

## THE RUBBER TRADE.

## Contents.

	Page.
INTRODUCTORY .. .. .	232
Summary of results .. .. .	232
Qualifications affecting comparisons .. .. .	233
Value of output and cost of materials .. .. .	233
PRODUCTION .. .. .	233
Total make of rubber .. .. .	233
Principal products .. .. .	234
Other products .. .. .	236
Repairs and work done on commission .. .. .	236
Value of output free from duplication .. .. .	237
Cost of materials .. .. .	237
Net output .. .. .	237
Exports and imports .. .. .	238
WAGES IN 1924 .. .. .	238
EMPLOYMENT .. .. .	239
MECHANICAL POWER .. .. .	239
TABLES .. .. .	241

## Introductory.\*

The tables on pages 241 to 245 are based on returns received from firms in Great Britain and Northern Ireland whose business in 1924 consisted wholly or mainly in the manufacture of rubber goods. The number of such separate returns was 376. About 70 firms to which schedules were sent did not furnish returns, but these firms for the most part had very small establishments and they included some which had ceased operations before the end of the censal year. On the basis of the information available it is estimated that they did not employ more than 150 persons in all and that their total net output probably did not exceed £25,000.

*Summary of results.*—The following table shows the main results of the Censuses of 1924, 1912 and 1907, comparisons between the figures for the three years being subject to the qualifications mentioned in the next paragraph.

\* See also the Notes on pp. vii to xv.

Particulars.	Unit.	1924.	1912.	1907.
Value of goods made and work done (Gross output) .. .. .	£'000	24,024	12,624	8,908
Cost of materials used .. .. .	"	12,236	8,240	5,932
Net output .. .. .	"	11,788	4,384	2,976
Average number of persons employed .. .. .	No.	48,087	31,550	24,039
Net output per person employed .. .. .	£	245	139	124
Mechanical power available :—				
Prime movers .. .. .	H.P.	51,676	35,865	27,440
Electric motors driven by purchased electricity .. .. .	"	60,217	7,244	(not recorded)

*Qualifications affecting comparisons.*—In considering the above table and the other tables in this report which show figures for different censal years, it should be borne in mind that :—

(1) The comparability of figures relating to value or cost is affected by the changes which have taken place in the general purchasing power of money.

(2) The Censuses of 1907 and 1912 covered Great Britain and the whole of Ireland, but that of 1924 applied only to Great Britain and Northern Ireland. Separate particulars relating to the output of rubber goods were not published in connexion with the Census of Production taken by the Government of the Irish Free State in respect of the year 1926, but the exclusion of Southern Ireland in 1924 does not seriously affect the comparability of the figures.

(3) The Censuses of 1907 and 1924 extended to all firms, however small, but, in 1912, firms employing not more than five persons (excluding the proprietors) were merely required to state the average number of persons employed by them in the year. According to the information so furnished, the average number of persons employed in the establishments thus excluded was 345, or about 1 per cent. of the number employed by the remaining firms as shown in the above table.

*Value of output and cost of materials.*—The figures in the above table representing the value of goods made and work done and the cost of materials used, are the aggregates of the figures recorded by the firms that made returns, and, for the reasons explained in paragraphs (i) and (ii) on page xiii, they probably over-state the value of the output of, and the cost of materials used by, the Rubber Trade considered as a whole. The matter is discussed on page 237, where it is estimated that the value, free from duplication, of the output of the Rubber Trade in 1924 lay between £23,000,000 and £24,000,000, and the cost of materials purchased from sources outside the trade and worked up into its products lay between £11,200,000 and £12,200,000.

## Production.

Detailed information relating to the output of the Rubber Trade in 1924 is given in Table II on pages 242 and 243.

