THE BUTTER, CHEESE, CONDENSED MILK AND MARGARINE TRADES.

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Introductory.*

The Tables on pages 112 to 116 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 butter, cheese, condensed milk and margarine. The number of such separate Returns was 481. Fifty-seven firms to which schedules were sent did not furnish Returns, but the majority of these firms had very small establishments and some were no longer in operation at the end of the censal year. On the basis of the information available, it is estimated that they did not employ more than 250 persons in all and that their total net output was probably not in excess of $f_{20,000}$.

Summary of results.—The following table shows the main results of the Censuses of 1924 and 1907, comparisons between the figures for the two years being subject to the qualifications mentioned in the next paragraph. Particulars relating to the Census of 1912 have been, in general, omitted for the reasons stated in that paragraph.

* See also the Notes on pages vii-xiv.

Particulars.	Unit.	1924.	1907.
Value of goods made and work done (Gross output) Cost of materials used	£'000 ", No. £	26,126 21,560 4,566 12,051 379	10,164 8,996 1,168 9,333 125
Prime movers	H.P. ,,	24,406 5,365	11,372 (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 these trades in that year was returned as $\pounds 6,331,000$, together with $\pounds 1,035,000$ for eggs purchased and packed, and the average number of persons employed (inclusive of egg packers) as 3,600.

(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 1,654 or 16 per cent. of the number employed by the remaining firms. The proportion of output excluded in this way is sufficiently large to invalidate comparisons, and, consequently, the relative information obtained for 1912 is not dealt with in this Report.

(4) This Report does not include production on farms or the butter, cheese and other products made by dairies whose main business consisted in the distribution of milk (see below, page 107).

(5) As regards the output of co-operative creameries in Northern Ireland, only central creameries are covered, the particulars obtained from independent and controlled auxiliary creameries not being sufficiently complete to enable reliable estimates to be made of the business of these establishments as a whole. The output of auxiliary creameries is, however, substantially covered by that of the central creameries.

(6) This Report also excludes whole milk and fresh pork sold by dairies. Sales of these goods have been deducted from the total value of the output and from the cost of materials used, and the latter figure is, accordingly, understated by the amount of the profit on such sales. The error so introduced is, however, unimportant.

Production.

Detailed information as to the output of the Butter, Cheese, Condensed Milk and Margarine Trades in 1924 will be found in Table II on page 113.

Output of creameries and factories.—The following table affords a comparison of the output of butter, cheese, other milk products, and margarine from creameries and factories in 1924 and 1907, including, for 1924, the amount received for blending butter on commission; this amount cannot be stated separately as the work was shown in the Return of one firm only. It must be emphasised that the absence of Returns from the Irish Free State in 1924 seriously affects the validity of comparisons between the figures for the two years. No output of similar products was recorded on schedules for other trades in either year.

	19	24.	1907.		
Kind of products.	Quantity.	Selling value.	Quantity.	Selling value.	
and the sector sectors in the	Th. cwts.	£'000.	Th. cwts.	£'000.	
Butter :	070	1,004 6,553	} 1,100	5,840	
Total—Butter	778	7,557	1,100	5,840	
Cheese :		569 153 48	} 75	193	
Total-Cheese		770	75	193	
Margarine and margarine cheese .	. 3,670 Th. Imp. galls.	10,294	881 Th. Imp. galls.	2,094	
Cream sold Separated milk sold	1,866	1,426 130	1,098	398 113	
Condensed milk Milk powder	700	2,932 671	Jono ir	1,217	
Other milk products and amount received for blending butter on commission .	1) dialator of	507	}	112	
TOTAL VALUE	antine and	24,287	wir hanne rein	9,967	

In 1907 the firms making Returns were asked to state voluntarily the separate quantities of butter made and of butter blended by them. The particulars furnished are shown below in comparison with those for 1924 and with those for the Irish Free State for 1926. FOOD, DRINK AND TOBACCO TRADES.

