# THE FERTILISER, GLUE, SHEEP DIP AND DISINFECTANT TRADES.

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#### Introductory.\*

The tables on pages 100 to 103 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 fertilisers, glue and disinfectants. The number of such separate returns was 354. About 30 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 f40,000.

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 pages vii to xv.

#### Contents.

Particulars.	Unit.	1924.	1912.	1907.
Value of goods made (Gross output)	£'000	8,347	6,634	5,861
Cost of materials used	~ ,,	5,358	4,581	3,941
Net output		2,989	2,053	1,920
Average number of persons employed	No.	10,766	13,325	12,444
Net output per person employed Iechanical power available :	£	277	154	154
Prime movers Electric motors driven by pur-	H.P.	17,555	23,816	21,900
chased electricity		20,495	3,983	(not recorded

Qualifications affecting comparisons.—In considering the above table and the other tables in this report which show figures for different 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 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. In the report on the Census of 1907, the value of the output of the Fertiliser, etc., Trades was shown for the whole of Ireland as £553,000, and the numbers employed as 1,270. 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 Fertiliser, Glue, Sheep Dip and Disinfectant Trades in that year was returned as £542,000, and the average number of persons employed as 873. Comparisons between the aggregates for the Censuses of 1907 and 1924 are thus not seriously affected by the omission of the Irish Free State in 1924.

(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 525, or about 4 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 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 Fertiliser, Glue, Sheep Dip and Disinfectant Trades considered as a whole. The matter is discussed on page 97, where it is estimated that the value, free from duplication, of the output of the Fertiliser, Glue, Sheep Dip and Disinfectant Trades in 1924 lay between £7,670,000 and £8,347,000, and the cost of materials purchased from sources outside the trade and worked up into its products lay between  $\pounds 4,680,000$  and  $\pounds 5,358,000$ .

#### **Production.**

Detailed information relating to the output of the Fertiliser, Glue, Sheep Dip and Disinfectant Trades in 1924 is given in Table II on pages 100 and 101.

In addition to the output dealt with in this report, fertilisers, etc., valued, on a cost basis, at  $\pounds 40,000$  were produced in 1924 by Local Authorities. The corresponding figure for 1907 was  $\pounds 20,000$ .

*Principal products.*—The following table shows, for 1924, 1912 and 1907, the value and, where recorded, the quantity of the principal products of these trades made for sale, the figures for each year being inclusive of the output of similar products recorded on schedules for other trades.

	1924.		1912.		1907.	
Kind of goods.	Quantity.	Selling value.	Quantity.	Selling value.	Quantity.	Selling value.
Fertilisers Disinfectants, insecti-	Th. tons 1,540 · 3	£'000 9,542	Th. tons 1,957 · 2	£'000 8,259	Th. tons 1,622 · 0	£'000 6,900
cides, etc	$46 \cdot 8 \\ 30 \cdot 0$	2,253 931	33.2	888		747
Gelatine Bones for manufacturing	1.6	235	$\left\{\begin{array}{c} 27 \cdot 0 \end{array}\right\}$	602	37.6	653
purposes Bones for manure, etc	, 19•0 ••	158 168	}	283	refringer	188
Waste and other by-pro- ducts		128		. 64	2 blad 'Y	35
Total — Principal Products		13,415	*	10,096		8,523

Further particulars regarding output in 1924 are given in the following paragraphs.

*Fertilisers.*—For the purposes of the Census, fertilisers were divided into four main classes : basic slag, superphosphates, sulphate of ammonia, and other fertilisers (including manufactured guano, bone meal, compound fertilisers, and other manufactured fertilisers). Of these only superphosphates and "other fertilisers" are principally made by firms that furnished returns on schedules for the trades now under consideration. Two-thirds of the output of basic slag ground for sale was returned on schedules for the Iron and Steel Trades, and sulphate of ammonia is mainly produced at gas works, at coke-oven by-product works, and by chemical firms. About one-fifth of the total make of superphosphates was returned on schedules for the Chemicals, Dyestuffs and Drugs Trades. It is, however, convenient to deal with all fertilisers together in this report.

