 107
" 113	Shorts and blouses, khaki, for G. I. P. Railway .. ..	" 113
" 115	Red flags with letter P. W. D. for roads under repair .. ..	" 115

Basic number.

Current edition.

TEXTILES—*contd.*

G/Tex/C-116	Badge cloth, embroidered C. & W. for N. W. Railway .. .. .	G/Tex/C-116 B‡
" 117	Ground sheets, waterproofed, for prisons, Bihar and Patna .. .. .	" 117
" 118	Long cloth, bleached, for the Government Printing and Stationery Department, Burma ..	" 118
" 119	Cloth, Holland, for N. W. Railway .. .. .	" 119
" 120	Canvas cotton, black, for N. W. Railway .. .. .	" 120
" 121	Bags, waterproof, for clearance of outside letter boxes .. .. .	" 121
" 122	Long cloth, bleached, for overalls, for E. I. Railway .. .. .	" 122
" 123	Duck, cotton, for G. I. P. Railway .. .. .	" 123 A
" 126	Bags kit, canvas, cotton, white, for Madras Police .. .. .	" 126
" 128	Bags, dosooti, cotton, for the Opium Factory, Ghazipur .. .. .	" 128
" 147	Covers, slip, for Mattresses for E. I. Railway .. .. .	" 147*
" 148	Lace (tape), cotton, yellow, for Bombay City Police .. .. .	" 148*
" 151	Cloth, cotton, mazri, for Jhoab Militia .. .. .	" 151*
G/Tex/F-48	Waterproof sheets for blankets for Assam Police .. .. .	G/Tex/F-48*
G/Tex/J-33	Hand bags for R. M. S. sorters .. .. .	G/Tex/F-33 A
" 34	Canvas, jute, unproofed, for I. G. Police, Madras .. .. .	" 34
" 35	Felt, tarred, jute, for N. W. Railway .. .. .	" 35
G/Tex/Misc. 1	Waist and shoulder belts of red broad cloth for Postal Department .. .. .	G/Tex/Misc.-1
" 2	Summer uniforms for the East Indian and Eastern Bengal Railway staff .. .. .	" 2 I‡
" 3	Winter uniforms for East Indian and Eastern Bengal Railway staff .. .. .	" 3 H‡
" 24	Clothing material for Government of India menial staff .. .. .	" 24
" 26	Belt, lace, for the N. W. Railway .. .. .	" 26
" 28	Textile materials for the Government Printing and Stationery Department, Imperial and Provincial .. .. .	" 28 B‡
" 40	Gold lace for the uniforms of Government of India menial staff .. .. .	" 40
" 42	Mat, door, pile, coir, for State Railways .. .. .	" 42 A‡
" 45	Twines, cotton, jute, hemp and flax, for Indian State Railways .. .. .	" 45 A‡
" 46	Uniforms for G. I. P. Railway staff .. .. .	" 46 A‡

Basic number.		Current edition.
TEXTILES—concl'd.		
G/Tex/W-10	Oxford grey for N. W. Railway .. .. .	G/Tex/W-10 B†
„ 14	Broad cloth, dark blue, for Bombay Police .. .. .	„ 14 A
„ 15	Serge, white, for Medical and Veterinary Department .. .. .	„ 15
„ 17	Great coats with capes for mounted and foot police, Sind .. .. .	„ 17 A‡
„ 28	Blankets, woollen, for G. I. P. Railway menial staff .. .. .	„ 28 B
„ 38	Great coats with capes for Salt and Excise Department, Sind .. .. .	„ 38 A
„ 39	Serge, khaki, for G. I. P. Railway .. .. .	„ 39
„ 41	Serge, grey, for E. I. Railway .. .. .	„ 41
„ 50	Drab mixture great coat cloth for I. G. Prisons, Bombay .. .. .	„ 50
„ 51	Twill cloth, woollen, khaki, for the Posts and Telegraphs Department .. .. .	„ 51
„ 57	Great coat cloth, khaki, for the Assam Police, 1, 2 and 4 Assam Rifles .. .. .	„ 57
„ 58	Kambalies, woollen, for Bombay Forest Department .. .. .	„ 58
„ 60	Great coats, foot and mounted types, for the Railway Police, Rajputana .. .. .	„ 60
„ 61	Blue grey hosiery worsted yarn for the Jail Department, Burma .. .. .	„ 61
„ 62	Lohies, natural grey, for Kashmir .. .. .	„ 62*

\* Specifications framed during the year 1932-33.

