

THE SCIENTIFIC INSTRUMENTS, APPLIANCES AND
APPARATUS TRADES.

Contents.		Page
INTRODUCTORY		426
Summary of results		426
Qualifications affecting comparisons		427
Value of output and cost of materials		427
Divisions of the industry		428
PRODUCTION		428
Principal products		428
Other products		430
Repairs and work done for the trade		430
Value of output free from duplication		430
Cost of materials and work given out		431
Net output		431
Exports and imports		431
WAGES IN 1924		432
EMPLOYMENT		433
MECHANICAL POWER		434
TABLES		435

Introductory.*

The tables on pages 435 to 440 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 scientific instruments, appliances and apparatus. The number of such separate returns was 725. About 130 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 500 persons in all and that their total net output probably did not exceed £90,000.

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 Notes on pages vii to xv.

Particulars.	Unit.	1924.	1912.	1907.
Value of goods made and work done (Gross output)	£'000	9,608	3,353	2,574
Cost of materials used	"	4,197	1,341	1,013
Paid for work given out to other firms	"	28	10	26
Net output	"	5,383	2,002	1,535
Average number of persons employed (excluding outworkers)	No.	25,521	17,423	14,256
Net output per person employed (excluding outworkers)	£	211	115	108
Mechanical power available:—				
Prime movers	H.P.	4,812	2,690	2,894
Electric motors driven by purchased electricity	"	11,189	2,498	(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. The exclusion of Southern Ireland in 1924 does not, however, 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 1,020, or nearly 6 per cent. of the number employed by the remaining firms, as shown in the above table. Moreover, correspondence on defective returns for 1912 had not been completed when the war compelled suspension of this work. In these circumstances detailed information for 1912 is not given in the remainder of this report. The resulting defects in the aggregate figures given above are, however, not important.

(4) Owing to changes in classification between the two years, the figures for 1907 do not cover as wide a ground as those for 1924. The total shown for 1907 in respect of *surgical and medical bandages and dressings* is very small compared with that for 1924, and it is probable that in the earlier year the main output of these goods was returned on schedules for the textile trades. Again, in 1907 the greater part of the production of sensitised films, plates and paper was returned on the schedules for the Chemicals, Dyestuffs and Drugs Trades (see page 23).

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 over-state the value of the output of, and the cost of materials used by, the Scientific Instruments, Appliances and Apparatus Trades considered as a whole. The matter is discussed on pages 430 and 431, where it is estimated that the value, free from duplication, of the output of these trades in 1924 lay between £9,200,000 and £9,400,000, and the cost of the materials purchased from sources outside the trade and worked up into its products lay between £3,800,000 and £4,000,000.

Divisions of the industry.—The firms that made returns for 1924 on the schedules for the Scientific Instruments, etc., Trades may be arranged in five groups, according as they were mainly engaged in the manufacture of:—

- (a) sensitised films, plates and papers;
- (b) cameras and other optical instruments and appliances;
- (c) surgical instruments and appliances;
- (d) surgical bandages and dressings; and
- (e) other scientific instruments, etc.

Each of the first four of these groups manufactured at least 95 per cent. of the total output of the products characteristic of the group, as returned by all firms in this trade. The main particulars relating to these groups are shown below:—

Particulars.	Unit.	Firms mainly engaged in the manufacture of—				
		Sensitised films, plates and papers.	Optical instruments and appliances.	Surgical instruments and appliances.	Surgical bandages and dressings.	Other scientific instruments, etc.
Value of goods made and work done (Gross output)	£'000	2,070	1,777	1,714	1,392	2,655
Cost of materials used and work given out	1,237	561	618	954	855
Net output	833	1,216	1,096	438	1,800
Average number of persons employed	No.	3,415	6,645	4,629	2,582	8,250
Net output per person employed	£	244	183	237	170	218

Production.

Detailed information relating to the output of the Scientific Instruments, Appliances and Apparatus Trades in 1924 will be found in Table II on pages 436 and 437.