Total make of certain fertilisers.—Firms were required to state the total quantities made by them of the principal simple fertilisers produced in the United Kingdom, and the information obtained is summarised below :—

ter lay between (4,080,000 and	Returned on schedules for-				
Kind of fertiliser.	The Fertiliser,	Other	All		
	etc., Trades.	trades.	trades.		
Basic slag	Tons.	Tons.	Tons.		
	107,210	202,200	309,410		
	320,500	72,400	392,900		
	5,380	414,370	419,750		

Fertilisers made for sale.—Particulars of fertilisers made for sale or stock in 1924 are given in the following table :—

entering and a first state	Returned on schedules for						
Kind of fertiliser.	The Fertiliser, etc., Trades.		Other trades.		All trades.		
A STATE OF STATE	Quantity.	Selling value.	Quantity.	Selling value.	Quantity.	Selling value.	
Basic slag Superphosphates Sulphate of ammonia Other fertilisers*	$\begin{array}{c} \text{Th. tons} \\ 106 \cdot 6 \\ 231 \cdot 7 \\ 4 \cdot 5 \\ 422 \cdot 9 \end{array}$	£'000 176 675 58 2,753	$\begin{array}{c} \text{Th. tons} \\ 202 \cdot 2 \\ 72 \cdot 4 \\ 413 \cdot 7 \\ 86 \cdot 3 \end{array}$	£'000 277 208 4,785 610	$\begin{array}{c} \text{Th. tons} \\ 308 \cdot 8 \\ 304 \cdot 1 \\ 418 \cdot 2 \\ 509 \cdot 2 \end{array}$	£'000 453 883 4,843 3,363	
TOTAL	765.7	3,662	774.6	5,880	1,540.3	9,542	

\* Including manufactured guano, bone meal, fish manure, ground phosphate, shoddy manure, and also compound fertilisers.

The exports and retained imports of manufactured fertilisers were as shown below :—

Kind	of fertiliser.				Exports.	Net imports.
					Th. tons	Th. tons
Basic slag	11.000		100 · · · · · · ·		24.8	66.3
Superphosphates					25.7	115.5
Sulphate of ammonia	ι				277.7	the state of the second
Other and compound	fertiliser	S			66.2	28.5
Nitrate of soda					0.9	76.8
Kainite	and would be		1		0.6	177.8
Potassium sulphate					0.1	8.5
Potassium chloride	····			1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	0.1	18.7
Nitrolim	Contraction of the local of					1.1

Output of fertilisers free from duplication and quantities available for use.—The output of "other fertilisers" shown in the above table of production (509,200 tons) is composed in part of simple fertilisers and in part of compound fertilisers and, as returns made under this heading were not differentiated, the proportions of simple and compound fertilisers making up the aggregate can only be estimated. On the basis of such information as is available, it is estimated that about 210,000 tons of the total consisted of simple fertilisers and the remaining 299,200 tons of compounds. To what extent the ingredients of these compound fertilisers were home-made the returns furnish no information, except that the makers of superphosphates showed that they used 88,800 tons of superphosphates in their own works, that is, for making compound fertilisers : about 900 tons of sulphate of ammonia and 600 tons of basic slag were, it would appear. similarly used. Of the remaining 209,000 tons, the distribution of the ingredients can at best be roughly estimated between homemanufactured sulphate of ammonia, superphosphates, basic slag, bone-meal, etc., on the one hand, and some of the 493,200 tons of the retained imports, of which at least 464,700 tons consisted of simple fertilisers, on the other. It is probable that not less than one-half of the total weight was made up of home-made ingredients. The total make of simple fertilisers in the United Kingdom may be estimated at about 1,330,000 tons; the retained imports of fertilisers, simple or compound, amounted to 493,200 tons, so that the total supply amounted to 1.823,000 tons. Of this amount 396,000 tons were exported, leaving for use in the United Kingdom, apart from variations in stocks, a total of 1,427,000 tons, of which between two-thirds and three-fourths was manufactured or compounded in the United Kingdom.

It remains to estimate the duplication involved in the gross value of the output of fertilisers for sale ( $\pounds$ 3,662,000) as returned on schedules for the Fertiliser, etc., Trades. This duplication was mainly related to the ingredients used in the production of the (estimated) 250,900 tons of compound fertilisers returned on those schedules. The makers of superphosphates and of other simple fertilisers in this trade showed that they used 90,300 tons of simple fertilisers of their own manufacture in making compound fertilisers. Thus the duplication amounts to the British-made ingredients of 160,600 tons of compound fertilisers. The total amount, and the proportions, of those ingredients are very imperfectly known. The cost, to the firms compounding them, of the British-made ingredients may have amounted to as much as  $\pounds$ 500,000, thus making the value of the fertilisers returned on schedules for the Fertiliser, etc., Trades a sum lying between  $\pounds$ 3,162,000 and  $\pounds$ 3,662,000.