*Total make of rubber.*—The total quantity of rubber in sheets, thread, etc., manufactured in 1924, inclusive of such rubber used

for further manufacturing purposes in the works of the firms by which it was made, was 43,270 tons. Exports of sheet or thread rubber in 1924 amounted to 560 tons and net imports to 280 tons, the total quantity available for consumption in the United Kingdom in the year being thus, approximately, 43,000 tons.

Of the total output of sheet or thread rubber (43,270 tons), 39,520 tons were used by the manufacturers themselves in the production of other goods, and the remaining 3,750 tons were sold in sheets, thread, etc., or added to stock.

Rubber manufacturers were not required to furnish a statement of their total make of sheet or thread rubber in the Censuses of 1907 or 1912.

*Principal products.*—The following statement shows the value of the output for sale of the principal products of the Rubber Trade in 1924, 1912 and 1907, the figures for each year being inclusive of the output of similar products returned on schedules for other trades.

Kind of products.	1924.	1912.	1907.
	Selling value.	Selling value.	Selling value.
	£'000.	£'000.	£'000.
Sheet and thread rubber; rubber valves, washers, etc., for industrial purposes; and miscellaneous rubber goods .. .. .	2,338	2,130	2,585
Tyres and tyre covers, pneumatic .. .. .	8,067	4,546	2,298
Solid tyres .. .. .	2,473	699	536
Waterproof piece goods .. .. .	1,102	544	1,194*
Rubber boots and shoes .. .. .	1,265	502	
Hose and tubing of rubber, etc. .. .. .	1,885	658	534
Machinery belting of rubber or balata .. .. .	923	511	136
Rubber heels .. .. .	819†	499	314
Hot water and air goods; medical, surgical, etc., goods .. .. .	651	254	181
Rubber compounds and solution .. .. .	181	135	51
Rubber substitutes .. .. .	126	37	54
Vulcanite, ebonite, and articles thereof .. .. .	912	186	—
Waste and reclaimed rubber .. .. .	237	476	137
<b>TOTAL—PRINCIPAL PRODUCTS .. .. .</b>	<b>20,979</b>	<b>11,177</b>	<b>8,020</b>

\* Including some waterproof garments.

† Including soles.

The value of the output of the principal rubber products in 1924 was over two and a half times the value of similar products in 1907. The cost of the materials purchased represented about two-thirds of the value of the gross output in 1907 and 1912 and only about one-half in 1924. The most important of these materials is raw rubber, the average import value of which was 2·90 shillings per lb. in 1907, 3·50 shillings per lb. in 1912, and 1·14 shillings per lb. in 1924. The value of materials used was rather more than twice as great in 1924 as in 1907, and the value per lb. of imported raw rubber in 1924 was less than 40 per cent. of the corresponding figure for 1907, so that it would appear that the volume of output was much greater in 1924 than in 1907.

More detailed particulars of the output of the principal products of the trade in 1924 are given in the following table:—