At creameries and factories.	Great I	Britain.	Northern Ireland.	Irish Free State.	Ireland.
	1924.	1907.	1924.	1926.	1907.
Butter made Butter blended Particulars not stated	Th. cwts. 46 676 —	Th. cwts. 46 350 26	Th. cwts. 56 —	Th. cwts. 568 149	Th. cwts. 436 164 78
TOTAL RETURNED	722	422	56	717	678

While the output of creamery butter in Great Britain was no greater in 1924 than in 1907 and may have declined, there was a very large increase (at least 80 per cent.) in the quantity of butter purchased from farmers or imported and blended at creameries or factories. The output of cheese also more than doubled in the, period.

Output of creameries, factories and farms.—The output of butter cheese, and cream returned to the Census formed only a part of the total output of these products in the United Kingdom. Utilising the information as to farmers' production in 1924–5 given in the Reports on The Agricultural Output of England and Wales (Cmd. 2815), of Scotland (Cmd. 3191), and of Northern Ireland (Cmd. 87), we obtain the following statement :—

Kind of products.	a daga	England and Wales.	Scotland.	Northern Ireland.	United Kingdom.
Butter :	n este Di Zelan	Th. cwts.	Th. cwts.	Th. cwts.	Th. cwts.
Made on farms Made in creameries		569 39	52 7	124 56	745 102
TOTAL	•••	608	59	180	847
Cheese :— Made on farms Made in creameries		502 122*	146 31	_†	648 153*
TOTAL	176	624*	177	the second second	801*
Cream :— Sold off farms Sold at creameries		Th. galls. 650 1,421	Th. galls. 206 428	Th. galls. (not stated) 17	Th. galls. 1,866
TOTAL		2,071	634	1.1.1	here the faith of the

* Including an estimate for the weight of some soft cheese returned by value only. † Very small.

Exports and imports of butter and cheese.—Exports of British butter in 1924 were about 20,000 cwts. and of British cheese about 7,500 cwts. Retained imports of butter were 5,096,000 cwts. of which 461,000 cwts. were consigned from the Irish Free State, and those of cheese were 2,840,000 cwts., of which 5,000 cwts. were from the Irish Free State. United Kingdom producers, therefore, supplied in 1924 only about 14* per cent. of the butter and 23* per cent. of the cheese available in this country. In 1907 the retained imports of butter were 4,127,000 cwts. and the retained imports of cheese were 2,320,000 cwts.

Output of milk distributors.—A number of Returns were received from firms whose main business consisted in milk distribution, and the statement below gives details of the products manufactured by them. These particulars are excluded both from the other tables contained in this Report and from Table II on page 113.

Goods made by milk	England a	England and Wales.		Scotland.		Great Britain.	
distributors.	Quantity.	Selling value.	Quantity.	Selling value.	Quantity.	Selling value.	
Butter :	Th. cwts.	£'000.	Th. cwts.	£'000.	Th. cwts.	£'000.	
Made at creameries Purchased and blended	3 4	27 39	3 2	38 22	6 6	65 61	
Total-Butter	7	66	5	60	12	126	
Cheese :— Hard Soft	41 1	182 6	19	46	60 1	228 6	
Total-Cheese	42	188	19	46	61	234	
Cream sold	Th. Imp. galls. 362	156	Th. Imp. galls. 69	39	Th. Imp. galls. 431	195	

Margarine.—The development of the manufacture of margarine in Great Britain since 1907 has been remarkable, as the following figures show :—

Year.	Production.	Exports.	Net imports.	Available for consumption in the United Kingdom.	Proportion of home market held by U.K. products.
1907 1912 1924	Th. cwts. 881 1,611 3,670	Th. cwts. 18 27 43	Th. cwts. 878 1,346 1,312	Th. cwts. 1,741 2,930 4,939	Per cent. 49.6 54.1 73.4

It should be noted that the exports and imports include under margarine "any article of food, whether mixed with butter or not, which resembles butter, and is not milk-blended butter"; small quantities of margarine cheese are also included in the above figures.