Disinfectants, etc.—The output for sale of disinfectants, insecticides, weed-killers, and sheep and cattle dressings in 1924 was returned as follows :—

	Quantity.	Selling value.
Returned on schedules for— The Fertiliser, etc., Trades . Other trades	$\begin{array}{c} \text{Th. tons.} \\ \cdot & 32 \cdot 8 \\ \cdot & 14 \cdot 0 \end{array}$	£'000. 1,662 591
Total—All trades	. 46.8	2,253

These figures are free from duplication, and the total shows an increase in quantity of nearly 41 per cent. since 1912; in 1907 the quantity made was not stated, but it would appear to have been less

than in 1912. In 1924 about 20,800 tons of disinfectants, etc., were exported and about 1,000 tons imported and retained. Tobacco offal is not included in the above figures.

Other principal products.—The total output of the other principal products of these trades in 1924 was as follows :—

	Returned on schedules for						
Kind of product.	The Fertilise	r, etc., Trades.	All trades.				
	Quantity.	Selling value.	Quantity.	Selling value.			
electronic to all mapping and all the	Th. tons	£'000	Th. tons	£'000			
Glue and size	27.3	859	30.0	931			
Gelatine Bones for manufacturing purposes	1.4	193	1.6	235			
(other than for manure)	11.6	87	19.0	158			
Bones for manure	DE L. HE I	36	3032. M. e	168			
Animal residues and waste products	Set into	128	de l'ense	128			
TOTAL VALUE		1,303	byu A r	1,620			

It is probable that the bones for manure, returned on schedules for the Fertiliser, etc., Trades, and valued at  $\pounds 36,000$ , represented additions to stock of bones sorted and prepared for grinding, and that no duplication is involved with the value of the bone meal included with fertilisers. There may, however, be duplication as between the bones for manufacturing purposes ( $\pounds 87,000$ ) and the output of glue and size.

About 8,400 tons of glue and size and nearly 400 tons of gelatine were exported in 1924; retained imports in the same year were 6,500 tons of glue and size and nearly 900 tons of gelatine. Nearly 76.9 per cent. of the glue and size and over 57.1 per cent. of the gelatine available for use in the United Kingdom were of British manufacture.

Other products.—In addition to the principal products shown in the preceding tables, firms that made their returns on schedules for the Fertiliser, etc., Trades, recorded, for each of the censal years, 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.

Miles dipos d	19:	1924.		12.	1907.	
Kind of goods.	Quantity.	Selling value.	Quantity.	Selling value.	Quantity.	Selling value.
Sulphuric acid Animal fats Animal feeding stuffs Other goods	$\begin{array}{c} \text{Th. tons} \\ 121 \cdot 3 \\ 27 \cdot 3 \\ 19 \cdot 8 \\ \end{array}$	£'000 338 944 280 158	$\begin{array}{c} \text{Th. tons} \\ 93 \cdot 0 \\ 24 \cdot 0 \\ \\ \\ \end{array}$	£'000 135 538 250 131	$\begin{array}{c} \text{Th. tons} \\ 67 \cdot 0 \\ 19 \cdot 0 \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \end{array}$	£'000 94 468 211 249
TOTAL VALUE	1	1,720		1,054		1,022

Makers of fertilisers were required to state their total make of sulphuric acid\* (whether subsequently used by themselves or not) in terms of acid of 1.7 specific gravity. The aggregate quantity so returned amounted to 237,350 tons, of which 48,800 tons were produced by firms that did not manufacture superphosphate. Makers of 119,800 tons of superphosphate produced 59,800 tons of sulphuric acid, the whole of which was used in the manufacture of superphosphate. Most manufacturers of superphosphate produced sulphuric acid, but firms that made 44,000 tons of superphosphate purchased all their acid and examination of the returns indicates that firms with an output of about 20,000 tons of superphosphate did not produce sufficient sulphuric acid for their requirements. It is estimated that between 20,000 and 30,000 tons of sulphuric acid were purchased by makers of superphosphate. So far as this acid was purchased from firms that made returns on schedules for the Fertiliser, etc., Trades, duplication would arise, the value involved being between about  $f_{60,000}$  and  $f_{90,000}$ .