† Specifications framed and revised during the year 1932-33.

‡ Specifications revised during the year 1932-33.



## APPENDIX XII.

Statement showing the work done by Inspection Branch.

Value and tonnage of stores inspected, number of tests and analyses carried out, and the amount of fees earned.

(Vide paragraphs 3, 44, 51 and 55 of the Report.)

	Value of stores inspected and charged on value.				Tonnage of stores inspected and charged on weight.				Number of tests and analyses carried out.				Fees earned.				
	1929-30.	1930-31.	1931-32.	1932-33.	1929-30.	1930-31.	1931-32.	1932-33.	1929-30.	1930-31.	1931-32.	1932-33.	1929-30.	1930-31.	1931-32.	1932-33.	
	Rs.	Rs.	Rs.	Rs.	Tons.	Tons.	Tons.	Tons.					Rs.	Rs.	Rs.	Rs.	
Calcutta Inspection Circle ..	4,33,15,920	3,74,98,794	3,05,42,816	1,92,56,370	44,148	40,340	1,11,595	11,394	..	..	..	..	5,09,606	4,39,189	4,50,544	2,11,864	
Bombay Inspection Circle ..	1,31,96,023	1,12,34,426	66,90,637	64,14,694	80	200	2,496	261	..	..	..	..	1,32,190	1,12,901	72,445	64,741	
Karachi Inspection Circle ..	90,06,402	79,39,758	42,63,092	33,48,090	4,600	274	2	..	..	..	..	..	99,264	79,946	42,634	33,481	
Upper India Inspection Circle	71,14,958	51,09,146	37,85,681	30,59,618	..	..	..	..	..	..	..	..	71,150	52,092	37,990	30,596	
Cawnpore Inspection Branch	8,04,066	24,57,120	20,76,382	14,64,723	..	..	..	..	..	..	..	..	8,041	24,616	20,764	14,691	
Madras Inspection Branch ..	8,04,066	8,41,026	7,61,770	13,27,245	..	..	..	..	..	..	..	..	8,041	8,410	7,618	13,272	
<b>Total Provincial Inspectorates</b>	<b>7,34,37,369</b>	<b>6,50,80,270</b>	<b>4,81,20,378</b>	<b>3,48,70,740</b>	<b>48,828</b>	<b>40,814</b>	<b>1,14,093</b>	<b>11,655</b>	..	..	..	..	<b>8,20,251</b>	<b>7,17,154</b>	<b>6,31,995</b>	<b>3,68,645</b>	
Metallurgical Inspectorate ..	13,61,768	10,39,272	3,01,489	5,36,869	2,94,281	2,87,206	1,96,411	144,548	5,292	7,087	6,345	4,466	3,58,909	3,57,736	2,31,434	1,80,841	
Government Test House, Alipore .. .. .	..	..	..	..	..	..	..	..	8,428	8,628	7,892	7,046	2,05,376	1,80,605	1,78,564	1,60,846	
Government Test House, Bombay .. .. .	..	..	..	..	..	..	..	..	553	561	164	..	10,621	10,118	3,573	..	
<b>GRAND TOTAL ..</b>	<b>7,47,99,137</b>	<b>6,61,19,542</b>	<b>4,84,21,867</b>	<b>3,54,07,609</b>	<b>3,43,109</b>	<b>3,28,020</b>	<b>3,10,504</b>	<b>156,203</b>	<b>14,273</b>	<b>16,256</b>	<b>14,401</b>	<b>11,512</b>	<b>13,95,157</b>	<b>12,65,613</b>	<b>10,45,566</b>	<b>7,10,332</b>	
					<i>Deduct tests carried out for the Indian Stores Department.</i>				3,927	3,876	3,731	3,891	91,142	82,762	84,687	76,318	
					<i>Net Total</i>				..	10,346	12,380	10,670	7,621	13,04,015	11,82,851	9,60,879	6,34,014

## APPENDIX XIII.

Statement showing inspection work carried out for various authorities (material charged on value).

(Vide paragraphs 3, 44, and 51 of the Report.)

