

THE PRINTING AND BOOKBINDING TRADES.

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Introductory.*

The tables on pages 308 to 312 are based on returns received from firms in Great Britain and Northern Ireland whose business in 1924 consisted wholly or mainly in printing, bookbinding and kindred work. The number of such separate returns was 6,690. About 930 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 2,600 persons in all and that their total net output probably did not exceed £500,000.

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 employing five persons or less, was not sufficiently complete to warrant its use for purposes of comparison.

* See also the Notes on pp. vii to xv.

Particulars.	Unit.	1924.	1907.
Value of goods made and work done (Gross output)	£'000	60,367	24,709
Cost of materials used	"	19,211	8,623
Paid for work given out to other firms	"	1,948	742
Net output	"	39,208	15,344
Average number of persons employed	No.	185,014	174,116
Net output per person employed	£	212	88
Mechanical power available :—			
Prime movers	H.P.	30,061	38,611
Electric motors driven by purchased electricity.	"	72,462	(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. In 1907 the number of persons employed in the Printing and Bookbinding Trades in the whole of Ireland was 6,903, and their gross output was valued at £721,000. 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 output of the Printing, Bookbinding and Engraving Trades in that year amounted to £908,000, exclusive of £879,000 returned for the printing of newspapers. The average number of persons employed in producing this total output of £1,787,000 was 5,170.

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 that made returns, and, for the reasons explained in paragraphs (i) and (ii) on page xiii, they probably overstate the value of the output of the Printing and Bookbinding Trades considered as a whole. The matter is discussed on page 304, where it is estimated that the value, free from duplication, of the output of the Printing and Bookbinding Trades in 1924 lay between £58,800,000 and £60,367,000. The figures in the table representing the cost of materials used are substantially free from duplication.

Production.

Detailed information relating to the output of the Printing and Bookbinding Trades in 1924 will be found in Table II on pages 308 and 309.

In addition to the output dealt with in this report, printing, etc., valued, on a cost basis, at £767,000, was carried out in 1924 by Government Departments, Local Authorities, Railway Companies

and Tramway and Light Railway Companies. The corresponding total for 1907 was £164,000.*

Principal products.—The following table shows for the censal years 1924 and 1907 the value of the chief classes of output of the Printing and Bookbinding Trades, the aggregate figures for each year being inclusive of similar output recorded on schedules for other trades.

Kind of goods made or work done.	1924.		1907.
	Returned on schedules for		Total.
	The Printing and Bookbinding Trades.	All trades.	
	Net value.	Net value.	Net value.
Books :—	£'000	£'000	£'000
Printed books, whether bound by the printer or not	4,361	4,560	1,678
Manuscript books (including note books, exercise books, account books, diaries, etc.)	2,524	3,508	1,491
Printing of daily newspapers	209	209	180
Printing of newspapers other than daily	1,564	1,564	2,265
Printing of magazines, reviews, trade journals and similar periodicals	3,724	3,724	
Music printing	376	383	121
Lithographic, chromo-litho and photo-litho printing (other than books and music)	6,399	6,528	2,964
Photographic printing and process engraving and printing (including carbon, collotype, photogravure, etc.)	1,268	1,306	572
Copper and steel printing (other than music)	472	540	347
Job and general printing, not included elsewhere	27,722	30,824	13,118
TOTAL—PRINTING	48,619	53,146	22,736
Bookbinding for the trade or for private customers :—			
Printed books (publishers' and cloth binding)	2,726	2,736	1,359
Account and blank books (vellum binding)	1,258	1,258	881†
TOTAL—BOOKBINDING	3,984	3,994	2,240
Maps, plans, drawings, etc.	70	152	50
Machine ruling for the trade	292	294	315
Gold blocking, stamping, lettering, gilding, etc.	113	113	71
Type setting, so far as recorded separately	71	84	(not separately recorded)
Other work done (stitching, gumming, folding, cutting, etc.)	47	48	—
Waste products	107	107	80
TOTAL	53,303	57,938	25,492

† Includes £137,000 in respect of bookbinding, not separately distinguished.