Value of output free from duplication.—The gross value of the output returned on schedules for the Fertiliser, etc., Trades was  $\pounds 8,347,000$ . It has already been estimated that the duplication in respect of compound fertilisers may have been as much as  $\pounds 500,000$ , and it appears that there may be duplication in respect of purchases of bones for manufacturing purposes ( $\pounds 87,000$ ) and of sulphuric acid amounting to between  $\pounds 60,000$  and  $\pounds 90,000$ . The value of the output, free from duplication, is therefore estimated to be between  $\pounds 7,670,000$  and  $\pounds 8,347,000$ .

Cost of materials.—The cost of materials used by firms that made their returns on schedules for the Fertiliser, Glue, Sheep Dip and Disinfectant Trades was returned as  $\pounds 5,358,000$  in 1924, a sum which, by the exclusion of purchases of the products of other firms in the same trades, is reduced to a sum lying between  $\pounds 4,680,000$  and  $\pounds 5,358,000$ .

Net output.—The net output in 1924 of the firms that made their returns on schedules for the Fertiliser, Glue, Sheep Dip and Disinfectant Trades (whose gross output was valued at  $\pounds 8,347,000$ ) was  $\pounds 2,989,000$ , 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  $\pounds 277$  as compared with  $\pounds 154$  in 1912 and  $\pounds 154$  in 1907.

\* The total make of sulphuric acid in the United Kingdom is discussed in the report on the Chemicals, Dyestuffs and Drugs Trades (pages 32 and 33).

#### 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 Fertiliser, Glue, Sheep Dip and Disinfectant Trades 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, 3,963 operatives, or 47 per cent. of the total of 8,445 operatives for the trades as a whole, and their net output totalled  $f_{1,520,000}$ , or 51 per cent. of the aggregate net output of  $f_{2,989,000}$  for the trades as a whole. The total wage-bill of these firms, as returned to the Ministry of Labour, was £548,000, representing about 36 per cent. of their aggregate net output.

#### Employment.

The detailed information relating to employment in 1924 is summarised in Table III on page 102. 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.

that and think of the	Ma	ıles.	Fem	ales.	Males and females.	
Average number.	Under 18.	All ages.	Under 18.	All ages.	Under 18.	All ages.
1924. Operatives Administrative, etc	402 92	7,475 1,464	319 44	1,437 390	721 136	8,912 1,854
Total	494	8,939	363	1,827	857	10,766
<b>1912.</b> Wage earners Salaried	609 125	10,728 1,591	142 21	870 136	751 146	11,598 1,727
Total	734	12,319	163	1,006	897	13,325
<b>1907.</b> Wage earners Salaried	516 144	9,811 1,551	158 16	991 91	674 160	10,802 1,642
Total	660	11,362	174	1,082	834	12,444

The numbers of operatives recorded month by month in 1924 ranged from 1,742 above the average, in April, to 901 below the average, in July (see Table IIIB., page 102). The decrease in male operatives and the increase in female operatives in 1924 as compared with pre-war years is an outstanding feature of the table.

#### Mechanical Power.

The detailed information relating to mechanical power in 1924 is summarised in Table IV on page 103. 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.

	and	1924.		1912.	1907.
Power equipment.	Ordinarily in use.	In reserve or idle.	Total.	Total.	Total.
PRIME MOVERS :	H.P.	H.P.	H.P.	H.P.	H.P.
Reciprocating steam engines	9,050	3,114	12,164	18,299	19,030
Steam turbines	105	30	135	50	All and the second
Gas engines	3,841	679	4,520	5,185	]
Petrol and light oil engines	180	5	185	} 158	> 2,559
Heavy oil engines	346	19	365		)
Water power	183	3	186	124	265
Other	a same and	10 0 <u>-0-</u> 0800		-	46
TOTAL	13,705	3,850	17,555	23,816	21,900
ELECTRIC GENERATORS :	Kw.	Kw.	Kw.	Kw.	Kw.
Driven by—				Contraction of the	and the second
Reciprocating steam engines	2,213	700	2,913	1,187	823
Steam turbines	80		80		
Gas engines	553	216	769	1	)
Petrol and light oil engines	15	a an <u>te</u> della	15	398	and the second s
Heavy oil engines	17	100 (100)	17	398	> 47
Water power	4	Lands - Bartin	4	J	
Other prime movers	-			-	]
TOTAL	2,882	916	3,798	1,585	870

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

Then for a consider a last stor !!		1912.		
Electric motors.	Ordinarily in use.	In reserve or idle,	Total.	Total.
Driven by—	H.P.	H.P.	H.P.	H.P.
Electricity generated in own works Purchased electricity	4,117 18,573	309 1,922	4,426 20,495	1,184 3,983

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 877,000.