If stores were	Calcutta Inspection Circle.				Bombay Inspection Circle.				Karachi Inspection Circle.				Upper India Inspection Circle.				Cawnpore Inspection Branch.				Madras Inspection Branch.				Total value of stores charged on value inspected by Provincial Inspectorates.				Metallurgical Inspectorate, Tatanagar.				Total value of stores inspected and		
	1929-30.	1930-31.	1931-32.	1932-33.	1929-30.	1930-31.	1931-32.	1932-33.	1929-30.	1930-31.	1931-32.	1932-33.	1929-30.	1930-31.	1931-32.	1932-33.	1930-31.	1931-32.	1932-33.	1929-30.	1930-31.	1931-32.	1932-33.	1929-30.	1930-31.	1931-32.	1932-33.	1929-30.	1930-31.	1931-32.	1932-33.	1929-30.	1930-31.	1931-32.	1932-33.
D. ..	Rs. 1,11,68,984	Rs. 1,26,65,834	Rs. 1,01,57,486	Rs. 1,05,07,648	Rs. 78,85,779	Rs. 84,75,293	Rs. 58,08,713	Rs. 57,08,531	Rs. 56,35,886	Rs. 65,47,995	Rs. 41,16,830	Rs. 33,41,237	Rs. 70,82,063	Rs. 50,66,224	Rs. 37,41,132	Rs. 30,55,874	Rs. 24,23,192	Rs. 19,97,914	Rs. 14,54,792	Rs. 8,04,066	Rs. 8,41,026	Rs. 7,61,770	Rs. 13,27,245	Rs. 3,25,76,778	Rs. 3,60,19,564	Rs. 2,65,83,845	Rs. 2,53,95,327	Rs. 11,68,607	Rs. 9,51,653	Rs. 3,01,427	Rs. 5,07,561	Rs. 3,37,45,385	Rs. 3,69,71,217	Rs. 2,68,85,...	
Departments—																																			
Departments—	768	756	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	768	756	..	..	..	..	..	..	768	756	..		
Departments—	..	..	..	..	..	..	..	..	..	1,170	1,40,229	..	..	..	..	..	..	..	..	..	..	..	..	1,170	1,40,229	..	..	..	..	28,059	..	1,170	1,40,...		
nd ..	2,16,94,619	1,58,65,506	1,48,16,453	54,71,742	38,44,808	20,01,998	7,02,365	5,69,777	33,54,290	13,77,254	535	2,667	12,155	10,922	405	3,744	24,895	75,508	973	..	..	..	..	2,89,05,872	1,92,80,575	1,55,95,266	60,48,903	..	..	..	..	2,89,05,872	1,92,80,575	1,55,95,...	
orked ..	1,00,72,775	84,48,302	50,56,487	29,14,552	13,84,347	6,08,094	1,43,450	1,06,104	..	..	840	4,186	..	..	..	..	..	..	..	..	..	..	..	1,14,57,122	91,16,396	52,00,757	30,24,842	..	..	..	..	1,14,57,122	91,16,396	52,00,...	
ndian States ..	58,385	42,064	74,528	24,197	68,217	87,454	27,548	17,991	16,226	10,035	102	..	..	..	..	..	..	..	..	..	..	..	..	1,42,828	1,39,553	1,02,178	42,188	..	..	..	..	1,42,828	1,39,553	1,02,...	
istrations ..	3,18,25,779	2,43,55,872	1,99,47,448	84,10,491	52,97,372	27,57,546	8,73,363	6,93,872	33,70,516	13,87,289	1,477	6,853	12,155	10,922	405	3,744	24,895	75,508	973	..	..	..	..	4,05,05,822	2,85,36,524	2,08,98,201	91,15,933	..	..	..	..	4,05,05,822	2,85,36,524	2,08,98,...	
is ..	1,64,248	2,15,054	4,01,092	3,19,806	..	..	..	167	..	..	..	..	..	32,000	44,144	..	..	..	..	..	..	..	..	1,64,248	2,47,054	4,45,236	3,19,973	..	..	..	..	1,64,248	2,47,054	4,45,...	
.. ..	1,45,369	1,91,866	27,764	14,836	10,542	..	..	9,000	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,55,911	1,91,866	27,764	23,836	..	..	..	..	1,55,911	1,91,866	27,...	
ndian States ..	10,372	67,803	9,026	3,589	2,330	1,587	3,795	..	..	3,304	4,556	..	..	..	..	..	..	..	..	..	..	..	..	12,702	72,694	17,377	3,589	1,93,161	87,619	62	1,249	2,05,863	1,60,313	17,...	
and public bodies	400	1,609	..	..	..	..	4,766	3,124	..	..	..	..	20,740	..	..	..	9,033	2,960	8,958	..	..	..	..	21,140	10,642	7,726	12,082	..	..	..	..	21,140	10,642	7,...	
r Departments	3,21,46,936	2,48,32,960	2,03,85,330	87,48,722	53,10,244	27,59,133	8,81,924	7,06,163	33,70,516	13,91,763	1,46,262	6,853	32,895	42,922	44,549	3,744	33,928	78,468	9,931	..	..	..	..	4,08,60,591	2,90,60,706	2,15,36,533	94,75,413	1,93,161	87,619	62	29,308	4,10,53,752	2,91,48,325	2,15,36,...	
ND TOTAL ..	4,33,15,920	3,74,98,794	3,05,42,816	1,92,56,370	1,31,96,023	1,12,34,426	66,90,637	64,14,694	90,06,402	79,39,758	42,63,092	33,48,090	71,14,958	51,09,146	37,85,681	30,59,618	24,57,120	20,76,382	14,64,723	8,04,066	8,41,026	7,61,770	13,27,245	7,34,37,369	6,50,80,270	4,81,20,378	3,48,70,740	13,61,768	10,39,272	3,01,489	5,36,869	7,47,99,137	6,61,19,542	4,84,21,...	

