

## THE BREAD AND BISCUIT TRADES.

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## Introductory.\*

The Tables on pages 57-60 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 bread, biscuits, cakes, pastries, etc. The number of such separate Returns was 18,350. About 5,875 firms to which schedules were sent did not furnish Returns, but the majority of these firms had very small establishments, frequently conducted in connection with a retail trading business, and they included a number which ceased operations in the course of the censal year. On the basis of the information available it is estimated that they did not employ more than 14,000 persons in all and that their total net output may probably have amounted to about £2,500,000.

*Summary of results.*—The following table shows the main results of the Censuses of 1924 and 1907, comparisons between the figures

\*See also the Notes on pp. vii-xiv.

for the two years being subject to the qualifications mentioned in the next paragraph. Particulars relating to the Census of 1912 have been omitted for the reasons stated in that paragraph.

Particulars.	Unit.	1924.	1907.
Value of goods made (Gross output) .. ..	£'000	111,170	38,962
Cost of materials used .. ..	"	71,737	27,442
Net output .. ..	"	39,433	11,520
Average number of persons employed .. ..	No.	155,223	110,357
Net output per person employed .. ..	£	254	104
Mechanical power available :—			
Prime movers .. ..	H.P.	18,933	20,554
Electric motors driven by purchased electricity .. ..	"	66,100	(not recorded)

*Qualifications affecting comparisons.*—In considering the above table and the other tables in this Report which show figures for the two censal years, the following qualifications should be borne in mind :—

(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 Census of 1907 covered the whole of Great Britain and Ireland, but that of 1924 applied only to Great Britain and Northern Ireland. According to the Census of Production taken by the Government of the Irish Free State in respect of the year 1926, the total value of the goods made and work done in the Bread, Flour Confectionery and Biscuit Making Industries in that year was returned as £5,072,000, and the average number of persons employed as 8,700; these figures are exclusive of certain small firms whose gross output was estimated at not more than £80,000.

(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 number of persons employed in the establishments thus excluded was 50,283 or 32·8 per cent. of the number (153,109) employed by the remaining firms. In what degree this total of over 50,000 represents persons employed in making bread, biscuits and cakes is not known, since the schedule issued in connexion with the 1912 Census covered not only the Bread and Biscuit Trades but also the Cocoa, Confectionery and Fruit Preserving Trades (see pp. 61 and 88). Doubtless also many of the firms that were exempted were engaged chiefly in retail trading, the baking of bread, etc., being but a minor part of their business. It is certain, therefore, that the proportion of output excluded by the exemption of small firms in 1912 was very much smaller than the proportion of persons employed shown

above, but it is, nevertheless, thought to be sufficient to invalidate comparisons, and, consequently, the relative information obtained for 1912 is not included in this Report.

*Value of output and cost of materials.*—As stated on page 50 the gross output of the Bread and Biscuit Trades involves little or no duplication (see Notes on pages xi–xiii) and the value of the output, free from duplication, of these trades in 1924 may be taken at the same figure as the gross output, £111,170,000, shown in the above table. Similarly, the materials used were practically all purchased from sources outside the Bread and Biscuit Trades, the cost of such materials in 1924 being £71,737,000.

### Production.

Detailed information as to the output of the Bread and Biscuit Trades in 1924 will be found in Table II on page 57.

In addition to the output dealt with in this Report, bread valued, on a cost basis, at £135,000 was made in 1924 at Army bakeries and H.M. Prisons and by Railway Companies.\* The corresponding figure for 1907 was £140,000.

#### *Principal products of bread and biscuit bakers.*

The following statement shows the value of the output of the principal products of bread and biscuit bakers for the years 1924 and 1907, the figures for each year including, in addition to the output returned on schedules for the Bread and Biscuit Trades, the output of similar products recorded on schedules for other trades.

Kind of products.	Selling value.	
	1924.	1907.
	£'000.	£'000
Bread, biscuits, cakes and pastry .. ..	103,883	38,516
Self-raising flour .. ..	2,285	100
Other principal products .. ..	714	19
<b>TOTAL</b> .. ..	<b>106,882</b>	<b>38,635</b>

Firms were instructed to exclude from their Returns all particulars relating to goods (*e.g.*, confectionery) purchased and sold retail in the same condition as received; similarly, meats and other commodities purchased and cooked for sale were not to be regarded as "output" for the purposes of the Census Return.