## TABLES.

#### I.—Summary of results.

Particulars.	Unit.	England and Wales and N. Ireland.*	Scotland.	United Kingdom.
Value of goods made (Gross output	£'000	6,782	1,565	8,347
Cost of materials used	,,	4,278	1,080	5,358
Net output	,,	2,504	485	2,989
Average number of persons employed	No.	8,965	1,801	10,766
Net output per person employed	£	279	268	277
Mechanical power available :			and the second	ALL AND DO TO
Prime movers	H.P.	14,459	3,096	17,555
electricity	,,	14,987	5,508	20,495

\* 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.

## A.—Total quantity of basic slag, superphosphates, sulphate of ammonia and sulphuric acid made in the year, as returned on schedules for the Fertiliser, etc., Trades.

Pi	England and Wales and N. Ireland.*	Scotland.	United Kingdom.				
Basic slag Superphosphates		•••	•••		Tons. † 244,300	Tons, † 76,200	Tons. 107,210 320,500
Sulphate of ammonia Sulphuric acid	•••	::	::	· · ·	184,750	<sup>†</sup> 52,600	5,380 237,350

\* 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.

## II.—Production.

## B.—OUTPUT FOR SALE OR FOR STOCK.

Kind of goods.	Wale	nd and es and a Ireland.*	Scotland.		United Kingdom.		
	Quantity.	Selling value.	Quantity.	Selling value.	Quantity.	Selling value.	
	Th. tons.	£'000	Th. tons.	£'000	Th. tons.	£'000	
Fertilisers :	$175 \begin{array}{c} \dagger \\ 5 \\ \dagger \end{array}$	510 †	$56 \overset{\dagger}{\cdot} 2 \overset{\dagger}{\dagger}$	165 †	$106 \cdot 6 \\ 231 \cdot 7 \\ 4 \cdot 5$	~ 176 675 58	
ures (including bone meal and other manu- factured fertilisers)	309.5	1,998	113.4	755	422.9	2,753	
Total—Fertilisers	†	+	+	†	765.7	3,662	
Disinfectants, insecticides, weed-killers and sheep and cattle dressings Glue and size Gelatine	29·5 25·8	1,436 777	3·3 1·5	226 82	$32 \cdot 8$ $27 \cdot 3$	1,662 859	
Bones for manufacturing purposes Bone by-products not elsewhere specified,	† †	†	† †	† 1	$\frac{1\cdot 4}{11\cdot 6}$	193 87	
including bones for manure Animal residues Other by-products, in-	Doine der	36 76	·	 14	579557 ••••	36 90	
cluding waste Sulphuric acid Animal fat, not refined :—	 83·4	$\frac{38}{240}$	37.9	98	121.3	38 338	
Tallow          Other sorts          Refined tallow          Oil-seed cake and other	$5 \cdot 8$ $19 \cdot 2$ $1 \cdot 0$	$\begin{array}{r} 205\\642\\48\end{array}$	$\begin{array}{c} 0 \cdot 2 \\ 1 \cdot 1 \\ - \end{array}$	6 43 —	$     \begin{array}{r}       6 \cdot 0 \\       20 \cdot 3 \\       1 \cdot 0     \end{array} $	211 685 48	
animal feeding stuffs Chemical products, etc Oils Soap	11 · 1   	$166 \\ 49 \\ 10 \\ 48 \\ 23$	8·7  	114 16 12 	19·8  	280 65 22 48 23	
TOTAL VALUE OF GOODS MADE (GROSS OUTPUT)	•.•	6,782		1,565		8,347	

\* 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.