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

The values shown in the above table represent the actual amounts charged to customers for the specified classes of work done in each year, less trade discounts and allowances and payments for carriage outwards. For printed books, magazines, etc., the value is inclusive of the cost of the paper if supplied by the printer, but not if supplied by the customer for whom the work was done.

The values shown for printing of newspapers, magazines and similar periodicals represent, in the main, receipts from publishing firms in respect of printing work done for them. As far as possible printers who were also publishers were required to make returns of their output on schedules for the Printing and Publication of Newspapers and Periodicals (see pages 313 to 324), but those that made returns on schedules for the Printing and Bookbinding Trades were instructed to follow the same rule of including as value of output their total receipts in the year in respect of such publications, i.e., the receipts from sales, subscriptions and advertisements. Publishers who had not printing works of their own were not required to make returns.

Other products.—In addition to the principal products shown in the preceding table, firms that made their returns on schedules for the Printing and Bookbinding 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 goods made or work done.	1924.	1907.
	Net value.	Net value.
	£'000	£'000
Boxes and cartons of paper and cardboard ..	2,613	107
Paper bags	1,540	157
Manufactured stationery	909	543
Other articles of paper or cardboard	296	
Tin printing and metal box making	1,297	*
Stereotyping and electrotyping	80	132
Other goods made and work done	329	269
TOTAL	7,064	1,208

* Not separately recorded in 1907.

Value of output free from duplication.—The value of the gross output in 1924 returned on schedules for the Printing and Bookbinding Trades was £60,367,000, but this amount includes duplication in respect of work done by one firm for another when both made their returns on schedules for these trades. Such duplicated items include, probably, some part of the following:—Machine-ruling, £292,000; typesetting, £71,000; stitching, etc., £47,000; stereotyping and electrotyping, £80,000; engraving, £18,000; Total,

£508,000. There may also be duplication in respect of a small part of the following:—Photographic printing, process engraving, etc. (£1,268,000); job and general printing (£27,722,000); and book-binding (£3,984,000).

Firms that made their returns on schedules for the Printing and Bookbinding Trades stated that they paid £1,948,000 for work given out by them to other firms in 1924, and this sum represents the maximum amount of duplication involved in the value of the gross output of the Printing and Bookbinding Trades. The actual amount of duplication was, however, almost certainly less than that amount since some of this work was probably given out to firms that made their returns on schedules for the Typefounding, Electrotyping, Engraving, etc., Trades. In particular, firms in the latter trades returned £368,000 for electrotyping and stereotyping, and it is probably safe to assume that this represented work done for printers or for printers and publishers of newspapers, and, so far as it was carried out for printers, is included in the £1,948,000 paid by such firms for work given out by them.

It would thus appear that the total amount of duplication as between firms in the Printing and Bookbinding Trades was not in excess of £1,580,000, and that the value of the output of the firms that furnished returns on schedules for these trades, free from duplication, was between £58,800,000 and £60,367,000.

Cost of materials and work given out.—The cost of materials used by firms that made their returns on schedules for the Printing and Bookbinding Trades was returned as £19,211,000 in 1924 and £8,623,000 in 1907.

The amount paid to other firms for work given out to them was returned as £1,948,000 in 1924 and £742,000 in 1907.

Net output.—The net output in 1924 of the firms that made their returns on schedules for the Printing and Bookbinding Trades (whose gross output was valued at £60,367,000) was £39,208,000, 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 £212, as compared with £88 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 Printing and Bookbinding 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, 93,721 operatives, or 58 per cent. of the total of 161,121 operatives for the trades as a whole, and their net output totalled £23,334,000, or 59 per cent. of the aggregate net output of £39,208,000 for the trades as a whole. The total wage-bill of these firms, as returned to the Ministry of Labour, was £12,718,000, representing about 54 per cent. of their aggregate net output.

Employment.

