

THE TYPEFOUNDING, ELECTROTYPING, STEREOTYPING,
ENGRAVING, PROCESS-BLOCK MAKING AND DIE
SINKING TRADES.

Contents.		Page
INTRODUCTORY		325
Summary of results		325
Qualifications affecting comparisons		326
Value of output and cost of materials		326
PRODUCTION		326
Principal products		326
Other products		328
Value of output free from duplication		328
Cost of materials and work given out		328
Net output.. .. .		328
WAGES IN 1924		329
EMPLOYMENT.. .. .		329
MECHANICAL POWER		330
TABLES		331

Introductory.*

The tables on pages 331 to 334 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 type and sundries for printers and in stereotyping, electrotyping, engraving, die-sinking, and relief-stamping. The number of such separate returns was 578. 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 325 persons in all and that their total net output probably did not exceed £50,000.

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. The information received in connexion with the Census of 1912, when details of output were not required from firms that employed five persons or less, was not sufficiently complete to warrant its use for purposes of comparison.

* See also Notes on pages vii to xv.

Particulars.	Unit.	1924.	1907.
Value of goods made and work done (Gross output)	£'000	3,163	970
Cost of materials used	"	615	304
Paid for work given out to other firms	"	126	—
Net output	"	2,422	666
Average number of persons employed	No.	10,091	6,519
Net output per person employed	£	240	102
Mechanical power available :—			
Prime movers	H.P.	777	680
Electric motors driven by purchased electricity	"	3,001	(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 Census of 1907 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 seriously affect the comparability of the figures since, 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 engraving and electrotyping work done in that year (together with some other work which was included with it) was returned as only £49,000.

Value of output and cost of materials.—The figures in the above table representing the value of goods made and work done are the aggregates of the figures recorded by the firms making returns, and for the reasons explained in paragraphs (i) and (ii) on page xiii, they may overstate the value of the output of the Typefounding, Electrotyping, Engraving, etc., Trades, considered as a whole. The matter is discussed on page 328, where it is estimated that the value, free from duplication, of the output of the trade in 1924 was probably about £3,100,000. The figures in the table representing the cost of materials used are substantially free from duplication.

Production.

Detailed information relating to the output in 1924 of the Typefounding, Electrotyping, Engraving, etc., Trades will be found in Table II on page 332.

Principal products.—The following table shows, for the censal years 1924 and 1907, the value and, where recorded, the quantity of the chief classes of output, including not only the products of

firms that made their returns on schedules for the Typefounding, Electrotyping, Engraving, etc., Trades, but also similar goods produced by firms whose returns were furnished on schedules for other trades.

Kind of goods made and work done.	1924.		1907.
	Returned on schedules for		Total.
	Typefounding, Electrotyping, Engraving, etc., Trades.	All trades.	
	Value.	Value.	Value.
Printing type	£'000	£'000	£'000
	373	380	289
	(950)	(970)	(2,300)
Printers' sundries (wood and metal furniture, etc.)	150	165	101
Electrotyping and stereotyping	368	460	234
Engraving of blocks, plates, etc. :—			
Steel and copper plates (intaglio work) ..	154	176	62
Wood blocks (relief work)	23	23	34
Process blocks (relief work)	1,046	1,075	202
Total—Engraving of blocks, plates, etc.	1,223	1,274	298
Die sinking	134	138	76
Relief stamping	110	203	47*
Stamps, marks and stencils of rubber or metal†	163	167	52
TOTAL VALUE	2,521	2,787	1,097

* Including £15,000 for die-sinking and relief stamping, not separately distinguished.

† So far as returned separately. Further amounts were probably included in unclassified statements by firms in other trades, e.g., the Finished Brass Trade and the Rubber Trade.

These amounts do not include the value of the goods and processes specified where they formed part of the operations of printing establishments: for example, printers doing electrotyping or stereotyping or the engraving of process blocks as part of the work of producing a book or periodical, did not account for such work separately, but included its value in the final value of the books or periodicals printed.

The quantity of printing type returned for 1924 represents only about 42 per cent. of the aggregate returned for 1907. This decrease is partly due to the decline in the exports from 533 tons in 1908 (the first year when printing type was shown separately in the import and export returns) to 196 tons in 1924. Retained imports also decreased from 40 to 32 tons. The weight of new type available for use in the United Kingdom in 1924 was thus 806 tons, against about 1,807 tons in 1907 (taking the imports and exports in that year as the same as in 1908). This reduction reflects the decreased use made in more recent years of manufactured printing type, consequent upon the development in the use of linotype and monotype machinery.

Other products.—In addition to the principal products shown in the preceding table, firms that made their returns on schedules for the Typefounding, Electrotyping, Engraving, etc., Trades recorded, for the censal years 1924 and 1907, an output of other goods and work done as set out below. Such output, being of kinds mainly produced in other trades, is dealt with in the reports on those trades.