Kind of products.	Returned on schedules for			
	The Rubber Trade.		All trades.	
	Quantity.	Selling value.	Quantity.	Selling value.
Rubber in sheets, thread, etc. .. .. .	Tons. 3,750	£'000. 971	Tons. 3,760	£'000. 973
Rubber valves, washers, rings, packing, etc., for industrial purposes .. .. .	..	525	..	525
Rubber accessories for motor and cycle trades .. .. .	..	347	..	347
Rubber flooring .. .. .	..	137	..	137
Piping and tubing of rubber or rubber and other materials, armoured or not:—				
Hose .. .. .	Th. yds. 5,270	722	Th. yds. 5,270	722
Mechanicals .. .. .	Tons. 4,000	1,163	Tons. 4,000	1,163
<b>TOTAL VALUE—PIPING AND TUBING .. .. .</b>	..	<b>1,885</b>	..	<b>1,885</b>
Pneumatic tyres and tubes:—				
Outer covers—	Thous.		Thous.	
Motor car .. .. .	1,927	4,913	1,927	4,913
Motor cycle .. .. .	634	617	634	617
Cycle .. .. .	5,932	1,291	5,932	1,291
Not separately distinguished .. .. .	..	..	35	28
Inner tubes .. .. .	7,382	1,202	7,489	1,218
<b>TOTAL—PNEUMATIC TYRES AND TUBES .. .. .</b>	<b>15,875</b>	<b>8,023</b>	<b>16,017</b>	<b>8,067</b>
Solid tyres:—				
For mechanically propelled vehicles .. .. .	404	2,083	412	2,128
For other vehicles .. .. .	..	306	..	306
Not separately distinguished .. .. .	..	39	..	39
<b>TOTAL VALUE—SOLID TYRES .. .. .</b>	..	<b>2,428</b>	..	<b>2,473</b>
Machinery belting, rubber or balata .. .. .	Tons. 1,670	636	Tons. 1,820	923*
Hot water and air goods; medical, surgical, etc., goods .. .. .	..	645	..	651
Rubberproofed and waterproofed piece goods .. .. .	..	979	..	1,102
Rubber boots and shoes .. .. .	Th. doz. pairs. 988	1,256	Th. doz. pairs. 991	1,265
Rubber heels and soles .. .. .	Tons. 3,720	819	Tons. 3,720	819
Miscellaneous rubber goods .. .. .	..	165	..	182
Rubber compounds and solutions .. .. .	1,680	179	1,680	181
Rubber substitutes .. .. .	..	72	..	126
Vulcanite and ebonite, and articles thereof .. .. .	..	774	..	912
Vulcanised fibre .. .. .	..	173	..	174
Waste and reclaimed rubber .. .. .	..	234	..	237
<b>TOTAL VALUE—PRINCIPAL PRODUCTS .. .. .</b>	..	<b>20,248</b>	..	<b>20,979</b>

\* Includes machinery belting valued at £225,000, for which quantity was not stated.

No particulars of the *quantity* of any class of rubber goods made in 1907 were obtained, but in 1912 it was stated that 1,035,000 dozen pairs of rubber boots and shoes and 35,280 cwts. of rubber and balata belting were manufactured in that year. It will be seen that tyres and tubes accounted for rather over 50 per cent. of the total value of the principal products of the trade in 1924.

*Other products.*—In addition to the principal products, dealt with in the preceding tables, there was returned on schedules for the Rubber Trade an output of other goods as set out below. These goods, being of kinds mainly produced in other trades, are dealt with in the reports on those trades\* :—

Kind of goods.	1924.		1912.	1907.
	Quantity.	Selling value.	Selling value.	Selling value.
	Number.	£'000.	£'000.	£'000.
Overcoats, mackintoshes, oilskins, etc. :—				
Rubber proofed .. .. .	2,015,000	1,666	} 950	} 770
Oil, paint and other proofings ..	72,000	48		
Other descriptions .. .. .	208,000	257		
Sports' requisites, including golf, tennis and other rubber balls ..	..	1,056	} 438	} 473
Toys, wholly or mainly of rubber..	..	45		
Other goods made .. .. .	..	162	121	90
TOTAL VALUE .. .. .	..	3,234	1,562	1,333

*Repairs and work done on commission.*—In addition to the manufactured goods recorded in the preceding paragraphs, the following amounts were returned in respect of repairs and other work done for customers, the figures for each year being inclusive of amounts received for similar work recorded by firms that made their returns on schedules for other trades. The amount so included for 1924 is £23,000.

Kind of work done.	1924.	1912.	1907.
	Amount received.	Amount received.	Amount received.
	£'000.	£'000.	£'000.
Repairs .. .. .	82	155	15
Work done on commission :—			
Waterproofing .. .. .	473	267	106
Other work .. .. .	10	4	—
TOTAL .. .. .	565	426	121

\* The total production of overcoats, mackintoshes, etc., is given on page 253 of the volume containing the report on the Clothing Trades, and of sports requisites, etc., on page 419 of this volume.