In addition to the output dealt with in this report, scientific instruments, appliances and apparatus, valued, on a cost basis, at £56,000 were produced in 1924 in Army Ordnance Factories and Naval Dockyards.*

Principal products.—The following statement shows, for the years 1924 and 1907, the value of the principal classes of scientific instruments, appliances and apparatus returned, the figures for each year being inclusive of the output of similar products recorded on schedules for other trades, but exclusive of the output of Government factories.

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

Scientific instruments, apparatus and appliances.	1924.		1907.
	Returned on schedules for		Total.
	The Scientific Instruments, etc., Trades.	All trades.	
	Selling value.	Selling value.	Selling value.
Optical instruments and appliances:—	£'000.	£'000.	£'000.
Lenses, prisms, etc., optically worked, sold separately	336	336	78
Telescopes, binoculars and microscopes ..	100	100	76
Spectacles, pince-nez, etc.	567	569	243
Spectacle frames, mounts and parts, not separately distinguished	77	77	
Other optical instruments and appliances ..	170	177	
TOTAL VALUE—Optical instruments and appliances	1,250	1,259	397
Dental, surgical, medical and veterinary instruments and appliances, other than optical:—			
Instruments	206	206	359
Appliances, including trusses and artificial limbs	908	913	
Aseptic hospital furniture	60	65	
Other sorts, including general dental goods, except dental platinum	496	496	278
TOTAL VALUE—Dental, surgical, medical and veterinary instruments and appliances	1,670	1,680	637
Surgical and medical bandages and dressings ..	1,354	1,667	24
Photographic apparatus and appliances:—			
Sensitised photographic paper	794	836	909
Sensitised photographic plates and films, including cinematograph blank films (raw films or stock)	1,107	1,107	
Cameras, complete	133*	133	
Cinematograph and projection apparatus (including magic lanterns)	54	57	161
Other photographic and cinematograph appliances, not elsewhere specified ..	62	65	
TOTAL VALUE—Photographic apparatus and appliances	2,150	2,198	1,070
Barometers, thermometers, hydrometers and similar instruments	363	366	108
Mathematical instruments	439	441	
Slide rules, calculating discs and cylinders ..	6	10	699
Gauges	75†	120	
Precision balances	20	20	
Other scientific instruments, etc., including land surveying, nautical, drawing, etc., and unspecified (not elsewhere included)	632	694	
TOTAL VALUE—Scientific instruments, apparatus and appliances, other than electrical	7,959	8,455	2,935

* 121,600 complete cameras.

† 125,000 gauges.

As stated in an earlier paragraph, the total value of *surgical and medical bandages and dressings* shown in the above table for 1907 is almost certainly incomplete and not comparable with the corresponding figure for 1924. Omitting such goods, the value of the total output of the principal products of the trade was nearly $2\frac{1}{2}$ times as great in 1924 as in 1907, and there can be no doubt that, after allowing for changes in prices, this represented a very substantial increase in the volume of production.

No particulars of quantities were required in 1907, and in 1924 such particulars were required only in respect of cameras and gauges.

Other products.—In addition to the products set out in the above table, firms that made their returns on schedules for the Scientific Instruments, etc., Trades recorded, for each of the censal years, the following goods which, being of kinds mainly produced in other trades, are dealt with in the reports on those trades:—

Kind of goods.	1924.	1907.
	Selling value.	Selling value.
	£'000.	£'000.
Electrical instruments and apparatus:—		
Electrical instruments, scientific	321	} 137
X-Ray apparatus (industrial, medical and other)	122	
Other electro-medical apparatus	42	
Thermionic valves	250	
Other electrical goods	123	
TOTAL—Electrical instruments and apparatus	858	137
Machinery and accessories and other metal manufactures	109	23
Manufactures of wood	97	} 47
Photographic printing, map mounting, etc.	37	
Other goods made	74	
TOTAL VALUE	1,175	207

Repairs and work done for the trade.—In addition to the output recorded in the preceding tables, firms that made their returns on schedules for the Scientific Instruments, etc., Trades stated that they received £317,000 for repair work done for customers in 1924. In 1907 the corresponding figure was £51,000.