Kind of output.	1924.	1907.
	Value.	Value.
	£'000	£'000
Engraving on gold and silver goods	61	} 85
Engraving on brass and other metals, including the manufacture of name plates	263	
Printing and bookbinding	157	
Other goods made and work done	161	
TOTAL VALUE	642	124

Value of output free from duplication.—The gross value of the goods made and work done by firms that made their returns on the schedule for the Typefounding, Electrotyping, Engraving, etc., Trades in 1924 was returned as £3,163,000. Such firms stated that they paid to other firms £126,000 for wood engraving, block making and similar work, and in so far as this work was done by firms that made returns on the schedule for these trades, its value is duplicated in the gross value of output. Some of the work given out may, however, have been done by firms in other trades and, making some allowance on this account, the value of the output of the firms that furnished returns on schedules for the Typefounding, Electrotyping, Engraving, etc., Trades in 1924, may be stated as about £3,100,000, free from duplication. The gross output for 1907 was £970,000 and was free from duplication.

Cost of materials and work given out.—The cost of the materials used by firms that made returns on schedules for the Typefounding, Electrotyping, Engraving, etc., Trades was returned as £615,000 for 1924 and £304,000 for 1907.

The amount paid to other firms for work given out to them was returned as £126,000 in 1924, but no work given out was recorded in 1907.

Net output.—The net output in 1924 of the firms that made their returns on schedules for the Typefounding, Electrotyping, Engraving, etc., Trades (whose gross output was valued at £3,163,000) was £2,422,000, 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 in the censal year 1924 was £240, as compared with £102 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 Typefounding, Electrotyping, Engraving, etc., 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, 3,933 operatives, or 51 per cent. of the total of 7,718 operatives for the trades as a whole, and their net output totalled £1,225,000, or 51 per cent. of the aggregate net output of £2,422,000 for the trades as a whole. The total wage-bill of these firms, as returned to the Ministry of Labour, was £674,000, representing about 55 per cent. of their aggregate net output.

Employment.

The detailed information relating to employment in 1924 is summarised in Table III on page 333. 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.	Males.		Females.		Males and females.	
	Under 18.	All ages.	Under 18.	All ages.	Under 18.	All ages.
1924.						
Operatives	1,294	6,301	480	1,300	1,774	7,601
Administrative, etc.	277	1,929	109	561	386	2,490
TOTAL	1,571	8,230	589	1,861	2,160	10,091
1907.						
Wage earners	997	4,704	338	910	1,335	5,614
Salaried	63	811	24	94	87	905
TOTAL	1,060	5,515	362	1,004	1,422	6,519

The numbers of operatives recorded month by month in 1924 ranged from 121 below the average, in January, to 165 above the average, in November (see Table IIIB, page 333). The numbers increased during the year except for the three summer months and a set-back in December, the relative increase being greater for female than for male operatives.

Mechanical Power.

The detailed information relating to mechanical power in 1924 is summarised in Table IV on page 334.

Prime movers.—The following table sets out the particulars for 1924 and 1907 relating to the capacity and kinds of prime movers installed :—

Prime movers.	1924.			1907.
	Ordinarily in use.	In reserve or idle.	Total.	Total.
	H.P.	H.P.	H.P.	H.P.
Reciprocating steam engines	177	—	177	180
Gas engines	557	40	597	} 500
Petrol and light oil engines	1	2	3	
Heavy oil engines	—	—	—	
TOTAL	735	42	777	680

Electric generators.—The total capacity of electric generators recorded in 1924 was 65 kilowatts, returned as driven by gas engines and as ordinarily in use. In 1907 electric generators with a total capacity of 33 kilowatts were recorded and returned as driven by prime movers other than steam engines.

Electric motors.—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	50	25	75
Purchased electricity	2,782	219	3,001

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 699,000.

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	2,991	172	3,163
Cost of materials used	"	582	33	615
Paid for work given out to other firms	"	123	3	126
Net output	"	2,286	136	2,422
Average number of persons employed	No.	9,439	652	10,091
Net output per person employed ..	£	242	209	240
Mechanical power available :—				
Prime movers	H.P.	631	146	777
Electric motors driven by purchased electricity	"	2,770	231	3,001

* 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.