The greater part of the amounts shown for repairs represents work done on tyres on behalf of private customers, while the work done on commission was probably done mainly on material supplied by merchant firms.

*Value of output free from duplication.*—The gross value of the goods manufactured by firms that furnished returns on schedules for the Rubber Trade was returned as £24,024,000, including £542,000 received for repairs, waterproofing and other work done for customers. As regards goods made, the possibility of duplication arises in respect of goods made by one firm and sold to another for further manufacture, both firms making returns on schedules for the Rubber Trade. The principal classes of goods so affected are :—rubber in sheets and threads, £971,000 ; rubberproofed and waterproofed piece goods, £979,000 ; rubber compounds and solutions, £179,000 ; rubber substitutes, £72,000 ; and waste and reclaimed rubber, £234,000 ; making a total of £2,435,000. The rubber and waterproofed piece goods, however, were probably in the main sold to firms in the clothing trades whose output of rubber-proofed goods was returned as £1,534,000 (taking no account of a further £1,589,000 for garments not distinguished as to whether they were proofed or not). There remain the other goods valued at £1,456,000, and of these there were exported sheet and thread rubber valued at £307,000 f.o.b., and reclaimed rubber, waste rubber, and rubber substitutes to the value of £118,000 f.o.b., besides, probably, some compounds and solutions not separately recorded. Allowing roughly for the factory value of these exports, there remains nearly £1,100,000, the value of goods which were either sold to firms that made returns on schedules for the Rubber Trade, in which case the value is duplicated, or were sold to firms outside the Rubber Trade (e.g. the electrical trades), or were added to makers' stocks. The repair work and commission work were done wholly or mainly for private customers, for firms outside the Rubber Trade or for merchants. The value of the output returned on schedules for the Rubber Trade in respect of the year 1924 may, therefore, be estimated, free from duplication, at a figure lying between £23,000,000 and £24,000,000. The corresponding net figure for 1907 lay between £8,400,000 and £8,900,000.

*Cost of materials.*—The cost of materials used by firms that made their returns on schedules for the Rubber Trade was returned as £12,236,000 in 1924, a sum which, by the exclusion of purchases of products of other firms in the trade, is reduced to an amount lying between £11,200,000 and £12,200,000. The corresponding net figure for 1907 lay between £5,400,000 and £5,900,000.

*Net output.*—The net output in 1924 of the firms that made their returns on schedules for the Rubber Trade (whose gross output was valued at £24,024,000) was £11,788,000, that sum representing,

without duplication, the total amount by which the value, as delivered, of the aggregate output exceeded the cost, as purchased, of the materials used.

The net output per head of persons employed in the censal year 1924 was £245 as compared with £139 in 1912, and £124 in 1907.

*Exports and imports.*—In 1907 and 1912 the only rubber goods which were recorded by quantity in the import and export statistics were boots and shoes. Retained imports and British exports of rubber boots and shoes in the three censal years were as follows:—

	1924.	1912.	1907.
	In thousand dozen pairs.		
Retained imports .. .. .	225	98	105
British exports .. .. .	259	128	301

The following table, relating to the year 1924, shows the total production of certain of the main classes of rubber manufactures in relation to the exports and imports of similarly described goods.

Kind of goods.	Production.	Exports.	Net imports.	Available for use in the United Kingdom.	Share of home market held by British made goods.
	Number.	Number.	Number.	Number.	Per cent.
Tyres and tubes:—					
Pneumatic—					
Outer covers—					
Motor car ..	1,927,000	550,000	843,000	2,220,000	62·0
Motor cycle ..	634,000	161,000	20,000	493,000	95·9
Cycle .. ..	5,932,000	1,623,000	724,000	5,033,000	85·6
Not separately distinguished	35,000	—	—	35,000	—
Total—Outer covers ..	8,528,000	2,334,000	1,587,000	7,781,000	79·6
Inner tubes for motor cars, motor cycles, and cycles ..	7,489,000	1,935,000	2,039,000	7,593,000	73·1
Solid tyres for mechanically propelled vehicles .. ..	412,000	62,000	72,000	422,000	82·9
Rubber boots and shoes	991,000	259,000	225,000	957,000	76·5
	Tons.	Tons.	Tons.	Tons.	
Rubber heels and soles	3,720	262	93	3,551	97·4

The exports and imports of tyres and tubes shown above include those exported or imported on complete vehicles.