(a) The figures include work done by the Cawnpore Branch.

Date	Description	Debit	Credit	Balance
1901				
1902				
1903				
1904				
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1906				
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## APPENDIX XIV.

Statement showing inspection work carried out for various authorities which is charged on weight.  
(Vide paragraphs 3, 44, and 51 of the Report.)

Authorities on whose half stores were inspected.	Calcutta Inspection Circle.				Bombay Inspection Circle.				Karachi Inspection Circle.				Total Provincial Inspectorates.				Metallurgical Inspectorate, Tatanagar.				Total tonnage of stores inspected and charged on weight.			
	1929-30.	1930-31.	1931-32.	1932-33.	1929-30.	1930-31.	1931-32.	1932-33.	1929-30.	1930-31.	1931-32.	1932-33.	1929-30.	1930-31.	1931-32.	1932-33.	1929-30.	1930-31.	1931-32.	1932-33.	1929-30.	1930-31.	1931-32.	1932-33.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Central Government Departments, Civil ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	71	..	..	..	71	..	..	..
Central Government Departments, Military ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	65	..	..	..	65	..	..	..
Railways, State-worked ..	16,602	27,330	47,186	9,040	80	200	2,199	..	4,600	274	2	..	21,282	27,804	49,387	9,040	64,192	81,871	31,799	26,437	85,474	1,09,675	81,186	35,477
Railways, Company-worked ..	23,123	6,577	61,197	1,908	..	..	..	..	..	..	..	..	23,123	6,577	61,197	1,908	62,735	37,720	25,983	15,626	85,858	44,297	87,180	17,534
Railways, worked by Indian States ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,840	4,564	1,600	1,800	1,840	4,564	1,600	1,800
Total Railway Administrations ..	39,725	33,907	1,08,383	10,948	80	200	2,199	..	4,600	274	2	..	44,405	34,381	1,10,584	10,948	1,28,767	1,24,155	59,382	43,863	1,73,172	1,58,536	1,69,966	54,811
Provincial Governments ..	6	180	..	197	..	..	..	..	..	..	..	..	6	180	..	197	..	..	..	33	6	180	..	230
Public bodies ..	679	166	..	54	..	..	182	..	..	..	..	..	679	166	182	54	..	..	..	..	679	166	182	54
Private concerns and Indian States ..	2,836	3,512	2,058	147	..	..	115	261	..	..	..	..	2,836	3,512	2,173	408	1,65,443	1,62,986	1,37,029	1,00,652	1,68,279	1,66,498	1,39,202	1,01,060
Foreign Governments and public bodies ..	902	2,575	1,154	48	..	..	..	..	..	..	..	..	902	2,575	1,154	48	..	..	..	..	902	2,575	1,154	48
Total ..	44,148	40,340	1,11,595	11,394	80	200	2,496	261	4,600	274	2	..	48,828	40,814	1,14,093	11,655	2,94,281	2,87,206	1,96,411	1,44,548	3,43,109	3,28,020	3,10,504	1,56,203