It will be seen that the value of the chief products in 1924 was more than two and three-quarter times the value returned in 1907, although the average retail selling price of bread had increased by only about two-thirds.

\* Such production falls within the scope of the Report on Public Utility Services, which forms part of a separate volume.

The following table gives more detailed particulars of the output of the chief products in 1924 :—

Kind of products.	Returned on schedules for			
	The Bread and Biscuit Trades.		All trades.	
	Quantity.	Selling value.	Quantity.	Selling value.
	Th. 4 lb. loaves.	£'000.	Th. 4 lb. loaves.	£'000.
Bread ..	1,215,899	45,823	1,215,899	45,823
Cakes, pastry, buns, scones, etc. ..	..	8,011	..	8,013
	..	31,080	..	31,227
Biscuits .. .. .	Th. cwts. 2,656	13,522	Th. cwts. 2,673	13,588
Bread, biscuits, cakes and pastry, not separately distinguished .. .. .	..	5,232	..	5,232
<b>TOTAL—BREAD, BISCUITS, CAKES AND PASTRY ..</b>	..	103,668	..	103,883
Self-raising flour .. .. .	..	2,174	..	2,285
Ice cream .. .. .	..	416	..	477
Other principal products .. .. .	..	138	..	237
<b>TOTAL VALUE .. .. .</b>	..	106,396	..	106,882

There is substantially no duplication between the items in the above table.

*Total quantity of bread, etc., baked in 1924 and 1907.*

Firms were asked to state voluntarily the quantity of bread baked by them and, as will be seen from the above table, firms responsible for at least 77½ per cent. of the output of bread did so. The average value of the bread baked by firms that stated the quantity of bread baked was 9·045 pence per 4-lb. loaf, which compares with 9 pence ascertained by the Ministry of Labour as the average retail price of bread in more than 500 towns. Assuming that the average value of all the bread distinguished as such in the Returns was the same as the average value returned by firms that stated both quantity and value, and assuming, further, that of the £5,232,000 shown for bread, cakes, etc., not separately distinguished, about 54·6 per cent. related to bread, as was the case with the output of firms that could state separately the values of the bread, biscuits, etc., baked by them, the total quantity of bread baked in the United Kingdom would be about 1,504 million 4-lb. loaves, valued at about £56,690,000.

The remainder of the unclassified output, if divided between biscuits and cakes, pastry, etc., in the proportion of the output recorded under these descriptions, would give a total for biscuits of about 2,815,000 cwts., valued at £14,310,000, and for cakes, pastry, etc., of about £32,883,000. Whether the small firms that

baked the greater part of the unclassified output produced a greater or a less proportion of bread or of biscuits to cakes, pastry, etc., than other bakers, there is not sufficient information to show.

In order to arrive at an estimate of the total quantity of bread baked for sale in 1924, the possible additional supply for which the firms that failed to furnish Returns were responsible must also be considered. It is estimated above that as many as 14,000 persons may have been employed by these firms. An examination of a large number of Returns from small firms shows an average value of output of about £560 per person. Such an average output of 14,000 persons, if divided in the proportions shown above, would require between 110 and 115 million 4-lb. loaves. The latter figure would bring up the total of bakers' bread to nearly 1,620 million 4-lb. loaves. Even if the whole of the output of these firms consisted of bread, it would not, unless assumed to be sold at a price below the average of the quantities recorded on the schedules, raise the total to more than 1,715 million 4-lb. loaves. An approximate division between Great Britain and Northern Ireland of the output shown in the preceding table, after the distribution of the inadequately classified articles, is given below :—

Products.	Great Britain.		Northern Ireland.	
	Quantity.	Value.	Quantity.	Value.
	Million 4 lb. loaves.	£'000.	Million 4 lb. loaves.	£'000.
Bread .. .. .	1,453	54,748	51	1,943
Biscuits .. .. .	Th. cwts. 2,776	14,147	Th. cwts. 39	162
Cakes, pastry, etc. ..	..	31,913	..	970
	..	100,808	..	3,075

In 1907 the output returned for Great Britain was :—*Bread*, £10,374,000 ; *Biscuits, cakes, pastry, etc.*, £8,551,000 ; *Bread, biscuits, etc., not separately distinguished*, £16,082,000 ; *Total*, £35,007,000. If the insufficiently classified output consisted of bread in the same proportion in which bread formed part of the more fully classified output, the total value of the output of bread would be rather more than £19,190,000, to which should be added about £15,000 in respect of output returned on other schedules. On the basis of about 5½d. per 4-lb. loaf, the quantity of bread baked in bakeries in Great Britain in 1907 would thus appear to have been in excess of 835 million 4-lb. loaves and may have been as much as 1,150 million loaves if the output inadequately classified consisted wholly of bread. Further, the consideration of firms that failed to render Returns would possibly add a substantial sum to the recorded output.