#### Wages in 1924.

Under the Census of Production Act, 1906, the powers of the Board of Trade to require information do not extend to particulars of the amount of wages paid, and, consequently, no information on this head was secured in connexion with the Census of 1924. As a result, however, of the voluntary enquiry undertaken by the Ministry of Labour into wages and hours in the United Kingdom in 1924,

information was obtained as to the total wage-bill of a group of firms in the Rubber Trade that made returns both to the Ministry of Labour and to the Census of Production office. According to the Census records this group of firms employed, in the week ended 18th October, 1924, 31,101 operatives, or 76 per cent. of the total of 40,771 operatives for the trade as a whole, and their net output totalled £9,484,000, or 80 per cent. of the aggregate net output of £11,788,000 for the trade as a whole. The total wage-bill of these firms, as returned to the Ministry of Labour, was £3,544,000, representing about 37 per cent. of their aggregate net output.

#### Employment.

The detailed information relating to employment in 1924 is summarised in Table III on page 244. The following table sets out certain particulars for that year together with those relating to the two previous censal years. For the purpose of this comparison, the average numbers of operatives of each sex returned for 1924 have been divided between the two age-groups in the proportions shown by the data relating to the week ended 18th October.

Average number.	Males.		Females.		Males and females.	
	Under 18.	All ages.	Under 18.	All ages.	Under 18.	All ages.
<b>1924.</b>						
Operatives .. .. .	2,243	22,516	4,258	18,130	6,501	40,646
Administrative, etc. ..	506	5,110	342	2,331	848	7,441
TOTAL .. .. .	2,749	27,626	4,600	20,461	7,349	48,087
<b>1912.</b>						
Wage earners .. .. .	1,829	17,519	2,646	10,538	4,475	28,057
Salaried .. .. .	383	3,057	94	436	477	3,493
TOTAL .. .. .	2,212	20,576	2,740	10,974	4,952	31,550
<b>1907.</b>						
Wage earners .. .. .	1,698	13,041	1,910	8,515	3,608	21,556
Salaried .. .. .	300	2,209	38	274	338	2,483
TOTAL .. .. .	1,998	15,250	1,948	8,789	3,946	24,039

The numbers of operatives recorded month by month in 1924 ranged from 2,646 below the average, in January, to 910 above the average, in July (see Table IIIB, page 244).

#### Mechanical Power.

The detailed information relating to mechanical power in 1924 is summarised in Table IV on page 245. The following table sets out the particulars for the three censal years relating to the capacity and kinds of *prime movers* and the capacity of *electric generators* installed.

Power equipment.	1924.			1912.	1907.
	Ordinarily in use.	In reserve or idle.	Total.	Total.	Total.
	H.P.	H.P.	H.P.	H.P.	H.P.
<b>PRIME MOVERS :—</b>					
Reciprocating steam engines ..	24,081	5,198	29,279	32,130	26,423
Steam turbines .. .. .	17,512	2,681	20,193	1,750	—
Gas engines .. .. .	1,693	377	2,070	1,875	} 951
Petrol and light oil engines ..	44	8	52	—	
Heavy oil engines .. .. .	52	—	52	—	
Water power .. .. .	30	—	30	110	
Other .. .. .	—	—	—	—	24
<b>TOTAL .. .. .</b>	<b>43,412</b>	<b>8,264</b>	<b>51,676</b>	<b>35,865</b>	<b>27,440</b>
<b>ELECTRIC GENERATORS :—</b>					
Driven by—	Kw.	Kw.	Kw.	Kw.	Kw.
Reciprocating steam engines ..	5,163	1,617	6,780	5,119	4,415
Steam turbines .. .. .	12,944	2,000	14,944	1,250	—
Gas engines .. .. .	120	38	158	—	} 37
Petrol and light oil engines ..	—	4	4	455	
Other prime movers .. .. .	—	—	—	—	
<b>TOTAL .. .. .</b>	<b>18,227</b>	<b>3,659</b>	<b>21,886</b>	<b>6,824</b>	