Year	Month	Day	Time	Location	Remarks
1900	Jan	1	10:00	...	...
1900	Jan	2	10:00	...	...
1900	Jan	3	10:00	...	...
1900	Jan	4	10:00	...	...
1900	Jan	5	10:00	...	...
1900	Jan	6	10:00	...	...
1900	Jan	7	10:00	...	...
1900	Jan	8	10:00	...	...
1900	Jan	9	10:00	...	...
1900	Jan	10	10:00	...	...
1900	Jan	11	10:00	...	...
1900	Jan	12	10:00	...	...
1900	Jan	13	10:00	...	...
1900	Jan	14	10:00	...	...
1900	Jan	15	10:00	...	...
1900	Jan	16	10:00	...	...
1900	Jan	17	10:00	...	...
1900	Jan	18	10:00	...	...
1900	Jan	19	10:00	...	...
1900	Jan	20	10:00	...	...
1900	Jan	21	10:00	...	...
1900	Jan	22	10:00	...	...
1900	Jan	23	10:00	...	...
1900	Jan	24	10:00	...	...
1900	Jan	25	10:00	...	...
1900	Jan	26	10:00	...	...
1900	Jan	27	10:00	...	...
1900	Jan	28	10:00	...	...
1900	Jan	29	10:00	...	...
1900	Jan	30	10:00	...	...
1900	Jan	31	10:00	...	...

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## APPENDIX XV.

Statement showing the number of tests and analyses carried out for various authorities.

(Vide paragraphs 3, 51 and 55 of the Report.)

Authorities on whose behalf tests, analyses, etc., were carried out.	Metallurgical Inspectorate, Tatanagar.				Government Test House, Alipore.				Government Test House, Bombay.			Total number of tests and analyses carried out.			
	1929-30.	1930-31.	1931-32.	1932-33.	1929-30.	1930-31.	1931-32.	1932-33.	1929-30.	1930-31.	1931-32.	1929-30.	1930-31.	1931-32.	1932-33.
For the Indian Stores Department	26	..	12	44	3,358	3,344	3,561	3,847	543	532	158	3,927	3,876	3,731	3,891
Outside authorities—															
1. Central Government, Civl.	12	2	..	36	281	197	270	205	2	..	..	295	199	270	241
2. Central Government, Military.	3	..	..	..	960	704	616	491	..	..	..	963	704	616	491
3. Railways, State-worked..	54	201	74	52	1,638	1,252	750	411	..	..	..	1,692	1,453	824	463
4. Railways, Company-worked.	15	12	9	6	200	120	129	217	2	26	..	217	158	138	223
5. Railways, worked by Indian States.	..	1	37	..	26	29	78	70	..	..	..	26	30	115	70
Total Railway Administrations.	69	214	120	58	1,864	1,401	957	698	2	26	..	1,935	1,641	1,077	756
6. Provincial Governments	20	9	8	12	309	466	548	297	..	..	..	329	475	556	309
7. Public bodies ..	..	..	..	..	100	173	115	94	..	..	..	100	173	115	94
8. Private concerns and Indian States.	5,162	6,842	6,205	4,316	1,556	2,343	1,825	1,414	6	3	6	6,724	9,188	8,036	5,730
<b>Total</b> ..	<b>5,292</b>	<b>7,067</b>	<b>6,345</b>	<b>4,466</b>	<b>8,428</b>	<b>8,628</b>	<b>7,892</b>	<b>7,046</b>	<b>553</b>	<b>561</b>	<b>164</b>	<b>14,273</b>	<b>16,256</b>	<b>14,401</b>	<b>11,512</b>

## APPENDIX XVI.

Statement showing the various articles tested at the Government Test House during the year 1932-33.

(Vide paragraphs 3 and 55 of the Report.)