*Consumption of bread per head of the population.*

The quantity of bakers' bread available in Great Britain in 1924, estimated above at 1,453 million 4-lb. loaves, represents an average supply of 133 lb. of bread for each of the 43,628,000 inhabitants in that year. The 39,349,000 inhabitants of Great Britain in 1907 would, at the same rate, have required 1,308 million 4-lb. loaves. In order to produce figures roughly similar in magnitude for the supply available per head in the two years, the output that escaped record at the Census would need to have been so much greater in 1907 than in 1924 that the alternative explanation appears unavoidable, viz., that a substantially greater supply of bakers' bread was used per head of the population in 1924 than in 1907. An important factor in the increase appears to have been a diminution of the practice of home baking in the interval between the two Censuses. The Census records show the prevalence of that practice in Yorkshire and the English counties further north, the supply of bakers' bread per head of the population in those counties being less than one-half of the average supply per head in the counties of Lancashire and Cheshire and just over one-third of the supply (about 150 lb. per head) in the rest of England and Wales. In Scotland the supply of bakers' bread per head of the population was over 170 lb. in the year.

*Disposal of flour.*

It has already been estimated\* that 4,386,000 tons of flour were available for use in the United Kingdom in 1924. The Report of the Royal Commission on Food Prices† shows that the yield of bread per 280 lb. sack of flour varies from 92 to 97 loaves of 4 lb., and concludes that " anything below an output of 93 4-lb. loaves is due to unsuitable premises, inefficient plant, poor quality of the flour used, or lack of skill on the part of the baker ".

On the basis of an average of 94 loaves to the sack, the 1,504 million 4 lb. loaves, estimated to have been baked for sale by firms making Returns to the Census, would require about 2,000,000 tons of flour, and the further 115 million loaves which may have represented the output of small bakers from whom Returns were not secured would require a further amount of about 150,000 tons, making in all about 2,150,000 tons of flour or approximately 49 per cent. of the total quantity of flour available in the United Kingdom in the censal year. The assumption of an average of 93 loaves to the sack would increase the estimate by 23,000 tons, while the assumption of 95 loaves to the sack would decrease it by an approximately equal amount. To bring the supply of bakers' bread in the Northern counties up to the average of the rest of the country would add over 200,000 tons to the flour used and would raise the latter to about 55 per cent. of the total flour available.

\* See the Report on the Grain Milling Trade, pages 33 and 39.

† See paragraphs 74-76 of the First Report of the Commission, (Cmd. 2390 of 1925).

With regard to biscuit making, it may perhaps be permissible to assume that the loss of weight in baking is balanced by the addition of sugar and other ingredients, so that the weight of the biscuits made, about 143,000 tons, represents the approximate weight of flour used. There is no direct means of calculating the quantity of flour used in the production of cakes, pastry, etc., valued at £32,883,000; bread of this value would require about 1,160,000 tons of flour and the flour actually required may, perhaps, be roughly estimated as in the neighbourhood of 230,000 tons, a figure not inconsistent with such information as is available. It would thus appear that about 2,523,000 tons of flour, or about 57½ per cent. of the quantity available may have been used in 1924 in the production for sale of bread, biscuits, cakes, pastry, etc., in the United Kingdom. The remainder was used partly at factories in the manufacture of a great variety of foods (self-raising flour, meat pies, infants' foods, etc.), and for making textile starches,\* and partly in hotels, restaurants and private households for various culinary purposes.

*Other products.*

In addition to the bakery products dealt with in the preceding paragraphs, firms that made their Returns on schedules for the Bread and Biscuit Trades recorded, in 1924 and 1907, the output shown in the following table. The goods enumerated are mainly produced by other trades and are dealt with in the Reports on those trades.