The capacity of *electric motors* recorded in 1924 and in 1912 was as shown below :—

Electric motors.	1924.			1912.
	Ordinarily in use.	In reserve or idle.	Total.	Total.
	H.P.	H.P.	H.P.	H.P.
<b>Driven by—</b>				
Electricity generated in own works ..	33,286	3,209	36,495	8,653
Purchased electricity .. .. .	55,675	4,542	60,217	7,244

Corresponding information was not required for 1907. The total number of Board of Trade units of electricity purchased for power and lighting purposes in that year was returned as 613,000.

## TABLES.

## I.—Summary of results.

Particulars.	Unit.	England and Wales and N. Ireland.*	Scotland.	United Kingdom.
Value of goods made and work done (Gross output) .. .. .	£'000	20,877	3,147	24,024
Cost of materials used .. .. .	„	10,534	1,702	12,236
Net output .. .. .	„	10,343	1,445	11,788
Average number of persons employed	No.	40,522	7,565	48,087
Net output per person employed ..	£	255	191	245
<b>Mechanical power available :—</b>				
Prime movers .. .. .	H.P.	48,667	3,009	51,676
Electric motors driven by purchased electricity .. .. .	„	49,099	11,118	60,217

\* In order to avoid the possible disclosure of information relating to individual firms, the figures for Northern Ireland have been combined with those for England and Wales.

## II.—Production.

Goods sold or added to stock and work done.	Unit.	England and Wales and N. Ireland.*	Scotland.	United Kingdom.
Rubber in sheets, thread, etc. ..	Tons	3,400	350	3,750
Rubber valves, washers, rings, packing, etc., for industrial purposes .. ..	£'000	908	63	971
Rubber accessories for the cycle and motor trades .. .. .	£'000	†	†	525
Rubber flooring .. .. .	£'000	†	†	347
	£'000	†	†	137
Piping and tubing of rubber or rubber and other materials, armoured or not :—				
Hose .. .. .	Th. yds.	3,589	1,681	5,270
	£'000	536	186	722
Mechanicals .. .. .	Tons	3,150	850	4,000
	£'000	1,040	123	1,163
TOTAL VALUE—PIPING AND TUBING ..	£'000	1,576	309	1,885
Pneumatic tyres and tubes :—				
Outer covers—				
Motor car .. .. .	Thous.	†	†	1,927
	£'000	†	†	4,913
Motor cycle .. .. .	Thous.	†	†	634
	£'000	†	†	617
Cycle .. .. .	Thous.	†	†	5,932
	£'000	†	†	1,291
Inner tubes .. .. .	Thous.	†	†	7,382
	£'000	†	†	1,202
TOTAL—PNEUMATIC TYRES AND TUBES	Thous.	†	†	15,875
	£'000	†	†	8,023
Solid tyres :—				
For mechanically propelled vehicles	Thous.	†	†	404
	£'000	†	†	2,083
For other vehicles .. .. .	£'000	†	†	306
Not separately distinguished .. .. .	£'000	†	†	39
TOTAL VALUE—SOLID TYRES .. .. .	£'000	†	†	2,428
Machinery belting, rubber or balata	Cwts.	†	†	33,300
	£'000	†	†	636
Hot water and air goods; medical, surgical and dental appliances .. .. .	£'000	514	131	645
Rubberproofed and waterproofed piece goods .. .. .	£'000	663	316	979
Rubber boots and shoes .. .. .	Th. doz.	†	†	988
	£'000	†	†	1,256
Rubber heels and soles .. .. .	Tons	3,720	—	3,720
	£'000	819	—	819
Miscellaneous rubber goods .. .. .	£'000	†	†	165
Rubber compounds and solutions	Cwts.	†	†	33,630
	£'000	†	†	179
Rubber substitutes .. .. .	£'000	72	—	72
Vulcanite and ebonite, and articles thereof	£'000	†	†	774
Vulcanised fibre .. .. .	£'000	173	—	173
Waste and reclaimed rubber .. .. .	£'000	234	—	234