In 1924 there was available for consumption $14 \cdot 8$ lb. of butter and $12 \cdot 3$ lb. of margarine per head of the population of Great Britain and Northern Ireland. In 1907 the quantity available in

* For the purpose of calculating these figures, account has been taken of the output recorded by milk distributors as shown in the next paragraph. As explained in that paragraph, this output is but a part of the total production of butter and cheese by such firms, and the percentages here quoted, therefore, slightly understate the proportions of butter and cheese available from United Kingdom sources. Great Britain and the whole of Ireland was approximately 13 lb. of butter and about 4.5 lb. of margarine per head; the quantity of butter consumed has been calculated on the assumption that the consumption on farms, of which there is no record in 1907, was the same in that year as in 1924.

Condensed milk and milk powder.—The production of condensed milk and milk powder in the United Kingdom in 1924 was confined to Great Britain. Particulars for 1907 were not shown separately, in order to avoid disclosure of the business of individual firms.

The output of condensed milk in 1924 was 783,000 cwts. and the output in 1912 was 731,000 cwts. Details of the kinds of condensed milk cannot be given owing to the risk of disclosing the business of individual firms, but it may be said that over two-thirds of the output in 1924 was sweetened condensed milk made from whole milk, about one-eighth was sweetened condensed milk made from separated or skimmed milk, and nearly one-fifth was condensed milk not sweetened; the exports were 98,000 cwts. of which 20,000 cwts. were not sweetened; the retained imports were 2,182,000 cwts., namely, 314,000 cwts. sweetened, whole milk, 1,478,000 cwts. sweetened, separated or skimmed milk, and 390,000 cwts. not sweetened. The available supply of sweetened condensed milk made from separated or skimmed milk, was thus mainly derived from importation. The total quantity of condensed milk of all kinds available for consumption in the United Kingdom in 1924 was 2,867,000 cwts., of which 23.9 per cent. was made in Great Britain.

The production of milk powder in 1924 was recorded as 123,000 cwts. : exports amounted to 6,000 cwts. and retained imports to 84,000 cwts. The quantity available for home consumption cannot be deduced from these particulars since the trade figures did not take account of preparations which consisted mainly of dried milk. Since 1929 such preparations, if they contain 70 per cent. or more of dried milk, have been included with milk powder in the trade accounts.

Other products.—In addition to the output shown in the table on page 105, firms that made their Returns on schedules for the Butter, Cheese, Condensed Milk and Margarine Trades produced in 1924 the goods shown in the following statement. These goods, being of kinds mainly produced in other trades, are dealt with in the Reports on those trades :—

Lard and lard compound*		1.226
	(<i>Th. cwts.</i>)	(342)
Oils, fats and greases (including such		491
Other goods		122
which is the second of the second sec		

The corresponding total for 1907 was $f_{197,000}$.

* See the Report on the Oil and Tallow Trades which forms part of a separate volume.

Cost of materials.—The cost of materials used by firms making their Returns on schedules for the Butter, Cheese, Condensed Milk and Margarine Trades was returned as $\pounds 21,560,000$ in 1924, the corresponding figure for 1907 being $\pounds 8,996,000$. These firms were also asked to state voluntarily the quantities of milk and cream used by them, but the replies received did not cover a sufficient proportion of the butter and cheese trade to provide a basis for general calculations.

Net output.—The net output in 1924 of the firms making their Returns on schedules for the Butter, Cheese, Condensed Milk and Margarine Trades (whose gross output was valued at $\pounds 26,126,000$) was $\pounds 4,566,000$, 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 f_{379} as compared with f_{125} in 1907.