Kind of goods.	1924.		1907.	
	Quantity.	Value.	Quantity.	Value.
	Th. cwts.	£'000.	Th. cwts.	£'000.
Sugar confectionery (including chocolate confectionery) .. .. .	225	1,980	69	149
Cocoa, chocolate and cocoa butter .. .. .	..	195	2	16
Meat pies, sausages, and other cooked meats .. .. .	..	1,141	..	155
Preserved meat, poultry, game, etc. .. .. .	..	100	..	..
Infant, invalid and breakfast foods .. .. .	..	287	113	147
Farinaceous preparations .. .. .	..	167	..	..
Poultry and animal foods (including bake-house offals) .. .. .	..	126	..	82
Marmalade, jams and fruit jellies .. .. .	115	442	12	19
Other preserved fruit .. .. .	..	53	..	..
Table jellies, custard and baking powders .. .. .	..	138	..	..
Other foods, syrups, essences, etc. .. .. .	..	145	..	87
TOTAL .. .. .	..	4,774	..	655

The greater extent to which bakery firms had taken up the manufacture of these subsidiary products as compared with 1907 is a prominent feature of the 1924 Returns, the proportion of subsidiary products to the total of principal products being about 4.5 per cent. in 1924 and about 1.7 per cent in 1907.

\* See the Report on the Starch, Blue, Polishes, etc., Trades, which forms part of a separate volume.

*Net output.*

The net output in 1924 of the firms that made their Returns on schedules for the Bread and Biscuit Trades (whose gross output was valued at £111,170,000) was £39,433,000, that sum representing, without duplication, the total amount by which the value of the aggregate output exceeded the cost of the materials used.

The net output per head of persons employed in the censal year 1924 was £254, as compared with £104 in 1907.

*Quantity of flour used in 1924.*

In response to a question in the Census schedule asking bakers to state voluntarily the quantity of flour used by them in the year, firms with a total gross output valued at £82,874,000, or 74·5 per cent. of the gross output of the Bread and Biscuit Trades as a whole, and whose cost of materials was returned as £54,041,000, stated that the total quantity of flour used by them in the year was 14,788,000 sacks of 280 lb. or 1,848,500 tons. The output of these firms was as follows:—

Kind of goods.	Value.	Proportion of total output of trade.
Bread .. .. . ( <i>Th. 4 lb. loaves</i> )	£'000. 41,594 (1,110,119*)	Per cent. 77·3
Cakes, pastry, etc. .. .. .	24,753	79·6
Biscuits .. .. .	7,181	53·1
Bread, cakes, pastry, etc., not separately distinguished	2,910	55·6
Self-raising flour .. .. .	1,427	65·6
Other goods .. .. .	5,009	94·0

\* Estimated as to £5,381,000 worth, for which no particulars of quantity were recorded.

*Exports and imports.*

In 1924 about 169,000 cwts. of biscuits for human consumption, valued at £1,108,000, were exported, or 6·3 per cent. of the total quantity made and distinguished as such. About 14,000 cwts. of cakes, valued at £62,000 were also exported. Retained imports of unsweetened biscuits were 12,000 cwts., valued at nearly £44,000, but the quantity of sweetened biscuits imported was not recorded separately. Imports of cakes were not separately recorded. In 1907 the exports of biscuits and cakes together (including biscuits for animal consumption) were 332,000 cwts.; the imports were not separately recorded.

**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 Bread and Biscuit Trades which 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, 52,866 operatives, or 42 per cent. of the total of 125,439 operatives for the trades as a whole, and their net output totalled £15,826,000, or 40 per cent. of the aggregate net output of £39,433,000 for the trades as a whole. The total wage-bill of these firms, as returned to the Ministry of Labour, was £6,378,000, representing about 40 per cent. of their aggregate net output.

**Employment.**

The detailed information relating to employment in 1924 is summarised in Table III on pages 58-59. The following table sets out certain particulars for that year together with those obtained at the 1907 Census. 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 proportion 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 .. .. .	13,347	88,780	10,019	34,951	23,366	123,731.
Administrative, etc. ..	836	24,322	934	7,170	1,770	31,492
<b>TOTAL .. .. .</b>	<b>14,183</b>	<b>113,102</b>	<b>10,953</b>	<b>42,121</b>	<b>25,136</b>	<b>155,223</b>
<b>1907.</b>						
Wage earners .. .. .	14,735	77,124	5,825	20,753	20,560	97,877
Salaried .. .. .	444	9,550	383	2,930	827	12,480
<b>TOTAL .. .. .</b>	<b>15,179</b>	<b>86,674</b>	<b>6,208</b>	<b>23,683</b>	<b>21,387</b>	<b>110,357</b>

The numbers of operatives recorded month by month in 1924 ranged from 2,732 above the average, in December, to 2,974 below the average, in January (see Table III B, page 59).