## II.—Production—continued.

Goods sold or added to stock and work done.	Unit.	England and Wales and N. Ireland.*	Scotland.	United Kingdom.
Overcoats, mackintoshes, oilskins and the like :—				
Rubberproofed .. .. .	Th. garments	1,653	362	2,015
	£'000	1,422	244	1,666
Oil, paint and other proofings ..	Th. garments	†	†	72
	£'000	†	†	48
Other descriptions .. .. .	Th. garments	†	†	208
	£'000	†	†	257
TOTAL—OVERCOATS, MACKINTOSHES, ETC.	Th. garments	†	†	2,295
	£'000	†	†	1,971
Sports requisites, including golf, tennis and other rubber balls .. .. .	£'000	1,004	52	1,056
Toys, wholly or mainly of rubber ..	£'000	45	—	45
Other goods made .. .. .	£'000	154	8	162
Repairs to rubber, etc., goods .. ..	£'000	75§	7§	82§
Work done on commission :—				
Waterproofing .. .. .	£'000	†	†	450§
Other work .. .. .	£'000	10§	—	10§
TOTAL VALUE OF GOODS MADE AND WORK DONE (GROSS OUTPUT) .. .. .	£'000	20,877	3,147	24,024

\* See footnote to Table I.

† In order to avoid the possible disclosure of information relating to individual firms, figures are given only for the United Kingdom as a whole.

§ Amount received for work done.

## III.—Employment.

## A.—NUMBERS EMPLOYED IN WEEK ENDED 18TH OCTOBER, 1924.

Kind of staff.	Males.		Females.		Males and females.	
	Under 18.	All ages.	Under 18.	All ages.	Under 18.	All ages.
<i>England and Wales and Northern Ireland :—*</i>						
Operatives .. ..	1,934	19,267	3,372	14,446	5,306	33,713
Administrative, etc.†	464	4,713	265	1,994	729	6,707
TOTAL .. ..	2,398	23,980	3,637	16,440	6,035	40,420
<i>Scotland :—</i>						
Operatives .. ..	325	3,420	875	3,638	1,200	7,058
Administrative, etc.†	42	397	77	337	119	734
TOTAL .. ..	367	3,817	952	3,975	1,319	7,792
<i>United Kingdom :—</i>						
Operatives .. ..	2,259	22,687	4,247	18,084	6,506	40,771
Administrative, etc.†	506	5,110	342	2,331	848	7,441
TOTAL .. ..	2,765	27,797	4,589	20,415	7,354	48,212

\* See footnote to Table I.

† Administrative, technical and clerical staff.

## B.—OPERATIVES EMPLOYED IN ONE WEEK IN EACH MONTH OF 1924.

*England and Wales and Northern Ireland.\**  
(Annual average : Males, 19,196 ; Females, 14,619 ; Total, 33,815.)