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 Butter, Cheese, Condensed Milk and Margarine 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, 5,615 operatives, or 60 per cent. of the total of 9,295 operatives for the trades as a whole, and their net output totalled $f_{2,622,000}$, or 57 per cent. of the aggregate net output of £4,566,000 for the trades as a whole. The total wage-bill of these firms, as returned to the Ministry of Labour, was £714,000, representing about 27 per cent. of their aggregate net output.

Employment.

The detailed information relating to employment in 1924 is summarised in Table III on pages 114–115. The following table sets out certain particulars for that year together with those obtained for 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.

fills bornshite.)	Mal	Males.		Females.		Males and females.	
Average number,	Under 18.	All ages.	Under 18.	All ages.	Under 18.	All ages.	
1924. Operatives Administrative, etc	489 101	6,185 2,042	667 74	2,977 847	1,156 175	9,162 2,889	
TOTAL	590	8,227	741	3,824	1,331	12,051	
1907. Wage earners Salaried	603 97	5,881 1,426	427 8	1,873 153	1,030 105	7,754	
TOTAL	700	7,307	435	2,026	1,135	9,333	

The numbers of operatives recorded month by month in 1924 ranged from 244 above the average, in September, to 287 below the average, in March (see Table III B, page 115).

Mechanical Power.

The detailed information relating to mechanical power in 1924 is summarised in Table IV on page 116. 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.

apper has model to them	15 Sat of	1924.		1907.
Power equipment.	Ordinarily in use.	In reserve or idle.	Total.	Total.
Prime movers :	H.P.	H.P.	H.P.	H.P.
Reciprocating steam engines	11.519	4.206	15,725	9,376
Steam turbines	2,730	2,680	5,410	333
Gas engines	1,549	176	1,725	2
Petrol and light oil engines	981	199	1,180	} 1,088
Heavy oil engines	221		221	(,,000
Water power	145		145	543
Other	and the state			32
Total	17,145	7,261	24,406	11,372
ELECTRIC GENERATORS :	Kw.	Kw.	Kw.	Kw.
Reciprocating steam engines	3.991	1,988	5,979	793
Steam turbines	2,000	2,000	4,000	
Gas engines	113	65	178	7
Petrol and light oil engines	20	_	20	The cases of
Heavy oil engines	5	di tol	5	45
Water power	54	20	74	1
Other prime movers	1 3/13 111	ETAL STREET	and and a	Junior
TOTAL	6,183	4,073	10,256	838

.

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

	1924.				
Electric motors.	Ordinarily in use.	In reserve or idle.	Total.		
	H.P.	H.P.	H.P.		
Driven by— Electricity generated in own works Purchased electricity	11,537 4,940	1,763 425	13,300 5,365		

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 268,000.

1924. ·			
Start Start	(miliante) 18		
	11,337 059.11		

and lighting purposes in that year was rotumed as 268,000.

TABLES.

I.—Summary of results.

Particulars.	Unit.	England and Wales.	Scotland.	Great Britain.	Northern Ireland.
Value of goods made and work done (Gross output)	£'000 ,,, No. £ H.P.	23,803 19,615 4,188 10,896 384 21,313	1,759 1,436 323 859 376 2,091	25,562 21,051 4,511 11,755 384 23,404	564 509 55 296 187
Electric motors driven by purchased electricity	,,,	5,097	2,091	5,335	1,002 30