The detailed information relating to employment in 1924 is summarised in Table III on pages 310 and 311. 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	14,379	93,630	19,011	65,137	33,390	158,767
Administrative, etc. ..	1,355	18,248	1,299	7,999	2,654	26,247
TOTAL	15,734	111,878	20,310	73,136	36,044	185,014
1907.						
Wage earners	21,863	104,133	18,809	53,319	40,672	157,452
Salaried	1,600	13,762	576	2,902	2,176	16,664
TOTAL	23,463	117,895	19,385	56,221	42,848	174,116

The numbers of operatives recorded month by month in 1924 ranged from 4,512 above the average in December, to 2,278 below the average in August (*see* Table IIIB, page 311). They were notably higher in the last quarter than earlier in the year, the average for that quarter being 4,450 in excess of that for the first nine months. The small increase in the total number of operatives in 1924 as compared with 1907 results from a decrease in the number of males and a somewhat greater increase in the number of females.

Mechanical Power.

The detailed information relating to mechanical power in 1924 is summarised in Table IV on page 312. 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 ..	4,603	3,395	7,998	15,239
Steam turbines	—	35	35	18
Gas engines	15,928	3,877	19,805	} 23,127
Petrol and light oil engines ..	385	50	435	
Heavy oil engines	1,069	394	1,463	
Water power	325	—	325	227
TOTAL	22,310	7,751	30,061	38,611
ELECTRIC GENERATORS :—				
Driven by—	Kw.	Kw.	Kw.	Kw.
Reciprocating steam engines..	1,674	1,789	3,463	5,305
Steam turbines	—	25	25	12
Gas engines	1,521	701	2,222	} 2,610
Petrol and light oil engines ..	8	—	8	
Heavy oil engines	728	116	844	
Water power	212	—	212	
TOTAL	4,143	2,631	6,774	7,927

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	4,967	561	5,528
Purchased electricity	66,483	5,979	72,462

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 10,936,000.

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	53,952	5,846	59,798	569
Cost of materials used	"	17,090	1,930	19,020	191
Paid for work given out to other firms	"	1,741	198	1,939	9
Net output	"	35,121	3,718	38,839	369
Average number of persons employed	No.	162,836	19,890	182,726	2,288
Net output per person employed ..	£	216	187	213	161
Mechanical power available:—					
Prime movers	H.P.	27,237	2,043	29,280	781
Electric motors driven by purchased electricity	"	63,740	8,086	71,826	636

II.—Production.

Output sold or added to stock and work done.	England and Wales.	Scotland.	Great Britain.	Northern Ireland.
	Net value.	Net value.	Net value.	Net value.
	£'000	£'000	£'000	£'000
Printed books, whether bound by printer or not	2,948	1,397	4,345	16
Manuscript books (including note books, exercise books, account books, diaries, etc.)	2,092	416	2,508	16
Printing of daily newspapers ..	*	*	209	—
Printing of newspapers, other than daily	1,392	150	1,542	22
Printing of magazines, reviews, trade journals, and similar periodicals	3,558	161	3,719	5
Music printing	352	24	376	—
Lithographic, chromo-litho and photo-litho printing (other than books and music)	5,615	641	6,256	143
Photographic printing and process engraving and printing (including carbon, collotype, photogravure, etc.)	1,253†	15	1,268†	†
Copper and steel printing (other than music)	*	*	472	—
Job and general printing not included elsewhere	25,443	2,067	27,510	212
TOTAL—PRINTING	*	*	48,619†	†

* † See Notes on page 309.

II.—Production—continued.