#### III.—Employment.

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

	Males.		Fem	ales.	Males and females.		
Kind of staff.	Under 18.	All ages.	Under 18.	All ages.	Under 18.	All ages.	
England and Wales and Northern Ireland :	349 73 422	5,910 1,212 7,122	301 37 338	1,298 330 1,628	650 110 760	7,208 1,542 8,750	
Scotland :— Operatives Administrative,etc.*	32 19 51	1,148 252 1,400	7 7 14	89 60 149	39 26 65	1,237 312 1,549	
TOTAL United Kingdom :	381 92	7,058	308 44	1,387	689 136	8,445 1,854	
Total	473	8,522	352	1,777	825	10,299	

\* Administrative, technical and clerical staff. † See footnote to Table I.

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

England and Wales and Northern Ireland.\* (Annual average : Males, 6,096 ; Females, 1,327 ; Total, 7,423.)

Week ende	d	Males.	Females.	Total.	Week ended	Males.	Females.	Total.
Jan. 12th Feb. 16th Mar. 15th April 12th May 17th June 21st	··· ··· ···	6,048 6,598 6,923 7,001 6,113 5,728	1,292 1,358 1,388 1,416 1,351 1,326	7,340 7,956 8,311 8,417 7,464 7,054	July 19th Aug. 16th Sept. 13th Oct. 18th Nov. 15th Dec. 13th	5,578 5,528 5,601 5,910 6,093 6,025	$\begin{array}{c} 1,300\\ 1,289\\ 1,288\\ 1,298\\ 1,305\\ 1,319\end{array}$	6,878 6,817 6,889 7,208 7,398 7,344

Scotland. (Annual average : Males, 1,379; Females, 110; Total, 1,489.

Jan. 12th Feb. 16th Mar. 15th April 12th May 17th	••• •• ••	1,261 1,448 1,877 2,075 1,719	92 137 171 162 130	1,585 2,048 2,237 1,849	Aug. 16th Sept. 13th Oct. 18th Nov. 15th	1,050 1,172 1,080 1,148 1,244 1,321	83 79 82 89 98 105	$1,133 \\ 1,251 \\ 1,162 \\ 1,237 \\ 1,342 \\ 1,426$
June 21st	100000000000000000000000000000000000000	1,148	98	1,246	Dec. 13th	1,321	105	1,426

United Kingdom. (Annual average : Males, 7,475 ; Females, 1,437 ; Total, 8,912.)

and the second second second		and the second second second	and the second second			0.000	1 000	0.011
Jan. 12th		7.309	1.384	8,693	July 19th	6,628	1,383	8,011
	to specific	8.046	1.495	9.541	Aug. 16th	6.700	1.368	8.068
Feb. 16th	• •	Contraction of the second	ALC TRACTORY OF A STATE	and the second second second		In Assessment Provide Card	1.370	8.051
Mar. 15th		8,800	1,559	10,359	Sept. 13th	6,681		
April 12th		9.076	1.578	10.654	Oct. 18th	7.058	1,387	8,445
	• •					7.337	1.403	8.740
May 17th		7,832	1,481	9,313	Nov. 15th			The second second second second
June 21st		6.876	1.424	8,300	Dec. 13th	7,346	1,424	8,770

\* See footnote to Table I.

## IV.—Mechanical Power.

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

Power equipment.	England and Wales and Northern 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.
PRIME MOVERS :	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
engines Steam turbines Gas engines Petrol and light oil	7,512 105 3,065	2,794 30 449	1,538 	320 	9,050 105 3,841	3,114 30 679
engines Heavy oil engines Water power	177 221 79	5 19 3	3 125 104		180 346 183	5 19 3
Total	11,159	3,300	2,546	550	13,705	3,850
Total of prime movers INSTALLED	14,459		3,096		17,555	
ELECTRIC GENERATORS : Driven by Reciprocating steam	Kw.	Kw.	Kw.	Kw.	Kw.	Kw.
engines Steam turbines Gas engines Petrol and light oil	1,946 80 328	700 	267  225		2,213 80 553	700 
engines Heavy oil engines Water power	15 2 4		15 		15 17 4	
Total	2,375	916	507		2,882	916
TOTAL OF ELECTRIC GENERATORS INSTALLED	3,291		507		3,798	
ELECTRIC MOTORS : Driven by Electricity generated	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
in own works Purchased electricity	3,131 13,520	227 1,467	986 5,053	82 455	4,117 18,573	309 1,922

\* See footnote to Table I.