Output sold or added to stock and work done.	England and Wales and N. Ireland.*	Scotland.	United Kingdom.
	Value.	Value.	Value.
	£'000	£'000	£'000
Printing type	†	†	373
(Tons)	†	†	(950)
Printers' sundries (wood and metal furniture, etc.)	†	†	150
Electrotyping and stereotyping	358	10	368
Engraving of blocks, plates, etc. :—			
Steel and copper plates (intaglio work) ..	†	†	154
Wood blocks (relief work)	†	†	23
Process blocks (relief work)	995	51	1,046
TOTAL—ENGRAVING OF BLOCKS, PLATES, ETC.	†	†	1,223
Die sinking	129	5	134
Relief stamping	†	†	110
Stamps, marks and stencils of metal	22	—	22
Stamps, marks and accessories of rubber ..	†	†	141
Engraving on gold and silver goods	54	7	61
Engraving on brass and other metals, including the manufacture of name plates	246	17	263
Printing and bookbinding	†	†	157
Designing and retouching	†	†	47
Preparing metal sheets for printing	59	—	59
Other metal manufactures	27	1	28
Other goods made	3	1	4
Other work done	22	1	23
TOTAL VALUE OF GOODS MADE AND WORK DONE (GROSS OUTPUT)	2,991	172	3,163

* 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.

Kind of staff.	Males.		Females.		Males and females.	
	Under 18.	All ages.	Under 18.	All ages.	Under 18.	All ages.
<i>England and Wales and Northern Ireland† :—</i>						
Operatives	1,247	5,891	475	1,264	1,722	7,155
Administrative, etc.*	270	1,871	103	521	373	2,392
TOTAL	1,517	7,762	578	1,785	2,095	9,547
<i>Scotland :—</i>						
Operatives	65	496	16	67	81	563
Administrative, etc.*	7	58	6	40	13	98
TOTAL	72	554	22	107	94	661
<i>United Kingdom :—</i>						
Operatives	1,312	6,387	491	1,331	1,803	7,718
Administrative, etc.*	277	1,929	109	561	386	2,490
TOTAL	1,589	8,316	600	1,892	2,189	10,208

* 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, 5,811 ; Females, 1,236 ; Total, 7,047.)*

Week ended	Males.	Females.	Total.	Week ended	Males.	Females.	Total.
Jan. 12th ..	5,730	1,193	6,923	July 19th ..	5,786	1,237	7,023
Feb. 16th ..	5,750	1,191	6,941	Aug. 16th ..	5,766	1,227	6,993
Mar. 15th ..	5,783	1,206	6,989	Sept. 13th ..	5,815	1,247	7,062
April 12th ..	5,806	1,228	7,034	Oct. 18th ..	5,891	1,264	7,155
May 17th ..	5,816	1,231	7,047	Nov. 15th ..	5,923	1,279	7,202
June 21st ..	5,787	1,235	7,022	Dec. 13th ..	5,884	1,292	7,176

Scotland. (Annual average : Males, 490 ; Females, 64 ; Total, 554.)

Jan. 12th ..	489	68	557	July 19th ..	477	60	537
Feb. 16th ..	488	68	556	Aug. 16th ..	486	59	545
Mar. 15th ..	488	64	552	Sept. 13th ..	494	62	556
April 12th ..	490	64	554	Oct. 18th ..	496	67	563
May 17th ..	486	64	550	Nov. 15th ..	502	62	564
June 21st ..	480	64	544	Dec. 13th ..	503	70	573

United Kingdom. (Annual average : Males, 6,301 ; Females, 1,300 ; Total, 7,601.)

Jan. 12th ..	6,219	1,261	7,480	July 19th ..	6,263	1,297	7,560
Feb. 16th ..	6,238	1,259	7,497	Aug. 16th ..	6,252	1,286	7,538
Mar. 15th ..	6,271	1,270	7,541	Sept. 13th ..	6,309	1,309	7,618
April 12th ..	6,296	1,292	7,588	Oct. 18th ..	6,387	1,331	7,718
May 17th ..	6,302	1,295	7,597	Nov. 15th ..	6,425	1,341	7,766
June 21st ..	6,267	1,299	7,566	Dec. 13th ..	6,387	1,362	7,749

* See footnote to Table I.

IV.—Mechanical Power.

PARTICULARS OF PRIME MOVERS, ELECTRIC GENERATORS
AND ELECTRIC MOTORS.

Power equipment.	England and Wales.*		Scotland.		Great Britain.	
	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	37	—	140	—	177	—
Gas engines	551	40	6	—	557	40
Petrol and light oil engines	1	2	—	—	1	2
TOTAL	589	42	146	—	735	42
TOTAL OF PRIME MOVERS INSTALLED	631		146		777	
ELECTRIC GENERATORS :	Kw.	Kw.	Kw.	Kw.	Kw.	Kw.
Driven by—						
Gas engines	65	—	—	—	65	—
TOTAL OF ELECTRIC GENERATORS INSTALLED	65		—		65	
ELECTRIC MOTORS :—	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
Driven by—						
Electricity generated in own works	50	25	—	—	50	25
Purchased electricity	2,607	163	175	56	2,782	219

* No mechanical power was returned for Northern Ireland.