The amount returned as received for work done for the trade in 1924 was £157,000, of which £83,000 was received for printing 14,562,000 feet of cinematograph films and £24,000 was in respect of other work on cinematograph films. In 1907 the amount received for work done for the trade was £14,000.

Value of output free from duplication.—The gross value of the output returned on schedules for the Scientific Instruments, etc.,

Trades in 1924 was £9,608,000, but this sum includes possible duplication in respect of lenses, prisms, etc., optically worked (£336,000) and of spectacle frames, mounts and parts (£77,000), in so far as they were sold to other firms in this trade for making up into more finished products. The value (f.o.b.) of the exports of lenses, prisms, etc., optically worked, was £47,000, but that of the exports of spectacle frames, etc., cannot be stated, nor can the value be stated of the lenses, prisms, etc., and spectacle frames, etc., sold to retail traders or to firms in other trades. There may also be a small amount of duplication in respect of certain miscellaneous products. Further, £28,000 was paid for work given out to other firms, and this amount is duplicated in so far as such work was done by other firms in this trade. The maximum amount of duplication did not, therefore, exceed about £400,000 and was probably somewhat less. Thus, the value, free from duplication, of the output in 1924 of the firms that made their returns on schedules for the Scientific Instruments, etc., Trades may be estimated as lying between £9,200,000 and £9,400,000.

The corresponding net figure for 1907 was estimated to lie between £2,464,000 and £2,560,000.

Cost of materials and work given out.—The cost of materials used by firms that made their returns on schedules for the Scientific Instruments, Appliances and Apparatus Trades was returned as £4,197,000 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 £3,800,000 and £4,000,000; the corresponding net figure for 1907 lay between £917,000 and £1,013,000.

The amount paid to other firms for work given out to them was returned as £28,000 in 1924 and £26,000 in 1907.

Net output.—The net output in 1924 of the firms that made their returns on schedules for the Scientific Instruments, Appliances and Apparatus Trades (whose gross output was valued at £9,608,000) was £5,383,000, 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 and the amount paid to other firms for work given out to them.

The net output per head of persons employed (excluding out-workers) in the censal year 1924 was £211 as compared with £108 in 1907.

Exports and imports.—The following table shows the exports and net imports of certain classes of scientific instruments and appliances (except electrical) in 1924. Owing to differences of classification no exact comparison can be made between figures of production and those of exports and imports.

Kind of goods.	Exports.	Net imports.
	Value f.o.b.	Value c.i.f.
	£'000.	£'000.
Optical instruments and appliances :—		
Lenses, prisms, etc., optically worked, mounted or unmounted (including those exported or imported with complete instruments)	47	197
(Thousand)	(209)	(6,705)
Bodies for telescopes, microscopes and other instruments for holding lenses	31	68
(Thousand)	(16)	(1,241)
Dental, surgical, medical and veterinary instruments and appliances (except optical) :—		
Instruments	102	36
Appliances, including trusses and artificial limbs, but excluding artificial eyes	126	12
Aseptic hospital furniture	15	15
Other sorts, including general dental goods, except dental platinum	198	*
Photographic apparatus and appliances, not including lenses :—		
Cameras	36	128
(Thousand)	(30)	(335)
Cinematograph and projection apparatus, including magic lanterns	14	27
Sensitised photographic paper	335	110
Sensitised photographic plates and films and blank cinematograph films	580	782
Other photographic and cinematograph appliances (except exposed cinematograph films)	108	64
Precision balances	7	5
Gauges	18	18
(Thousand)	(18)	(33)
Mathematical instruments	53	9
Slide rules, calculating discs and cylinders	1	3
Other scientific instruments and appliances	569	153

* Re-exports in excess of imports by £107,000.