Output sold or added to stock and work done.	England and Wales.	Scotland.	Great Britain.	Northern Ireland.
	Net value.	Net value.	Net value.	Net value.
	£'000	£'000	£'000	£'000
Bookbinding for the trade or for private customers:—				
Printed books (publishers' and cloth binding)	2,468	242	2,710	16
Account and blank books (vellum binding)	1,137	107	1,244	14
TOTAL—BOOKBINDING	3,605	349	3,954	30
Machine-ruling for the trade ..	237†	55	292†	†
Maps, plans, drawings, etc. ..	*	*	70	—
Gold blocking, stamping, lettering, gilding, etc.	111	2	113	—
Type setting	69	2	71	—
Other work done (stitching, gumming, folding, cutting, etc.) ..	37	10	47	§
Waste products	95	10	105	2
Tin printing and metal box making ..	1,297	—	1,297	—
Stereotyping and electrotyping for the trade	71	9	80	—
Engraving metal plates and wood blocks	*	*	18	—
Ticket and showcard writing ..	*	*	81†	†
Relief stamping	43	12	55	§
Paper bags	1,308	216	1,524	16
(Th. cwts.)	(571)	(82)	(653)	(8)
Boxes and cartons of paper or cardboard	2,383	179	2,562	51
Pattern cards	389	9	398	§
Christmas cards, picture post-cards, etc.	81	42	123	—
Envelopes	115	30	145	—
Other manufactured stationery ..	192	12	204	—
Letter files and systems	39	—	39	—
Other manufactures of paper and cardboard	287	—	287	9
Type, ink, pastes, etc.	*	*	44†	†
Other goods made and work done ..	128	3	131	—
TOTAL VALUE OF GOODS MADE AND WORK DONE (GROSS OUTPUT) ..	53,952	5,846	59,798	569

* In order to avoid the possible disclosure of information relating to individual firms, figures are given only for Great Britain as a whole.

† In order to avoid the possible disclosure of information relating to individual firms in Northern Ireland, the output for that division of the United Kingdom has been included with that for England and Wales (where indicated) and for Great Britain.

§ Less than £500.

III.—Employment.

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

Kind of staff.	Males.		Females.		Males and females.	
	Under 18.	All ages.	Under 18.	All ages.	Under 18.	All ages.
<i>England and Wales</i> :—						
Operatives	13,367	85,415	16,789	56,646	30,156	142,061
Administrative, etc.*	1,220	16,256	1,043	6,589	2,263	22,845
TOTAL	14,587	101,671	17,832	63,235	32,419	164,906
<i>Scotland</i> :—						
Operatives	982	8,310	2,334	8,729	3,316	17,039
Administrative, etc.*	124	1,815	229	1,286	353	3,101
TOTAL	1,106	10,125	2,563	10,015	3,669	20,140
<i>Great Britain</i> :—						
Operatives	14,349	93,725	19,123	65,375	33,472	159,100
Administrative, etc.*	1,344	18,071	1,272	7,875	2,616	25,946
TOTAL	15,693	111,796	20,395	73,250	36,088	185,046
<i>Northern Ireland</i> :—						
Operatives	211	1,087	229	934	440	2,021
Administrative, etc.*	11	177	27	124	38	301
TOTAL	222	1,264	256	1,058	478	2,322
<i>United Kingdom</i> :—						
TOTAL	15,915	113,060	20,651	74,308	36,566	187,368

* Administrative, technical and clerical staff.

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

England and Wales. (Annual average : Males, 84,287 ; Females, 55,704 ; Total, 139,991.)

Week ended	Males.	Females.	Total.	Week ended	Males.	Females.	Total.
Jan. 12th ..	83,107	54,957	138,064	July 19th ..	83,648	55,463	139,111
Feb. 16th ..	83,367	54,692	138,059	Aug. 16th ..	82,863	54,933	137,796
Mar. 15th ..	83,882	54,803	138,685	Sept. 13th ..	84,120	55,847	139,967
April 12th ..	84,369	54,996	139,365	Oct. 18th ..	85,415	56,646	142,061
May 17th ..	84,336	55,629	139,965	Nov. 15th ..	85,705	57,150	142,855
June 21st ..	84,261	55,655	139,916	Dec. 13th ..	86,372	57,678	144,050

Scotland. (Annual average : Males, 8,250 ; Females, 8,539 ; Total, 16,789.)

