

THE FINISHED BRASS TRADE

Note.—For information regarding the scope of the Census, instructions given to firms for making returns, and definitions of the terms used in this report, reference should be made to the Introductory Notes on pages v to xviii.

Introductory

This trade comprises firms that were engaged wholly or mainly in the manufacture of finished brass goods of the kinds specified in the table on page 463, the majority of which are foundry products. Other descriptions of brass manufactures are dealt with in the reports on various metal working trades, such as brass bolts, nuts, screws, etc., in Chain, Nail, Screw, etc., Trades and smallwares of brass in the Needle, Pin, etc., Trades while a large output of sheet brass articles was recorded on schedules for the Hardware, Hollow-ware, etc., Trades. It should be borne in mind that brass foundry products may also be manufactured by engineering and other firms for use as parts of composite products such as machinery, vehicles, etc., and may thus escape separate record in the Census results, while some further output by firms in other trades has probably been included under general descriptions which did not enable the goods to be identified.

The aggregates shown in this report for the year 1924 are inclusive of a few returns which, in the Final Report on the Census for that year, were assigned to the Light Castings Trade. The gross output added is £186,000.

The following table shows the main results of the Censuses of 1930 and 1924 in respect of firms in Great Britain that employed an average of more than ten persons:—

Particulars	Unit	1930	1924
Value of goods made and work done (Gross output)	£'000	10,730	10,165
Cost of materials used	"	4,883	4,314
Paid for work given out to other firms	"	128	84
Net output	"	5,719	5,767
Average number of persons employed	No.	32,439	32,335
Net output per person employed	£	176	178
Power available:—			
Prime movers	H.P.	8,701	10,266
Electric motors driven by purchased electricity	"	21,481	15,354
Number of returns	No.	417	538
Number of establishments	"	443	*

* Not available.

Deficiencies in 1930 aggregates.—The aggregate number of persons employed in 1930 by firms that stated that they employed not more than ten persons on the average was 1,663, the corresponding figure for 1924 being 1,770.* The value of the gross output of the small firms in 1924 was £507,000,* and particulars of the items included in this figure are given below:—

		£'000
Finished goods of brass:—		
Engineers' and mechanics' goods	75	
Builders' and cabinet makers' goods	101	
Electric and other lighting fittings and accessories...	29	
Other and unspecified goods of brass	76	
Brass castings and ingots	76	
Other goods made (including scrap and waste sold) ...	88	
Repair work and work done for the trade	62	
TOTAL	507*	

* These figures include particulars in respect of the few firms in Northern Ireland, regarding which separate information is not available for publication.

In addition, 19 firms to which schedules were sent at the 1930 Census and about 80 at that of 1924 furnished no information; these firms either had small businesses or had ceased productive operations before the end of the censal year.

Size of firms.—In the following table the main particulars recorded at the Census of 1930 are grouped according to the average numbers of persons shown in the returns:—

Size of firm (average numbers employed)	Number of returns	Gross output	Net output	Average number of persons employed	Net output per person employed
	No.	£'000	£'000	No.	£
11-24	114	612	3,281	1,998	164
25-49	113	1,471	684	3,909	175
50-99	88	1,953	1,033	6,107	169
100-199	70	3,047	1,638	9,330	176
200-299	18	1,458	809	4,385	185
300-399	7	804	436	2,554	171
400 and over	7	1,385	791	4,156	190
TOTAL	417	10,730	5,719	32,439	176

Regional distribution.—In the following table the results recorded at the Censuses of 1930 and 1924 are grouped according to the principal areas* of Great Britain in which firms in this trade are situated:—

Area	Number of returns	Gross output	Net output	Average number of persons employed	Net output per person employed	
						No.
1	1930	43	1,251	608	2,798	218
	1924	64	683	402	2,091	192
2	1930	43	541	281	1,889	149
	1924	44	422	226	1,349	168
3	1930	33	973	510	3,408	150
	1924	49	916	561	3,164	177
4	1930	12	226	129	781	165
	1924	10	169	86	523	164
5	1930	231	6,887	3,754	21,060	178
	1924	312	7,186	4,073	22,615	180
6	1930	25	384	223	1,385	161
6 and 7	1924	25	438	243	1,601	152
9	1930	20	237	103	678	153
	1924	19	199	97	567	171
10	1930	10	231	111	440	252
	1924	15	152	79	425	186
TOTAL	1930	417	10,730	5,719	32,439	176
	1924	538	10,165	5,767	32,335	178

Northern Ireland.—Owing to the risk of disclosing information relating to individual firms, separate particulars regarding the Finished Brass Trade in Northern Ireland in 1930 were not published, the information being combined with that for the Non-Ferrous Metal (Smelting, Rolling, etc.) Trades (see page 416). For the same reason, no information is available for 1924.