Week ended.	Males.	Females.	Total.	Week ended.	Males.	Females.	Total.
Jan. 12th ..	18,073	13,551	31,624	July 19th ..	19,520	15,147	34,667
Feb. 16th ..	18,491	14,176	32,667	Aug. 16th ..	19,499	14,910	34,409
March 15th ..	19,165	14,781	33,946	Sept. 13th ..	19,379	14,488	33,867
April 12th ..	19,318	15,121	34,439	Oct. 18th ..	19,267	14,446	33,713
May 17th ..	19,552	15,014	34,566	Nov. 15th ..	19,247	14,379	33,626
June 21st ..	19,532	14,938	34,470	Dec. 13th ..	19,313	14,478	33,791

*Scotland. (Annual average : Males, 3,320 ; Females, 3,511 ; Total, 6,831.)*

Jan. 12th ..	3,162	3,214	6,376	July 19th ..	3,333	3,556	6,889
Feb. 16th ..	3,234	3,308	6,542	Aug. 16th ..	3,395	3,562	6,957
March 15th ..	3,263	3,384	6,647	Sept. 13th ..	3,389	3,552	6,941
April 12th ..	3,259	3,477	6,736	Oct. 18th ..	3,420	3,638	7,058
May 17th ..	3,273	3,528	6,801	Nov. 15th ..	3,399	3,682	7,081
June 21st ..	3,352	3,572	6,924	Dec. 13th ..	3,363	3,657	7,020

*United Kingdom. (Annual average : Males, 22,516 ; Females, 18,130 ; Total, 40,646.)*

Jan. 12th ..	21,235	16,765	38,000	July 19th ..	22,853	18,703	41,556
Feb. 16th ..	21,725	17,484	39,209	Aug. 16th ..	22,894	18,472	41,366
March 15th ..	22,428	18,165	40,593	Sept. 13th ..	22,768	18,040	40,808
April 12th ..	22,577	18,598	41,175	Oct. 18th ..	22,687	18,084	40,771
May 17th ..	22,825	18,542	41,367	Nov. 15th ..	22,646	18,061	40,707
June 21st ..	22,884	18,510	41,394	Dec. 13th ..	22,676	18,135	40,811

\* See footnote to Table I.

## IV.—Mechanical Power.

## PARTICULARS OF PRIME MOVERS, ELECTRIC GENERATORS AND ELECTRIC MOTORS.

Power equipment.	England and Wales and N. Ireland.*		Scotland.		United Kingdom.	
	Ordinarily in use.	In reserve or idle.	Ordinarily in use.	In reserve or idle.	Ordinarily in use.	In reserve or idle.
	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
PRIME MOVERS :—						
Reciprocating steam engines .. ..	21,281	5,190	2,800	8	24,081	5,198
Steam turbines .. ..	17,352	2,681	160	—	17,512	2,681
Gas engines .. ..	1,672	357	21	20	1,693	377
Petrol and light oil engines .. ..	44	8	—	—	44	8
Heavy oil engines .. ..	52	—	—	—	52	—
Water power .. ..	30	—	—	—	30	—
TOTAL .. ..	40,431	8,236	2,981	28	43,412	8,264
TOTAL OF PRIME MOVERS INSTALLED .. ..	48,667		3,009		51,676	
ELECTRIC GENERATORS :—	Kw.	Kw.	Kw.	Kw.	Kw.	Kw.
Driven by—						
Reciprocating steam engines .. ..	5,163	1,617	—	—	5,163	1,617
Steam turbines .. ..	12,944	2,000	—	—	12,944	2,000
Gas engines .. ..	120	38	—	—	120	38
Petrol and light oil engines .. ..	—	4	—	—	—	4
TOTAL .. ..	18,227	3,659	—	—	18,227	3,659
TOTAL OF ELECTRIC GENERATORS INSTALLED	21,886		—		21,886	
ELECTRIC MOTORS :—	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
Driven by—						
Electricity generated in own works .. ..	33,286	3,209	—	—	33,286	3,209
Purchased electricity	45,083	4,016	10,592	526	55,675	4,542

\* See footnote to Table I.