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 Scientific Instruments, Appliances and Apparatus 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, 11,192 operatives, or 51 per cent. of the total of 21,769 operatives for the trades as a whole, and their net output totalled £2,711,000, or 50 per cent. of the aggregate net output of £5,383,000 for the trades as a whole. The total wage-bill of these firms, as returned to the Ministry of Labour, was £1,214,000, representing about 45 per cent. of their aggregate net output.

Employment.

The detailed information relating to employment in 1924 is summarised in Table III on pages 433 and 439. The following table sets out certain particulars for that year together with those relating to 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 proportions shown by the data relating to the week ended 18th October.

Average number (excluding outworkers).	Males.		Females.		Males and females.	
	Under 18.	All ages.	Under 18.	All ages.	Under 18.	All ages.
1924.						
Operatives	2,357	13,243	2,722	8,225	5,079	21,468
Administrative, etc.	176	2,656	226	1,397	402	4,053
TOTAL	2,533	15,899	2,948	9,622	5,481	25,521
1907.						
Wage earners	2,102	9,344	1,145	3,378	3,247	12,722
Salaried	126	1,185	49	349	175	1,534
TOTAL	2,228	10,529	1,194	3,727	3,422	14,256
Average number of outworkers :—						
1924	29		35		64	
1907	111		22		133	

The numbers of operatives recorded month by month in 1924 increased throughout the year, ranging from 775 below the average, in January, to 332 above the average, in December (see Table IIIB, p. 439). With a small recession in July and August, the numbers increased monthly throughout the year. The number of female operatives in 1924 showed an advance of 143 per cent. over the figure for 1907 and the number of males an increase of 42 per cent.

Mechanical Power.

The detailed information relating to mechanical power in 1924 is summarised in Table IV on page 440. 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.
	H.P.	H.P.	H.P.	H.P.
PRIME MOVERS :—				
Reciprocating steam engines ..	1,631	108	1,739	837
Steam turbines	50	—	50	—
Gas engines	1,724	334	2,058	1,947
Petrol and light oil engines ..	55	—	55	
Heavy oil engines	435	400	835	
Water power	75	—	75	45
Other	—	—	—	65
TOTAL	3,970	842	4,812	2,894
ELECTRIC GENERATORS :—				
Driven by—	Kw.	Kw.	Kw.	Kw.
Reciprocating steam engines ..	726	23	749	358
Steam turbines	35	—	35	—
Gas engines	512	88	600	232
Petrol and light oil engines ..	—	—	—	
Heavy oil engines	295	335	630	
Water power	33	—	33	—
Other prime movers	—	—	—	—
TOTAL	1,601	446	2,047	590

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

Electric motors.	1924.		
	Ordinarily in use.	In reserve or idle.	Total.
	H.P.	H.P.	H.P.
Driven by—			
Electricity generated in own works ..	2,023	83	2,106
Purchased electricity	10,076	1,113	11,189

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 829,000.

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	9,237	371	9,608
Cost of materials used	"	4,068	129	4,197
Paid for work given out to other firms	"	28	†	28
Net output	"	5,141	242	5,383
Average number of persons employed (excluding outworkers)	No.	24,054	1,467	25,521
Net output per person employed (excluding outworkers)	£	214	165	211
Mechanical power available :—				
Prime movers	H.P.	4,759	53	4,812
Electric motors driven by purchased electricity	"	9,670	1,519	11,189

* In order to avoid the possible disclosure of information relating to the few firms in Northern Ireland, the figures for that division of the United Kingdom have been combined with those for England and Wales.

† Less than £500.

II.—Production.