**Mechanical Power.**

The detailed information relating to mechanical power in 1924 is summarised in Table IV on page 60. The following table sets out the particulars for 1924 and 1907 relating to the capacity and kinds of *prime movers* and the capacity of *electric generators* installed.

Power equipment.	1924.			1907.
	Ordinarily in use.	In reserve or idle.	Total.	Total.
<b>PRIME MOVERS :—</b>	H.P.	H.P.	H.P.	H.P.
Reciprocating steam engines ..	4,404	1,469	5,873	10,322
Gas engines .. .. .	8,132	972	9,104	10,146
Petrol and light oil engines ..	3,046	280	3,326	
Heavy oil engines .. .. .	581	36	617	71
Water power .. .. .	13	—	13	
Other (not steam turbines) ..	—	—	—	15
<b>TOTAL .. .. .</b>	<b>16,176</b>	<b>2,757</b>	<b>18,933</b>	<b>20,554</b>
<b>ELECTRIC GENERATORS :—</b>	Kw.	Kw.	Kw.	Kw.
Driven by—				
Reciprocating steam engines ..	1,095	829	1,924	2,269
Gas engines .. .. .	343	127	470	348
Petrol and light oil engines ..	116	158	274	
Heavy oil engines .. .. .	181	25	206	—
Water power .. .. .	—	—	—	
Other prime movers (not steam turbines) .. .. .	—	—	—	—
<b>TOTAL .. .. .</b>	<b>1,735</b>	<b>1,139</b>	<b>2,874</b>	<b>2,617</b>

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

Electric motors.	1924.		
	Ordinarily in use.	In reserve or idle.	Total.
Driven by—	H.P.	H.P.	H.P.
Electricity generated in own works .. ..	2,798	279	3,077
Purchased electricity .. .. .	62,117	3,983	66,100

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 3,119,000.

## TABLES.

## I.—Summary of results.

Particulars.	Unit.	England and Wales.	Scotland.	Great Britain.	Northern Ireland.
Value of goods made (Gross output) .. .. .	£'000	88,604	19,486	108,090	3,080
Cost of materials used .. .. .	„	57,360	12,244	69,604	2,133
Net output .. .. .	„	31,244	7,242	38,486	947
Average number of persons employed .. .. .	No.	123,683	27,457	151,140	4,083
Net output per person employed	£	253	264	255	232
Mechanical power available :—					
Prime movers .. .. .	H.P.	13,147	4,952	18,099	834
Electric motors driven by purchased electricity .. .. .	„	49,467	15,057	64,524	1,576

## II.—Production.

Output sold or added to stock.	Unit.	England and Wales.	Scotland.	Great Britain.	Northern Ireland.
Bread { Quantity stated } .. .. .	Th. 4 lb. loaves. } .. .. .	1,009,187	189,179	1,198,366	17,533
	£'000 } .. .. .	38,158	7,003	45,161	662
Cakes, pastry, buns, scones, etc. .. .. .	£'000 } .. .. .	5,951	889	6,840	1,171
	Th. „ } .. .. .	23,143	7,022	30,165	915
Biscuits .. .. .	Th. cwts. } .. .. .	2,001	618	2,619	37
	£'000 } .. .. .	10,053	3,316	13,369	153
Bread, biscuits, cakes and pastry, not separately distinguished .. .. .	£'000	4,197	861	5,058	174
<b>TOTAL VALUE—BREAD, BISCUITS, CAKES AND PASTRY .. .. .</b>	£'000	<b>81,502</b>	<b>19,091</b>	<b>100,593</b>	<b>3,075</b>
Self-raising flour .. .. .	£'000	2,092*	82	2,174*	*
Ice cream .. .. .	„	416	—	416	—
Other bakery products, including Xmas puddings, mincemeat, etc. .. .. .	„	127	11	138	—
Sugar confectionery, including chocolate confectionery .. .. .	Th. cwts. } .. .. .	210*	15	225*	*
	£'000 } .. .. .	1,883*	97	1,980*	*
Marmalade, jams and fruit jellies .. .. .	Th. cwts. } .. .. .	108	7	115	†
	£'000 } .. .. .	419	23	442	§
Preserved meat, poultry, game and fish, in tins, pots, etc.—					
Quantity stated .. .. .	Th. cwts.	5	†	5	—
Quantity not stated .. .. .	£'000	44	1	45	—
Meat pies .. .. .	£'000	53	2	55	—
	„	985	68	1,053	—