Serial No.	Articles.	Serial No.	Articles.
1	Acid.	35	Chains.
2	Accumulators.	36	Chemicals.
3	Aluminium, drillings, ingots, sheets, etc.	37	Clay, China.
4	Aluminium sulphate.	38	Coal.
5	Ammeter.	39	Coal tar.
6	Ammonium sulphate.	40	Coke.
7	Antimony.	41	Concrete.
8	Apparatus, flash point.	42	Copper, bars, rods, sheets, tubes, etc.
9	Asbestos.	43	Cordages, cotton, flax and jute .
10	Ashes, boiler.	44	Cotters, M. S.
11	Asphalt.	45	Coupler, inter-carriage electric lighting.
12	Barley.	46	Deposits.
13	Batteries.	47	Disinfectants.
14	Bauxite.	48	Fabrics, cotton.
15	Beltings, cotton, hair and jute.	49	Fabrics, woollen.
16	Benzene.	50	Fans, regulators.
17	Bitumen.	51	Flour.
18	Blankets, woollen.	52	Files, workshop, of sorts and sizes.
19	Blocks, masonry.	53	Fishplates.
20	Bolts and nuts.	54	Fittings, vacuum brake.
21	Bottles, glass.	55	Fittings, electrical.
22	Brass, bars, rods, sheets, plates, tubes etc.	56	Gas, acetylene, dissolved.
23	Braids, cotton.	57	Gas, carbonic.
24	Bricks.	58	Gauges, pressure, steam and vacuum.
25	Bronze shaft.	59	Glass.
26	Buttons, metal.	60	Graphite.
27	Cables.	61	Grease.
28	Calcium carbide.	62	Gum.
29	Canvas, cotton, flax and jute.	63	Hammers, steel.
30	Candles, wax.	64	Hooks, drawbar.
31	Caustic soda.	65	Ink.
32	Carsac elements.	66	Insecticide.
33	Cells.	67	Iron, angles, bars, plates, roads, etc.
34	Cement.	68	Ingots, drillings.

Serial No.	Articles.	Serial No.	Articles.
69	Jars, stoneware.	111	Sand.
70	Jute.	112	Saw dust.
71	Knives.	113	Scissors.
72	Lamps, electric.	114	Screw couplings.
73	Lead, drillings, pipes, sheets, etc.	115	Sealing compound.
74	Leather.	116	Seeds, oil.
75	Lime.	117	Shellac.
76	Metals, antifriction.	118	Sheets, asbestos.
77	Metals, type.	119	Sheets, corrugated, galvanised.
78	Meters, electric.	120	Sheets, mild steel.
79	Minerals.	121	Sheets, fibre, grey.
80	Nibs.	122	Sheets, India rubber.
81	Oil cakes.	123	Sleepers, Rly., steel.
82	Oil, creosote.	124	Sieve, brass.
83	Oil, fish.	125	Soap.
84	Oil, fuel.	126	Soil.
85	Oil, kerosene.	127	Solder.
86	Oil, lubricating.	128	Spirit.
87	Oil, vegetable.	129	Spring, Buffer, I. R.
88	Padlocks.	130	Spring, bearing, auxiliary.
89	Paints and pigments.	131	Steel, angles, bars, plates, etc.
90	Paint removers.	132	Steel bogie side frame.
91	Papers, carbon.	133	Stone.
92	Petrol.	134	Talc.
93	Pipes, hose, canvas.	135	Tallow.
94	Pipes, mild steel, galvanised.	136	Tapes, cotton.
95	Pipes, concrete.	137	Taxi-meter reduction gear.
96	Pipes, stoneware.	138	Tea.
97	Pitch.	139	Thermometers.
98	Pole, tubular, steel.	140	Threads.
99	Polishes, french.	141	Tin.
100	Polishes, leather.	142	Turpentine.
101	Polishes, metal.	143	Twine.
102	Preservatives, wood.	144	Valve, sluice.
103	Rail joints.	145	Varnishes.
104	Rail anchors.	146	Voltoids.
105	Revivers, leather.	147	Voltmeter.
106	Ropes, metallic.	148	Washers, hard fibre.
107	Ropes non-metallic.	149	Water.
108	Rosin.	150	Wax, bees.
109	Sajimati.	151	Wires.
110	Salt.	152	Yarns, cotton and woollen.
		153	Zinc, drillings, ingotss sheets,



Page	Text	Page	Text
100			
101	Hand		
102	See Hand		
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## APPENDIX XVII.