Goods sold or added to stock and work done.	England and Wales and N. Ireland.*	Scotland.	United Kingdom.
	Selling value.	Selling value.	Selling value.
	£'000	£'000	£'000
Optical instruments and appliances :—			
Lenses, prisms, etc., optically worked, sold separately	†	†	336
Telescopes, binoculars and microscopes	100	—	100
Spectacles, pince-nez, etc.	538	29	567
Spectacle frames, mounts and parts not separately distinguished	77	—	77
Other optical instruments and appliances	†	†	170
TOTAL—Optical instruments and appliances	†	†	1,250
Dental, surgical, medical and veterinary instruments and appliances (other than optical) :—			
Instruments	202	4	206
Appliances, including trusses and artificial limbs	896	12	908
Aseptic hospital furniture	†	†	60
Other sorts, including general dental goods except dental platinum	481	15	496
TOTAL—Dental, surgical, medical and veterinary instruments and appliances	†	†	1,670
Surgical and medical bandages and dressings	†	†	1,354
Photographic apparatus and appliances :—			
Sensitised photographic paper	†	†	794
Sensitised photographic plates and films and blank cinematograph films	1,107	—	1,107
Cameras, complete	133	—	133
(Thousands) (121·6)			(121·6)
Cinematograph and projection apparatus (including magic lanterns)	54	—	54
Other photographic and cinematograph appliances (other than lenses) not elsewhere specified	62	—	62
TOTAL—Photographic apparatus and appliances	†	†	2,150
Barometers, thermometers, hydrometers, and similar instruments	†	†	363
Mathematical instruments	439	—	439
Slide rules, calculating discs and cylinders	6	—	6
Gauges	†	†	75
(Thousands) (125·0)			(125·0)
Precision balances	20	—	20
Other scientific instruments and appliances	522	110	632
TOTAL—SCIENTIFIC INSTRUMENTS, APPLIANCES AND APPARATUS (OTHER THAN ELECTRICAL)	7,656	303	7,959

* For notes see page 437.

Goods sold or added to stock and work done.	England and Wales and N. Ireland.*	Scotland.	United Kingdom.
	Selling value.	Selling value.	Selling value.
	£'000.	£'000.	£'000.
Electrical instruments, apparatus, etc. :—			
Electrical instruments, scientific	†	†	321
X-Ray apparatus (industrial, medical and other)	†	†	122
Other electro-medical apparatus (other than X-Ray)	42	—	42
Thermionic valves	250	—	250
Other electrical goods (including wireless apparatus)	†	†	123
TOTAL—Electrical instruments, apparatus, etc.	839	19	858
Machinery and accessories and other manufactures of metal	96	13	109
Manufactures of wood	97	—	97
Photographic printing, map-mounting, etc.	35	2	37
Other goods made	69	5	74
TOTAL VALUE OF GOODS MADE	8,792	342	9,134
	Amount received.	Amount received.	Amount received.
Repair work for customers	294	23	317
Work done for the trade :—			
On cinematograph films—			
Printing	83§	—	83§
Other than printing	24	—	24
All other work	44	6	50
TOTAL VALUE OF WORK DONE	445	29	474
TOTAL VALUE OF GOODS MADE AND WORK DONE (GROSS OUTPUT)	9,237	371	9,608

* 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.

§ For printing 14,562,000 linear feet of films of the standard width of 1·378 inches.

III.—Employment.

A.—NUMBERS EMPLOYED IN WEEK ENDED 18TH OCTOBER, 1924
(EXCLUDING OUTWORKERS).

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	2,282	12,408	2,734	8,179	5,016	20,587
Administrative, etc.†	164	2,470	217	1,274	381	3,744
TOTAL	2,446	14,878	2,951	9,453	5,397	24,331
<i>Scotland :—</i>						
Operatives	114	1,050	17	132	131	1,182
Administrative, etc.†	12	186	9	123	21	309
TOTAL	126	1,236	26	255	152	1,491
<i>United Kingdom :—</i>						
Operatives	2,396	13,458	2,751	8,311	5,147	21,769
Administrative, etc.†	176	2,656	226	1,397	402	4,053
TOTAL	2,572	16,114	2,977	9,708	5,549	25,822

* See footnote to Table I.

† Administrative, technical and clerical staff.