II.—**Production.**

Output sold or added to stock and work done.	Unit.	England and Wales.	Scotland.	Great Britain.	Northern Ireland.
Butter :—		a totale in	Caller March		
Made at creameries	Th. cwts.	39	7	46	56
	£'000	375	77	452 676	552
Purchased and blended	$\begin{array}{c c} Th. cwts. \\ f'000 \end{array}$	673 6,520	3 33	6,553	
Total—Butter {	Th. cwts. £'000	7 <i>12</i> 6,895	<i>10</i> 110	722 7,005	56 552
Cheese :		Charles of			
Hard {	Th. cwts.	100	31	131	<u>†</u>
	£'000	481	88	569	3
Soft Weight stated	Th. cwts. £'000	17 153		17 153	anapara de la
Weight not stated	£'000	48		48	ALEU DA.
TOTAL VALUE—CHEESE	£'000	682	88	770	ş
Margarine and margarine f	Th. cwts.	3,348	322	3,670	
cheese)	£'000	9,215	1,079	10,294	ai atta
Cream sold \ldots	Th. Imp.galls.	1,421	428	1,849	17
199	£'000	1,109 7,784	305 1,380	1,414 9,164	12 30
Separated milk sold	Th.Imp.galls. £'000	108	1,380	130	50
	Th. cwts.	783		783	1000 MB 3
Condensed milk {	£'000	2,932		2,932	The former
	Th. cwts.	*	*	123	
Milk powder {	£'000	*	*	671	
Other milk products	£'000	491	3	494	
Lard and lard compound $\left\{ \right.$	Th. cwts.	*	*	342	and was to the
	£'000	*	*	1,226	Laster The
Dils, fats and greases (including suet and dripping)	£'000	*	*	491	authits
Soups, potted and cooked	288	*	*	66	1
meats, etc	Th. cwts.	*	*	2	and the second s
$Bacon \dots \dots $	£'000 .	*	*	8	ALL DESCRIPTION
Other products and work done	£'000	61		61	2 - 20
TOTAL VALUE OF GOODS MADE	and the second se			and Server	
AND WORK DONE (GROSS	(2000	02.000	1 750	05 500	ECA
OUTPUT)	£'000	23,803	1,759	25,562	564

* In order to avoid the possible disclosure of information relating to individual firms, figures are given only for Great Britain as a whole. † Less than 500 cwts. § Less than £500.

III.—Employment.

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

Kind of staff.	Ma	Males.		Females.		Males and females.	
Kind of stall.	Under 18.	All ages.	Under 18.	All ages.	Under 18.	All ages.	
England and Wales :	. 467 * 90	5,559 1,827	650 68	2,851 753	1,117 158	8,410 2,580	
TOTAL	. 557	7,386	718	3,604	1,275	10,990	
Scotland :— Operatives Administrative, etc	* 14 8	447 160	45 6	202 85	59 14	649 245	
TOTAL	. 22	607	51	287	73	894	
Great Britain :— Operatives Administrative, etc.	* 481 98	6,006 1,987	695 74	3,053 838	1,176 172	9,059 2,825	
Total	. 579	7,993	769	3,891	1,348	11,884	
Northern Ireland :— Operatives Administrative, etc.	. 8 * 3	179 55	2	57 9	10 3	236 64	
Total	. 11	234	2	66	13	• 300	
United Kingdom :	. 590	8,227	771	3,957	1,361	12,184	

* Administrative, technical and clerical staff.

B.—Operatives employed in one week in each month of 1924.

England and Wales. (Annual average : Males, 5,580 ; Females, 2,736 ; Total, 8,316.)