Production

Principal products.—The figures given in the following table represent the output of those firms whose chief business was the production of finished goods of brass. Similar output returned on schedules for other trades is added in so far as such output was clearly identifiable.

* For particulars see page xviii.

Kind of goods	1930				1924
	Returned on schedules for				Total
	The Finished Brass Trade		All trades		
	Value	Entries	Value	Entries	Value
	£'000	No.	£'000	No.	£'000
Finished brass goods:—					
Engineers' and mechanics' goods and fittings for water supply ...	1,922	101	2,261	121	2,685*
Builders' and cabinet makers' goods (including house, shop, ship, office, hearth and church furniture but excluding fittings for water supply or lighting and heating purposes)	1,895	116	2,124	155	2,446
Fittings for motor cars or chassis ...	503	50	504	52	436
Lamps, pendants, electroliers, brackets, taps and other fittings for lighting or heating purposes, whether oil, gas or electric, but not accessories included below ...	1,100	83	1,249	91	992†
Switches, lamp-holders, cut-outs and other accessories for electric lighting	376	25	376	25	
Coffin furniture ...	153	15	153	15	189
Bar, brewery and distillery fittings ...	124	22	126	24	98‡
Sparklets, sprinklers and fire extinguishers ...	43	10	147	15	88‡
Railway and tramway fittings‡ ...	95	10	95	10	51
Bathroom, lavatory and sanitary fittings‡ ...	201	13	211	15	1,054
Steam fittings (including valves, cocks, boiler mountings, etc.)‡ ...	873	50	931	54	
Ships' fittings (other than ships' furniture), including portholes, scuttles, etc.‡ ...	77	16	331	27	
Art and architectural metal work (including antique reproductions)‡§	264	19	264	19	
Other and unspecified finished brass goods ...	1,067	105	1,499	162	
TOTAL—PRINCIPAL PRODUCTS	8,693	...	10,271	...	8,039

* "Engineers', mechanics' and plumbers' goods."

† "Electric lighting accessories" and "Lamps and fittings for lighting (not electric) purposes."

‡ So far as recorded separately.

§ Including some goods of metals other than brass.

Volume of production in 1930 and 1924.—The absence of quantitative particulars of production for this trade in both years renders it impracticable to attempt any precise and detailed comparison of the volume of production of finished brass goods in 1930 and 1924, but such information as is available indicates that, on the basis of 1930 average prices, the goods valued in 1924 at £8,039,000 (see table of "Principal products" on page 463) would be valued at about £8,250,000 and that the volume of production in 1930 was roughly 25 per cent. greater than in 1924. Nearly half of this increase may be accounted for by the fact that it proved possible at the 1930 Census to identify a much larger proportion of finished brass goods returned on schedules for other trades than was the case at the earlier Census (£1,578,000 as compared with £563,000).

Exports and imports.—Detailed particulars of the external trade in the kind of goods covered by this report are not given in the trade returns. The following figures relate to *Manufactures of brass and other alloys of copper, not elsewhere specified* (i.e., other than sheet, strip, wire, rods and tubes*):—

		Tons	£'000
Exports	1930	6,779	1,518
	1924	5,955	1,470
Retained imports	1930	2,962	569
	1924	2,394	376

Work done for the trade, etc.—The total amount recorded as received for work done for the trade, etc., in 1930 was £140,000, the corresponding total for 1924 being £243,000. The principal kinds of work included in these totals were as follows:—

	1930	1924
	£'000	£'000
Finishing, polishing, lacquering, etc ...	56	67
Repair work ...	73	176
Other work ...	11	—
TOTAL ...	140	243

Other products.—In addition to the finished brass goods shown in the table on page 463, firms in this trade recorded a large output of finished goods of other metals. This output, together with other goods made by these firms, is shown in the following table and is dealt with in the reports on those trades in which the principal output was recorded:—

* Machinery accessories and parts and similar goods, whether made of brass or not, which are included in the trade returns under specific headings, such as "Parts of road vehicles," "Electric lighting accessories and fittings," etc., are also excluded from this heading.