B.—OPERATIVES EMPLOYED IN ONE WEEK IN EACH MONTH OF 1924
(EXCLUDING OUTWORKERS).*England and Wales and Northern Ireland.**

(Annual average : Males, 12,220 ; Females, 8,090 ; Total, 20,310.)

Week ended.	Males.	Females.	Total.	Week ended.	Males.	Females.	Total.
Jan. 12th ..	11,905	7,666	19,571	July 19th ..	12,177	8,207	20,384
Feb. 16th ..	12,057	7,923	19,980	Aug. 16th ..	12,145	8,166	20,311
March 15th ..	12,117	8,002	20,119	Sept. 13th ..	12,303	8,215	20,518
April 12th ..	12,210	8,026	20,236	Oct. 18th ..	12,408	8,179	20,587
May 17th ..	12,250	8,125	20,375	Nov. 15th ..	12,416	8,181	20,597
June 21st ..	12,245	8,176	20,421	Dec. 13th ..	12,412	8,206	20,618

Scotland. (Annual average : Males, 1,023 ; Females, 135 ; Total, 1,158.)

Jan. 12th ..	978	144	1,122	July 19th ..	1,022	127	1,149
Feb. 16th ..	999	146	1,145	Aug. 16th ..	1,024	134	1,158
March 15th ..	1,002	138	1,140	Sept. 13th ..	1,052	133	1,185
April 12th ..	1,019	137	1,156	Oct. 18th ..	1,050	132	1,182
May 17th ..	1,019	133	1,152	Nov. 15th ..	1,047	132	1,179
June 21st ..	1,019	132	1,151	Dec. 13th ..	1,044	138	1,182

United Kingdom. (Annual average : Males, 13,243 ; Females, 8,225 ; Total, 21,468.)

Jan. 12th ..	12,883	7,810	20,693	July 19th ..	13,199	8,334	21,533
Feb. 16th ..	13,056	8,069	21,125	Aug. 16th ..	13,169	8,300	21,469
March 15th ..	13,119	8,140	21,259	Sept. 13th ..	13,355	8,348	21,703
April 12th ..	13,229	8,163	21,392	Oct. 18th ..	13,458	8,311	21,769
May 17th ..	13,269	8,258	21,527	Nov. 15th ..	13,463	8,313	21,776
June 21st ..	13,264	8,308	21,572	Dec. 13th ..	13,456	8,344	21,800

* See footnote to Table I.

C.—NUMBER OF OUTWORKERS AT TWO SPECIFIED PERIODS IN 1924.

Country.	January.			July.		
	Males.	Females.	Total.	Males.	Females.	Total.
<i>England and Wales*</i> ..	30	22	52	28	47	75

* No outworkers were returned for Scotland or Northern Ireland.

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	1,631	108	—	—	1,631	108
Steam turbines	50	—	—	—	50	—
Gas engines	1,671	334	53	—	1,724	334
Petrol and light oil engines	55	—	—	—	55	—
Heavy oil engines	435	400	—	—	435	400
Water power	75	—	—	—	75	—
TOTAL	3,917	842	53	—	3,970	842
TOTAL OF PRIME MOVERS IN- STALLED	4,759		53		4,812	
ELECTRIC GENERATORS :—	Kw.	Kw.	Kw.	Kw.	Kw.	Kw.
Driven by—						
Reciprocating steam engines	726	23	—	—	726	23
Steam turbines	35	—	—	—	35	—
Gas engines	512	88	—	—	512	88
Heavy oil engines	295	335	—	—	295	335
Water power	33	—	—	—	33	—
TOTAL	1,601	446	—	—	1,601	446
TOTAL OF ELECTRIC GENERATORS INSTALLED	2,047		—		2,047	
ELECTRIC MOTORS :—	H.P.	H.P.	H.I.	H.F.	H.P.	H.P.
Driven by—						
Electricity generated in own works	2,023	83	—	—	2,023	83
Purchased electricity	8,776	894	1,300	219	10,076	1,113

* See footnote to Table I.