	Contraction of the second s		CONTRACTOR STATES OF THE		23450 1.W-17-047 1.94624 1.12.1	A CONTRACT OF	
Week ended.	Males.	Females.	Total.	Week ended.	Males.	Females.	Total.
[an. 12th	5,507	2,596	8,103	July 19th	5,664	2,768	8,432
Jan. 12th Feb. 16th	5,522	2,670	8,192	Aug. 16th	5,677	2,774	8,451
March 15th	5,448	2,622	8,070	Sept. 13th	5,639	2,861	8,500
1 1011	5,537	2,655	8,192	Oct. 18th	5,559	2,851	8,410
1711	5,623	2,710	8,333	Nov. 15th	5,483	2,779	8,262
June 21st	5,666	2,776	8,442	Dec. 13th	5,634	2,769	8,403
Scotland.	(Annue	al average	: Males	s, 429 ; Females,	Share Share - Martin	and the second second	1 martin and a state
Jan. 12th	408	170	578	July 19th	435	179	614
Feb. 16th	409	171	580	Aug. 16th	440	195	635
March 15th	416	162	578	Sept. 13th	452	216	668
April 12th	420	172	592	Oct. 18th	447	202	649
		1 101	594	Nov. 15th	430	197	627
May 17th	413	181		A CONTRACTOR OF A CONTRACTOR OF A CONTRACTOR	A COLOR OF CONTRACTOR	A TABLET AND AN AREAS FOR AT A SEC	GAG
	413 434	181	611	Dec. 13th	442	204	646
May 17th	434	177	611	A CONTRACTOR OF A CONTRACTOR OF A CONTRACTOR	442 es, 2,921	204 ; Total,	and the second second second second
May 17th June 21st	434	177	611 : Males	Dec. 13th s, 6,009 ; Female July 19th	442 es, 2,921 6,099	204 ; Total, . 2,947	8,930.) 9,046
May 17th June 21st Great Britain.	434 (Annu	177 al average 2,766 2,841	611 : Male: 8,681 8,772	Dec. 13th s, 6,009 ; Female July 19th Aug. 16th	442 25, 2,921 6,099 6,117	204 ; Total, 2,947 2,969	8,930.) 9,046 9,086
May 17th June 21st Great Britain. Jan. 12th	434 (Annua) 5,915	177 al average 2,766 2,841 2,784	611 <i>a</i> : Males 8,681 8,772 8,648	Dec. 13th s, 6,009 ; Female July 19th Aug. 16th Sept. 13th	442 es, 2,921 6,099 6,117 6,091	204 ; Total, 2,947 2,969 3,077	8,930.) 9,046 9,086 9,168
May 17th June 21st Great Britain. Jan. 12th Feb. 16th	434 (Annua 5,915 5,931	177 al average 2,766 2,841 2,784 2,827	611 a : Males 8,681 8,772 8,648 8,784	Dec. 13th s, 6,009 ; Female July 19th Aug. 16th Sept. 13th Oct. 18th	442 es, 2,921 6,099 6,117 6,091 6,006	204 ; Total, 2,947 2,969 3,077 3,053	8,930.) 9,046 9,086 9,168 9,059
May 17th June 21st Great Britain. Jan. 12th Feb. 16th March 15th	434 (Annual 5,915 5,931 5,864 5,957 6,036	177 al average 2,766 2,841 2,784 2,827 2,891	611 3,681 8,772 8,648 8,784 8,784 8,927	Dec. 13th s, 6,009 ; Female July 19th Aug. 16th Sept. 13th Oct. 18th Nov. 15th	442 25, 2,921 6,099 6,117 6,091 6,006 5,913	204 ; Total, 2,947 2,969 3,077 3,053 2,976	8,930.) 9,046 9,086 9,168 9,059 8,889
May 17th June 21st Great Britain. Jan. 12th Feb. 16th March 15th	434 (Annua) 5,915 5,931 5,864 5,957	177 al average 2,766 2,841 2,784 2,827	611 a : Males 8,681 8,772 8,648 8,784	Dec. 13th s, 6,009 ; Female July 19th Aug. 16th Sept. 13th Oct. 18th	442 es, 2,921 6,099 6,117 6,091 6,006	204 ; Total, 2,947 2,969 3,077 3,053 2,976	8,930.) 9,046 9,086 9,168 9,059 8,889
May 17th June 21st Great Britain. Jan. 12th Feb. 16th March 15th April 12th May 17th	434 (Annua) 5,915 5,931 5,864 5,957 6,036 6,100	177 al average 2,766 2,841 2,784 2,827 2,891 2,953	611	Dec. 13th s, 6,009 ; Female July 19th Aug. 16th Sept. 13th Oct. 18th Nov. 15th	442 25, 2,921 6,099 6,117 6,091 6,006 5,913 6,076	204 ; Total, . 2,947 2,969 3,077 3,053 2,976 2,973	8,930.) 9,046 9,086 9,168 9,055 8,885 9,045 232.)