Kind of goods	1930	1924
	Value	Value
	£'000	£'000
Finished goods of metals other than brass:—		
Engineers' and mechanics' goods and fittings for water supply:—		
Of copper ...	39	126
Of other and unspecified metals (not brass) ...	11	172
Builders' and cabinet makers' goods:—		
Of iron and steel ...	152	150
Of other and unspecified metals (not brass) ...	67	271
Coffin furniture:—		
Of zinc ...	109	132
Of other and unspecified metals (not brass) ...	36	
Bar, brewery and distillery fittings ...	49	
Bathroom, lavatory and sanitary fittings* ...	78	
Steam fittings (including valves, cocks, boiler mountings, etc.)*:—		†
Of copper ...	29	
Of other and unspecified metals (not brass) ...	240	
Other and unclassified finished goods:—		
Of copper ...	89	162
Of iron and steel ...	220	194
Of aluminium ...	48	532
Of other and unspecified metals (not brass) ...	131	
Bedsteads and parts, of brass... ..	41	76
Brass castings in the rough	256‡	416§
Other goods made	96	64
TOTAL	1,691	2,295

* So far as recorded separately.

† Not separately recorded.

‡ Including some ingots of brass.

§ Including some ingots and forgings of brass.

Waste products sold.—The following sales of manufacturers' scrap and other waste products were recorded by firms in the Finished Brass Trade in 1930 and 1924:—

	1930	1924
	£'000	£'000
Brass scrap (including dust)	191	146
Scrap of other and unspecified metals	15	5
TOTAL	206	151

Employment and Wages

Employment.—The following table shows the average numbers of persons employed in 1930 and 1924 :—

Persons employed	Males		Females		Total	
	Under 18	All ages	Under 18	All ages	Under 18	All ages
	1930					
Operatives (average for the year)	3,575	19,694	2,316	8,636	5,891	28,330
Administrative, technical and clerical staff (as at 18th October)	209	2,631	325	1,478	534	4,109
TOTAL	3,784	22,325	2,641	10,114	6,425	32,439
1924						
Operatives (average for the year)	3,803	19,595	2,640	8,975	6,443	28,570
Administrative, technical and clerical staff (as at 18th October)	220	2,415	299	1,350	519	3,765
TOTAL	4,023	22,010	2,939	10,325	6,962	32,335

Wages.—The available information as to the amount of wages paid in 1930 and 1924 is given on pages 406 and 407.

Power

The following table shows the capacity of prime movers, electric generators and electric motors ordinarily in use and in reserve or idle in 1930 and 1924 :—

Power equipment	1930			1924		
	Ordinarily in use	In reserve or idle	Total	Ordinarily in use	In reserve or idle	Total
PRIME MOVERS						
Reciprocating steam engines	H.P. 877	H.P. 7	H.P. 884	H.P. 1,049	H.P. 48	H.P. 1,097
Steam turbines	215	731	946	193	96	289
Internal combustion engines :—						
Gas	3,780	247	4,027	7,427	873	8,300
Petrol, kerosene, or other light oils	40	35	75	—	—	—
Heavy oils	2,739	—	2,739	552	—	552
Water engines	30	—	30	28	—	28
TOTAL	7,681	1,020	8,701	9,249	1,017	10,266

Power equipment	1930			1924		
	Ordinarily in use	In reserve or idle	Total	Ordinarily in use	In reserve or idle	Total
ELECTRIC GENERATORS						
Driven by	Kw.	Kw.	Kw.	Kw.	Kw.	Kw.
Reciprocating steam engines	44	—	44	112	34	146
Steam turbines	160	545	705	144	72	216
Internal combustion engines :—						
Gas	845	42	887	389	19	408
Petrol, kerosene, or other light oils	2	—	2	—	—	—
Heavy oils	464	—	464	61	—	61
Water engines	25	—	25	25	—	25
TOTAL	1,540	587	2,127	731	125	856
ELECTRIC MOTORS						
Driven by	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
Electricity generated in same works	2,326	401	2,727	1,253	306	1,559
Electricity generated in other works under same ownership	10	—	10	—	—	—
Purchased electricity	20,070	1,411	21,481	13,564	1,790	15,354
TOTAL	22,406	1,812	24,218	14,817	2,096	16,913