\* In order to avoid the possible disclosure of information relating to individual firms in Northern Ireland, the small Irish output has been included with that for England and Wales and for Great Britain.

† Less than 500 cwts. § Less than £500.

## II.—Production—continued.

Output sold or added to stock.	Unit.	England and Wales.	Scotland.	Great Britain.	Northern Ireland.
Sausages and other cooked meats .. .. .	£'000	86	2	88	—
Farinaceous preparations ..	"	141	26	167	—
Infant, invalid and breakfast foods .. .. .	"	204	83	287	—
Cocoa, chocolate and cocoa butter .. .. .	"	195	—	195	—
Pickles and sauces .. .. .	"	54	—	54	—
Table jellies, custard and baking powders .. .. .	"	138	—	138	—
Preserved fruit (other than jams and jellies) .. .. .	"	53	—	53	—
Poultry and animal foods, including bakehouse offals ..	"	126	—	126	—
Other foods, syrups, essences, etc. .. .. .	"	91	—	91	—
<b>TOTAL VALUE OF GOODS MADE (GROSS OUTPUT)</b>	<b>£'000</b>	<b>88,604</b>	<b>19,486</b>	<b>108,090</b>	<b>3,080</b>

## 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</i> :—						
Operatives .. .. .	10,425	69,862	8,071	28,371	18,496	98,233
Administrative, etc.*	745	21,052	715	5,697	1,460	26,749
<b>TOTAL .. .. .</b>	<b>11,170</b>	<b>90,914</b>	<b>8,786</b>	<b>34,068</b>	<b>19,956</b>	<b>124,982</b>
<i>Scotland</i> :—						
Operatives .. .. .	2,832	16,399	2,156	7,123	4,988	23,522
Administrative, etc.*	81	3,007	207	1,336	288	4,343
<b>TOTAL .. .. .</b>	<b>2,913</b>	<b>19,406</b>	<b>2,363</b>	<b>8,459</b>	<b>5,276</b>	<b>27,865</b>
<i>Great Britain</i> :—						
Operatives .. .. .	13,257	86,261	10,227	35,494	23,484	121,755
Administrative, etc.*	826	24,059	922	7,033	1,748	31,092
<b>TOTAL .. .. .</b>	<b>14,083</b>	<b>110,320</b>	<b>11,149</b>	<b>42,527</b>	<b>25,232</b>	<b>152,847</b>
<i>Northern Ireland</i> :—						
Operatives .. .. .	200	3,244	74	440	274	3,684
Administrative, etc.*	10	263	12	137	22	400
<b>TOTAL .. .. .</b>	<b>210</b>	<b>3,507</b>	<b>86</b>	<b>577</b>	<b>296</b>	<b>4,084</b>
<i>United Kingdom</i> :—						
<b>TOTAL .. .. .</b>	<b>14,293</b>	<b>113,827</b>	<b>11,235</b>	<b>43,104</b>	<b>25,528</b>	<b>156,931</b>

\* Administrative, technical and clerical staff.

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

*England & Wales.* (Annual average : Males, 69,291 ; Females, 27,643 ; Total, 96,934.)

Week ended.	Males.	Females.	Total.	Week ended.	Males.	Females.	Total.
Jan. 12th ..	67,903	26,816	94,719	July 19th ..	69,853	27,349	97,202
Feb. 16th ..	67,996	26,671	94,667	Aug. 16th ..	69,794	27,193	96,987
March 15th ..	68,295	27,065	95,360	Sept. 13th ..	69,714	28,641	98,355
April 12th ..	69,478	27,340	96,818	Oct. 18th ..	69,862	28,371	98,233
May 17th ..	68,962	27,346	96,308	Nov. 15th ..	69,981	28,627	98,608
June 21st ..	69,482	27,719	97,201	Dec. 13th ..	70,173	28,578	98,751

*Scotland.* (Annual average : Males, 16,257 ; Females, 6857 ; Total, 23,114.)