May 17th June 21st Great Britain. Jan. 12th Feb. 16th March 15th April 12th June 21st Northern Ire	434 (Annua) 5,915 5,931 5,864 5,957 6,036 6,100 eland. (2)	177 al average 2,766 2,841 2,784 2,827 2,891 2,953 Annual a	611	Dec. 13th s, 6,009 ; Female July 19th Aug. 16th Sept. 13th Oct. 18th Nov. 15th Dec. 13th Males, 176 ; Female	442 25, 2,921 6,099 6,117 6,091 6,006 5,913 6,076	204 ; Total, 4 2,969 3,077 3,053 2,976 2,973 ; Total, 56	8,930.) 9,040 9,080 9,168 9,059 8,889 9,049 232.) 23
May 17thJune 21stGreat Britain.Jan. 12thFeb. 16thMarch 15thApril 12thJune 21stNorthern IreJan. 12th	434 (Annua) 5,915 5,931 5,864 5,957 6,036 6,100 eland. (2)	177 al average 2,766 2,841 2,784 2,827 2,891 2,953 Annual a 55	611 3: Malex 8,681 8,772 8,648 8,784 8,927 9,053 verage :	Dec. 13th s, 6,009 ; Female July 19th Aug. 16th Sept. 13th Oct. 18th Nov. 15th Dec. 13th Males, 176 ; Female	$\begin{array}{ c c c c c c c c c c c c c c c c c c $	204 ; Total, 4 2,947 2,969 3,077 3,053 2,976 2,973 2; Total, 56 58	8,930.) 9,046 9,086 9,059 8,889 9,049 232.) 23 23
May 17th June 21st Great Britain. Jan. 12th Feb. 16th March 15th April 12th June 21st Northern Irre Jan. 12th Feb. 16th	434 (Annua) 5,915 5,931 5,864 5,957 6,036 6,100 eland. 1773 1773 1773	177 al average 2,766 2,841 2,784 2,827 2,891 2,953 Annual a 55 54	611 8: Males 8,681 8,772 8,648 8,784 8,927 9,053 verage : 228	Dec. 13th s, 6,009 ; Female July 19th Aug. 16th Sept. 13th Oct. 18th Nov. 15th Dec. 13th Males, 176 ; Fen July 19th July 19th	$\begin{array}{ c c c c c c c c c c c c c c c c c c $	204 ; Total, 4 2,947 2,969 3,077 3,053 2,976 2,973 ; Total, 56 58 58	8,930.) 9,046 9,086 9,053 8,883 9,043 232.) 23 23 23 23 23
May 17thJune 21stGreat Britain.Jan. 12thFeb. 16thMarch 15thApril 12thJune 21stNorthern IrreJan. 12thFeb. 16thMarch 15th	434 (Annu.) 5,915 5,931 5,864 5,957 6,036 6,100 eland. 173 173 173 173	177 al average 2,766 2,841 2,784 2,827 2,891 2,953 Annual a 55 54 54 54	611 8: Males 8,681 8,772 8,648 8,784 8,927 9,053 verage : 228 227	Dec. 13th s, 6,009 ; Female July 19th Aug. 16th Sept. 13th Oct. 18th Nov. 15th Dec. 13th Males, 176 ; Fen July 19th Aug. 16th Sept. 13th	$\begin{array}{ c c c c c c c c c c c c c c c c c c $	204 ; Total, 4 2,947 2,969 3,077 3,053 2,976 2,973 4; Total, 56 58 58 58 58	8,930.) 9,046 9,066 9,065 9,055 8,885 9,045 232.) 233 23 23 23 23 23
May 17th June 21st Great Britain. Jan. 12th Feb. 16th March 15th April 12th June 21st Northern Irre Jan. 12th Feb. 16th	434 (Annu.) 5,915 5,931 5,864 5,957 6,036 6,100 eland. 173 173 173 173 173	177 al average 2,766 2,841 2,784 2,827 2,891 2,953 Annual a 55 54 54 54 54	611 8: Males 8,681 8,772 8,648 8,784 8,927 9,053 verage : 228 227 227	Dec. 13th s, 6,009 ; Female July 19th Aug. 16th Sept. 13th Oct. 18th Nov. 15th Dec. 13th Males, 176 ; Fem July 19th Aug. 16th Sept. 13th Males, 176 ; Fem July 19th Aug. 16th Sept. 13th Oct. 18th	$\begin{array}{ c c c c c c c c c c c c c c c c c c $	204 ; Total, 4 2,947 2,969 3,077 3,053 2,976 2,973 2; Total, 56 58 58 58 57 56	8,930.) 9,046 9,086 9,059 9,059 8,889 9,049