Consumption of fuel

The following table shows the quantities of coal, coke, and electricity recorded as used in 1930 :—

Kind of fuel used	For power (driving engines)		For other purposes (so far as recorded)
	Tons	Tons	
Coal	6,354	8,136*	
Coke	184	20,513*	
			B.T.U. (Kw.-hrs.) '000
Electricity used for all purposes :—			
Generated in same works			2,251
Generated in other works under same ownership			16
Purchased			16,373
TOTAL—Electricity			18,640

* These figures were recorded by firms representing 96·8 per cent. of the net output of the whole trade.

TABLES
I. Summary of results

Particulars	Unit	England and Wales	Scotland	Great Britain
Value of goods made and work done (Gross output)	£'000	10,262	468	10,730
Cost of materials used	"	4,632	251	4,883
Paid for work given out to other firms... ..	"	125	3	128
Net output	"	5,505	214	5,719
Average number of persons employed... ..	No.	31,321	1,118	32,439
Net output per person employed	£	176	192	176
Power available :—				
Prime movers	H.P.	8,204	497	8,701
Electric motors driven by purchased electricity	"	20,309	1,172	21,481

II. Production

Goods sold or added to stock and work done	England and Wales	Scotland	Great Britain
	Value	Value	Value
Finished brass goods :—	£'000	£'000	£'000
Engineers' and mechanics' goods and fittings for water supply	1,780	142	1,922
Builders' and cabinet makers' goods (including house, shop, ship, office, hearth and church furniture, but excluding fittings for water supply or heating or lighting purposes)	1,895	†	1,895
Fittings for motor cars or chassis	*	*	503
Lamps, pendants, electroliers, brackets, taps, and other fittings for lighting or heating purposes, whether oil, gas, or electric, but not accessories included below	*	*	1,100
Switches, lampholders, cut-outs and other accessories for electric lighting	376	—	376
Coffin furniture	*	*	153
Bedsteads and parts	41	—	41
Bar, brewery, and distillery fittings	*	*	124
Sparklets, sprinklers, and fire extinguishers	43	†	43
Railway and tramway fittings‡	95	—	95
Bathroom, lavatory and sanitary fittings‡	119	82	201
Steam fittings (including valves, cocks, boiler mountings, etc.)‡	796	77	873
Ships' fittings (other than ships' furniture), including portholes, scuttles, etc.‡	*	*	77
Art and architectural metal work (including antique reproductions)‡§	*	*	264
Other and unspecified finished brass goods	1,046	21	1,067
TOTAL—Finished brass goods	8,370	364	8,734

Goods sold or added to stock and work done	England and Wales	Scotland	Great Britain
	Value	Value	Value
Finished goods of other metals :—	£'000	£'000	£'000
Engineers' and mechanics' goods and fittings for water supply :—			
Of copper	*	*	39
Of other and unspecified metals (not brass)	11	—	11
Builders' and cabinet makers' goods :—			
Of iron and steel	152	—	152
Of other and unspecified metals (not brass)	67	—	67
Coffin furniture :—			
Of zinc	*	*	109
Of other and unspecified metals (not brass)	*	*	36
Bar, brewery and distillery fittings	*	*	49
Bathroom, lavatory and sanitary fittings‡	78	—	78
Steam fittings (including valves, cocks, boiler mountings, etc.)‡:—			
Of copper	29	—	29
Of other and unspecified metals (not brass)	240	—	240
Other and unspecified finished goods :—			
Of copper	*	*	89
Of iron and steel	220	†	220
Of aluminium	48	—	48
Of other and unspecified metals (not brass)	131	†	131
Brass castings in the rough (including some brass ingots)	212	44	256
Scrap, dust and other waste sold :—			
Of brass	187	4	191
Of other and unspecified metals	14	1	15
Other goods made	93	3	96
TOTAL VALUE OF GOODS MADE	10,129	461	10,590
Work done for the trade, etc. :—	Amount received	Amount received	Amount received
Finishing, polishing, lacquering, etc.	*	*	56
Repair work	*	*	73
Other work done	11	—	11
TOTAL AMOUNT RECEIVED FOR WORK DONE	133	7	140
TOTAL VALUE OF GOODS MADE AND WORK DONE (GROSS OUTPUT)	10,262	468	10,730

* Owing to the possible disclosure of information relating to individual firms, figures can be given only for Great Britain as a whole.