Jan. 12th ..	8,149	8,408	16,557	July 19th ..	8,195	8,483	16,678
Feb. 16th ..	8,149	8,360	16,509	Aug. 16th ..	8,195	8,494	16,689
Mar. 15th ..	8,199	8,420	16,619	Sept. 13th ..	8,304	8,695	16,999
April 12th ..	8,248	8,392	16,640	Oct. 18th ..	8,310	8,729	17,039
May 17th ..	8,255	8,485	16,740	Nov. 15th ..	8,315	8,718	17,033
June 21st ..	8,267	8,500	16,767	Dec. 13th ..	8,410	8,786	17,196

Great Britain. (Annual average : Males, 92,537 ; Females, 64,243 ; Total, 156,780.)

Jan. 12th ..	91,256	63,365	154,621	July 19th ..	91,843	63,946	155,789
Feb. 16th ..	91,516	63,052	154,568	Aug. 16th ..	91,058	63,427	154,485
Mar. 15th ..	92,081	63,223	155,304	Sept. 13th ..	92,424	64,542	156,966
April 12th ..	92,617	63,388	156,005	Oct. 18th ..	93,725	65,375	159,100
May 17th ..	92,591	64,114	156,705	Nov. 15th ..	94,020	65,868	159,888
June 21st ..	92,528	64,155	156,683	Dec. 13th ..	94,782	66,464	161,246

Northern Ireland. (Annual average : Males, 1,093 ; Females, 894 ; Total, 1,987.)

Jan. 12th ..	1,099	885	1,984	July 19th ..	1,086	913	1,999
Feb. 16th ..	1,082	854	1,936	Aug. 16th ..	1,099	905	2,004
Mar. 15th ..	1,077	847	1,924	Sept. 13th ..	1,085	911	1,996
April 12th ..	1,081	855	1,936	Oct. 18th ..	1,087	934	2,021
May 17th ..	1,102	877	1,979	Nov. 15th ..	1,102	922	2,024
June 21st ..	1,112	893	2,005	Dec. 13th ..	1,103	930	2,033

IV.—Mechanical Power.

PARTICULARS OF PRIME MOVERS, ELECTRIC GENERATORS
AND ELECTRIC MOTORS.

(a) Ordinarily in use. (b) In reserve or idle.	England and Wales.	Scotland.	Great Britain.	Northern Ireland.
	H.P.	H.P.	H.P.	H.P.
PRIME MOVERS :—				
Reciprocating steam engines	{ (a) 3,737 (b) 3,373	661 22	4,398 3,395	205 —
Steam turbines	{ (a) — (b) 35	—	— 35	—
Gas engines	{ (a) 14,233 (b) 3,694	1,240 98	15,473 3,792	455 85
Petrol and light oil engines	{ (a) 332 (b) 50	17 —	349 50	36 —
Heavy oil engines	{ (a) 1,064 (b) 394	5 —	1,069 394	— —
Water power	{ (a) 325 (b) —	—	325	—
TOTAL	{ (a) 19,691 (b) 7,546	1,923 120	21,614 7,666	696 85
TOTAL OF PRIME MOVERS INSTALLED				
	27,237	2,043	29,280	781
ELECTRIC GENERATORS :—				
Driven by—				
Reciprocating steam engines	{ (a) 1,626 (b) 1,742	48 —	1,674 1,742	— 47
Steam turbines	{ (a) 25 (b) 1,420	— 7	25 1,427	— 94
Gas engines	{ (a) 701 (b) 8	— —	701 8	— —
Petrol and light oil engines	{ (a) 728 (b) 116	— —	728 116	— —
Heavy oil engines	{ (a) 212 (b) —	— —	212	—
Water power	{ (a) 3,994 (b) 2,584	55 —	4,049 2,584	94 47
TOTAL	{ (a) 3,994 (b) 2,584	55 —	4,049 2,584	94 47
TOTAL OF ELECTRIC GENERATORS INSTALLED				
	6,578	55	6,633	141
ELECTRIC MOTORS :—				
Driven by—				
Electricity generated in own works	{ (a) 4,896 (b) 558	25 3	4,921 561	46 —
Purchased electricity	{ (a) 58,079 (b) 5,661	7,771 315	65,850 5,976	633 3