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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.
PRIME MOVERS :	H.P.	H.P.	H.P.	H.P.
Reciprocating steam engines $\ldots \begin{cases} a \\ b \end{cases}$	9,694	1.072	10,766	753
Recipiocating steam engines $\ldots \begin{pmatrix} b \end{pmatrix}$	3,523	625	4,148	58
Steam turbines	2,680	50	2,730	
(b)	2,680		2,680	
Gas engines $\ldots \qquad \ldots \qquad \ldots \qquad \ldots \qquad $	1,236	130	1,366	183
	176		176	-
Petrol and light oil engines $\ldots \begin{cases} (a) \\ (b) \end{cases}$	909 194	64 5	973	8
Heavy oil engines \dots (a)	194	110	<i>199</i> 221	Caller Internet
Water power \ldots \ldots (a)	110	35	145	1231
			140	States Transie
TOTAL $\int (a)$	14,740	1,461	16,201	944
Total $\ldots \ldots \begin{cases} a \\ b \end{cases}$	6,573	630	7,203	58
All PERSON AND ALL ADDED				
TOTAL OF PRIME MOVERS INSTALLED	21,313	2,091	23,404	1,002
ELECTRIC GENERATORS : Driven by	Kw.	Kw.	Kw.	Kw.
Reciprocating steam engines. $\begin{cases} (a) \\ (b) \end{cases}$	3,456	490	3,946	45
Recipiocating steam engines. $\zeta(b)$	1,558	430	. 1,988	
Steam turbines $\ldots \qquad \int a^{(a)} a^{(a)}$	2,000		2,000	
(b)	2,000		2,000	
Gas engines $\ldots \qquad \ldots \qquad \ldots \qquad \ldots \qquad \ldots \qquad \ldots \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad $	113	95.5 - 516	113	
$\sum_{i=1}^{n} \sum_{j=1}^{n} \sum_{i=1}^{n} \sum_{i$	65	-	65	
TT	18	2	20	and the second
(in)	5		5	
Water power $\ldots \qquad \ldots \qquad \ldots \qquad \vdots \qquad $	54 20		54 20	ara - a dr
				nator an ga
Total $\binom{(a)}{(b)}$	5,646	492	6,138	45
$101112 \cdots 1 (b)$	3,643	430	4,073	
OTAL OF ELECTRIC GENERATORS		1		
THOM IT T DD	9,289	922	10,211	1E
INSTALLED	9,209	922	10,211	45
ELECTRIC MOTORS :	H.P.	H.P.	H.P.	H.P.
Driven by—			and the second second second	
Electricity generated in own $\int (a)$	10,652	855	11,507	30
works \dots \dots (b)	1,250	513	1,763	
Purchased electricity $\int (a) $	4,704*	236	4,940*	*
I uteriased electricity $\cdots (b)$	423*	. 2	425*	*

* In order to avoid the disclosure of information relating to one firm, the particulars for Northern Ireland have been included with those for England and Wales and for Great Britain.