† Less than £500.

‡ So far as recorded separately.

§ Including some goods of metals other than brass.

III. Employment

A.—NUMBERS EMPLOYED IN WEEK ENDED 18TH OCTOBER, 1930

Persons employed	Males		Females		Males and females	
	Under 18	All ages	Under 18	All ages	Under 18	All ages
	<i>England and Wales :—</i>					
Operatives	3,368	18,608	2,272	8,479	5,640	27,087
Administrative, etc.* ...	204	2,532	320	1,438	524	3,970
TOTAL	3,572	21,140	2,592	9,917	6,164	31,057
<i>Scotland :—</i>						
Operatives	168	872	19	63	187	935
Administrative, etc.* ...	5	99	5	40	10	139
TOTAL	173	971	24	103	197	1,074
<i>Great Britain :—</i>						
Operatives	3,536	19,480	2,291	8,542	5,827	28,022
Administrative, etc.* ...	209	2,631	325	1,478	534	4,109
TOTAL	3,745	22,111	2,616	10,020	6,361	32,131

* Administrative, technical and clerical staff.

B.—OPERATIVES EMPLOYED IN ONE WEEK IN EACH MONTH OF 1930

Week ended	Males and females			Week ended	Males and females		
	England and Wales	Scotland	Great Britain		England and Wales	Scotland	Great Britain
Jan. 18 ...	28,360	1,028	29,388	July 19 ...	27,022	1,006	28,028
Feb. 15 ...	27,991	1,020	29,011	Aug. 16 ...	26,714	998	27,712
Mar. 15 ...	27,654	1,017	28,671	Sept. 13... ..	27,072	959	28,031
Apl. 12 ...	27,777	1,007	28,784	Oct. 18 ...	27,087	935	28,022
May 17 ...	27,621	990	28,611	Nov. 15... ..	26,896	907	27,803
June 21 ...	27,294	1,005	28,299	Dec. 13 ...	26,720	878	27,598
AVERAGE FOR THE 12 MONTHS					27,351	979	28,330

IV. 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
PRIME MOVERS						
Reciprocating steam engines	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
Steam turbines	651	7	226	—	877	7
Internal combustion engines :—	215	731	—	—	215	731
Gas	3,638	247	142	—	3,780	247
Petrol, kerosene, or other light oils ...	40	35	—	—	40	35
Heavy oils	2,610	—	129	—	2,739	—
Water engines	30	—	—	—	30	—
TOTAL	7,184	1,020	497	—	7,681	1,020
TOTAL OF PRIME MOVERS INSTALLED	8,204		497		8,701	
ELECTRIC GENERATORS						
Driven by	Kw.	Kw.	Kw.	Kw.	Kw.	Kw.
Reciprocating steam engines	—	—	44	—	44	—
Steam turbines	160	545	—	—	160	545
Internal combustion engines :—	845	42	—	—	845	42
Gas	2	—	—	—	2	—
Petrol, kerosene, or other light oils	449	—	15	—	464	—
Heavy oils	25	—	—	—	25	—
Water engines	1,481	587	59	—	1,540	587
TOTAL	2,068		59		2,127	
TOTAL OF ELECTRIC GENERATORS INSTALLED	2,068		59		2,127	
ELECTRIC MOTORS						
Driven by	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
Electricity generated in same works	2,292	401	34	—	2,326	401
Electricity generated in other works under same ownership	10	—	—	—	10	—
Purchased electricity	18,981	1,328	1,089	83	20,070	1,411
TOTAL	21,283	1,729	1,123	83	22,406	1,812
TOTAL OF ELECTRIC MOTORS INSTALLED	23,012		1,206		24,218	

V. Consumption of fuel

Kind of fuel used	England and Wales	Scotland	Great Britain
	Tons	Tons	Tons
Coal used for power	5,961	393	6,354
Coke used for power	184	—	184
	B.T.U. (Kw.-hrs.) '000	B.T.U. (Kw.-hrs.) '000	B.T.U. (Kw.-hrs.) '000
Electricity used for all purposes:—			
Generated in same works	2,118	133	2,251
Generated in other works under same			
ownership	16	—	16
Purchased	15,916	457	16,373
TOTAL—Electricity	18,050	590	18,640