Financial statement of the Receipts and Expenditure of the Indian Stores Department for the years 1929-30, 1930-31, 1931-32 and 1932-33.

(Vide paragraphs 8 and 74 of the Report.)

Particulars.	Amount.									
	1929-30.	1930-31.			1931-32.			1932-33.		
		Com- mercial.	Non-Com- mercial.	Total.	Com- mercial.	Non-Com- mercial.	Total.	Com- mercial.	Non-Com- mercial.	Total.
Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
1. By 1% purchase charge ..	4,17,143	4,52,794	..	4,52,794	3,56,528	..	3,56,528	3,41,685	..	3,41,685
2. By 1% inspection charge ..	3,35,024	3,70,761	..	3,70,761	2,68,495	..	2,68,495	2,53,593	..	2,53,593
3. By recoveries on account of fees for tests, inspections, etc., made from Government Departments, Railways, Private firms and individuals ..	9,64,185	6,95,298	1,05,736	8,01,034	6,17,281	99,492	7,16,773	2,95,140	81,866	3,77,006
4. By miscellaneous receipts ..	55,880	35,070	941	36,011	41,489	1,085	42,574	40,547	1,608	42,155
*5. By charges for tests, etc., adjusted between commercial and non-commercial branches of the Department ..	..	10,221	73,114	..	4,064	80,801	..	1,434	75,403	..
Total Receipts ..	17,72,232	15,64,144	1,79,791	16,60,600	12,87,857	1,81,378	13,84,370	9,32,399	1,58,877	10,14,439
1. Pay of officers ..	7,01,283	6,26,585	1,31,710	7,58,295	6,02,816	1,40,315	7,43,131	5,23,073	1,18,301	6,41,374
2. Pay of Establishment ..	7,01,131	5,68,409	1,53,726	7,22,135	5,66,771	1,60,297	7,27,068	5,01,738	1,50,536	6,52,274
3. Allowances ..	2,04,216	1,99,488	30,057	2,29,545	1,66,417	24,723	1,91,140	1,63,512	26,858	1,90,370
4. Grants-in-aid ..	600	3,975	470	4,445	409	191	600	40	20	60
5. Supplies and Services— (a) Expenditure in India ..	1,93,299	..	..	1,55,070	39,692	36,408	76,100	27,616	19,920	47,536
Deduct amount treated as Capital Expenditure ..	18,342	..	..	9,991	443	1,338	1,781	760	7,727	8,487
Total ..	1,74,957	..	..	1,45,079	39,249	35,070	74,319	26,856	12,193	39,049
(b) Expenditure in England										
(i) On Stores ..	..	..	..	604	..	..	..	..	..	..
(ii) On inspections on behalf of non-commercial Civil Deptts. of the Central Government ..	..	..	..	4,319	11,122	..	11,122	160	..	160
Total Supplies and Services (excluding amount treated as Capital Expenditure) ..	1,74,957	1,04,965	45,037	1,50,002	50,371	35,070	85,441	27,016	12,193	39,209
6. Contingencies ..	1,10,311	93,138	24,146	1,17,284	73,610	22,560	96,170	74,059	23,563	97,622
7. Works (including Petty constructions and repairs) ..	78,807	..	..	17,772	7,159	2,593	9,752	8,763	2,618	11,381
Deduct amount treated as Capital Expenditure ..	68,256	..	..	7,587	108	..	108	1,619	..	1,619
Total ..	10,551	6,853	3,332	10,185	7,051	2,593	9,644	7,144	2,618	9,762
8. Loss or gain by exchange (included with the cost of stores in the Profit and Loss Account) ..	48	..	..	50	..	..	..	-3	..	-3
9. Total direct expenditure charged to Indian grant (excluding expenditure in England) ..	19,89,695	..	..	20,04,596	14,56,874	3,87,087	18,43,961	12,98,798	3,41,816	16,40,614
Deduct amount treated as Capital Expenditure and Loss or Gain by Exchange ..	86,646	..	..	17,628	551	1,338	1,889	2,376	7,727	10,103
10. Net direct expenditure ..	19,03,049	16,03,413	3,88,478	19,86,968	14,56,323	3,85,749	18,42,072	12,96,422	3,34,089	16,30,511
11. Expenditure in England [item 5 (b)] ..	..	..	..	4,923	11,122	..	11,122	160	..	160
12. Leave salary and overseas pay paid in England ..	47,358	64,567	19,796	84,363	83,297	29,468	1,12,765	44,439	19,619	64,058
13. Pensionary charges ..	1,21,163	75,108	12,151	87,259	58,457	10,471	68,928	55,454	10,435	65,889
14. Government Contribution to Provident Fund ..	42,766	40,295	9,526	49,821	67,634	23,103	90,737	45,752	15,453	61,205
15. Interest on Capital Outlay ..	60,029	28,609	37,596	66,205	28,674	37,916	66,590	28,413	37,909	66,322
16. Depreciation charges ..	21,998	15,207	13,347	28,554	14,978	13,126	28,104	14,379	12,577	26,956
17. Stationery and Printing ..	38,436	32,432	6,432	38,864	31,264	7,067	38,271	28,016	7,568	35,584
18. Cost of Audit and Accounts ..	2,22,875	2,22,838	24,760	2,47,598	2,06,627	22,958	2,29,585	1,77,577	19,731	1,97,308
19. Expenditure on retrenched personnel ..	..	..	..	..	1,302	123	1,525	17,854	1,209	19,063
*20. Services rendered by Non-Commercial Branches to Commercial Branches and vice versa ..	..	76,082	7,053	..	73,874	10,991	..	70,858	5,979	..
Total Expenditure ..	24,57,674	21,58,551	5,19,139	25,94,555	20,33,592	5,40,972	24,89,699	17,79,324	4,64,569	21,67,056
Deficit ..	6,85,442	5,94,607	3,39,348	9,33,955	7,45,735	3,59,594	11,05,329	8,46,925	3,05,692	11,52,617