Jan. 12th ..	15,944	6,477	22,421	July 19th ..	16,272	6,698	22,970
Feb. 16th ..	16,038	6,569	22,607	Aug. 16th ..	16,371	6,936	23,307
March 15th ..	16,035	6,618	22,653	Sept. 13th ..	16,378	6,994	23,372
April 12th ..	16,088	6,719	22,807	Oct. 18th ..	16,399	7,123	23,522
May 17th ..	16,182	6,781	22,963	Nov. 15th ..	16,408	7,208	23,616
June 21st ..	16,317	6,835	23,152	Dec. 13th ..	16,647	7,330	23,977

*Great Britain.* (Annual average : Males, 85,548 ; Females, 34,500 ; Total, 120,048.)

Jan. 12th ..	83,847	33,293	117,140	July 19th ..	86,125	34,047	120,172
Feb. 16th ..	84,034	33,240	117,274	Aug. 16th ..	86,165	34,129	120,294
March 15th ..	84,330	33,683	118,013	Sept. 13th ..	86,092	35,635	121,727
April 12th ..	85,566	34,059	119,625	Oct. 18th ..	86,261	35,494	121,755
May 17th ..	85,144	34,127	119,271	Nov. 15th ..	86,389	35,835	122,224
June 21st ..	85,799	34,554	120,353	Dec. 13th ..	86,820	35,908	122,728

*Northern Ireland.* (Annual average : Males, 3,232 ; Females, 451 ; Total, 3,683.)

Jan. 12th ..	3,145	472	3,617	July 19th ..	3,270	438	3,708
Feb. 16th ..	3,148	457	3,605	Aug. 16th ..	3,281	451	3,732
March 15th ..	3,179	462	3,641	Sept. 13th ..	3,254	440	3,694
April 12th ..	3,254	459	3,713	Oct. 18th ..	3,244	440	3,684
May 17th ..	3,201	430	3,631	Nov. 15th ..	3,248	451	3,699
June 21st ..	3,277	467	3,744	Dec. 13th ..	3,290	445	3,735

## IV.—Mechanical Power.

PARTICULARS OF PRIME MOVERS, ELECTRIC GENERATORS AND  
ELECTRIC MOTORS.

(a) Ordinarily in use. (b) In reserve or idle.	England and Wales.	Scotland.	Great Britain.	Northern Ireland.
	H.P.	H.P.	H.P.	H.P.
<b>PRIME MOVERS :—</b>				
Reciprocating steam engines ..	{ (a) 3,212 (b) 1,294	961 108	4,173 1,402	231 67
Gas engines .. ..	{ (a) 5,287 (b) 578	2,591 372	7,878 950	254 22
Petrol and light oil engines ..	{ (a) 2,247 (b) 67	773 13	3,020 80	26 200
Heavy oil engines .. ..	{ (a) 415 (b) 36	132 —	547 36	34 —
Water power .. ..	(a) 11	2	13	—
<b>TOTAL .. ..</b>	{ (a) 11,172 (b) 1,975	4,459 493	15,631 2,468	545 289
<b>TOTAL OF PRIME MOVERS INSTALLED ..</b>	13,147	4,952	18,099	834
<b>ELECTRIC GENERATORS :—</b>				
Driven by—				
Reciprocating steam engines ..	{ (a) 1,001 (b) 779	44 —	1,045 779	50 50
Gas engines .. ..	{ (a) 213 (b) 67	115 60	328 127	15 —
Petrol and light oil engines ..	{ (a) 67 (b) —	49 8	116 8	— 150
Heavy oil engines .. ..	{ (a) 179 (b) 25	2 —	181 25	— —
<b>TOTAL .. ..</b>	{ (a) 1,460 (b) 871	210 68	1,670 939	65 200
<b>TOTAL OF ELECTRIC GENERATORS INSTALLED .. ..</b>	2,331	278	2,609	265
<b>ELECTRIC MOTORS :—</b>				
Driven by—				
Electricity generated in own works .. ..	{ (a) 2,532 (b) 187	186 25	2,718 212	80 67
Purchased electricity .. ..	{ (a) 47,054 (b) 2,413	13,600 1,457	60,654 3,870	1,463 113