\* As these figures represent adjustments within the Department, they have not been shewn in the column representing totals for the Department as a whole.

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APPENDIX XVIII.

Statement of the work done by the Indian Stores Department, year by year, since its constitution.

(Vide paragraphs 3 and 7 of the Report).

Year.	Value of textile stores and leather goods purchased.	Value of Engineering and miscellaneous stores purchased.	Total value of stores purchased.	Amount of stores inspected and charged on value.	Tonnage of stores inspected and charged on weight.	Tests and analyses carried out.	Total fees earned.
1	2	3	4	5	6	7	8
	Rs.	Rs.	Rs.	Rs.	Tons Rs.	No. Rs.	Rs.
1921-22 (January-March 1922)	59,27,330	..	59,27,330	..	..	..	59,273
1922-23 .. .. .	1,64,78,305	..	1,64,78,305	1,42,79,333	107,648	5,744	4,42,168
1923-24 .. .. .	1,17,08,745	50,15,636	1,67,24,401	2,21,45,403	171,797	7,364	6,20,742
1924-25 .. .. .	1,33,26,953	1,25,84,188	2,59,11,141	2,13,73,382	251,760	9,989	8,57,941
1925-26 .. .. .	1,18,81,516	1,47,86,417	2,66,67,933	3,98,78,885	292,550	9,932	11,08,043
1926-27 .. .. .	1,62,86,293	2,35,95,952	3,98,82,245	5,19,88,643	336,368	12,354	15,01,075
1927-28 .. .. .	1,18,82,009	2,54,22,663	3,73,04,672	5,71,10,815	331,628	13,065	15,72,158
1928-29 .. .. .	1,16,24,973	2,44,23,101	3,60,48,074	5,42,33,106	218,764	12,953	12,92,698
1929-30 .. .. .	1,13,36,292	3,15,89,409	4,29,25,701	7,47,99,137	343,109	14,273	17,33,302
1930-31 .. .. .	98,37,157	2,78,45,539	3,76,82,696	6,61,19,542	328,020	16,256	15,59,697
1931-32 .. .. .	1,06,14,978	2,53,85,028	3,60,00,006	4,84,21,867	310,504	14,401	13,20,790
1932-33 .. .. .	79,12,155	2,51,78,748	3,30,90,903	3,54,07,609	156,203	11,512	9,69,454
Total from 1st January 1922 to 31st March 1933 ..	13,88,16,706	21,58,26,701	35,46,43,407	48,57,57,722	2,848,351	1,27,843	1,30,32,941

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