

THE MISCELLANEOUS TRADES GENERAL REPORT

The following report summarises the principal results of the Censuses of 1930 and 1924 for twelve trades which cannot properly be assigned to more specific groups. Some of these trades differ widely from one another in structure and in the type of product manufactured and the results are assembled in group aggregates solely for convenience of reference. The particulars in this report relate to the United Kingdom except where otherwise specified.

Principal results

The main particulars obtained for 1930 and 1924 are set out in the following table:—

Trade	Gross output (selling value of goods made and value of work done)	Cost of materials used and amount paid for work given out	Net output (excess of Col. (2) over Col. (3))	Average number of persons employed (except out-workers)	Net output per person employed	Power available*
(1)	(2)	(3)	(4)	(5)	(6)	(7)
	£'000	£'000	£'000	No.	£	Th. H.P.
Rubber ...	1930 28,868	14,379	14,489	52,165	278	176.3
	1924 23,834	12,142	11,692	47,496	246	110.7
Scientific Instruments, Appliances and Apparatus† ...	1930 9,964	3,967	5,997	25,230	238	17.9
	1924 9,092	4,034	5,058	23,778	213	15.7
Musical Instruments† ...	1930 11,428	4,622	6,806	22,969	296	27.3
	1924 7,930	3,694	4,236	18,819	225	13.8
Coke and By-Products and Manufactured Fuel ...	1930 16,962	13,249	3,713	16,638	223	96.7
	1924 26,178	18,978	7,200	20,180	357	120.2
Fancy Articles†	1930 4,007	1,760	2,247	13,818	163	13.3
	1924 5,520	2,687	2,833	16,237	175	9.9
Linoleum and Oilcloth ...	1930 8,964	5,408	3,556	12,853	277	54.9
	1924 11,340	6,091	5,249	12,355	425	43.2
Brush ...	1930 3,174	1,482	1,692	10,152	167	7.2
	1924 3,252	1,646	1,606	10,109	159	5.9
Sports Requisites	1930 3,117	1,440	1,677	8,515	197	6.1
	1924 3,167	1,524	1,643	6,775	242	5.3
Games and Toys	1930 2,000	863	1,137	6,641	171	3.2
	1924 1,468	763	705	4,992	141	1.8

Trade		Gross output (selling value of goods made and value of work done)	Cost of materials used and amount paid for work given out	Net output (excess of Col. (2) over Col. (3))	Average number of persons employed (except out-workers)	Net output per person employed	Power available*
(1)		(2)	(3)	(4)	(5)	(6)	(7)
		£'000	£'000	£'000	No.	£	Th. H.P.
Manufactured	{ 1930	1,515	790	725	2,487	291	4.2
Abrasives ...	{ 1924	1,296	700	596	1,929	309	2.9
Incandescent	{ 1930	641	240	401	1,716	233	0.6
Mantles	{ 1924	574	219	355	2,201	162	0.7
Cinematograph	{ 1930	1,053	708	345	641	539	0.4
Film Printing	{ 1924	672	495	177	600	294	0.3
Miscellaneous	{ 1930	175	42	133	251	530	0.8
(Northern Ire-land)† ...	{ 1924	151	50	101	275	367	0.7
TOTAL—UNITED KINGDOM	{ 1930	91,868	48,950	42,918	174,076	247	408.9
	{ 1924	94,474	53,023	41,451	165,746	250	331.1
England and Wales ...	{ 1930	83,112	44,284	38,828	156,129	249	356.9
	{ 1924§	84,821	48,134	36,687	149,558	245	292.6
Scotland ...	{ 1930	8,562	4,616	3,946	17,622	224	51.2
	{ 1924§	9,490	4,833	4,657	15,877	293	37.7
Northern Ireland	{ 1930	194	50	144	325	443	0.8
	{ 1924	163	56	107	311	344	0.8

* Total capacity of prime movers and of electric motors driven by purchased electricity.

† Great Britain.

‡ Includes the Match, Ice, Umbrella and Walking Stick, Scientific Instruments and Musical Instruments Trades. In the other trades (except the Brush Trade) there was no production in Northern Ireland.

§ Owing to the possible disclosure of information relating to individual firms the figures in respect of the Games and Toys Trade in Scotland for 1924 have been included with those for England and Wales.

Deficiencies due to the exclusion of small firms in Great Britain.

—The report on each trade contains a section setting out the number of persons reported to have been employed in both 1924 and 1930 by firms employing not more than ten persons, with details of the chief classes of goods made and work done by these firms in the earlier year. Taking this group as a whole, 13,743 persons were stated to have been employed by firms of this class at the 1930 Census and 8,530 at that of 1924.

About 320 firms to which schedules were sent furnished no information at the 1930 Census, but these outstanding cases are known to have consisted either of small businesses or of businesses which were in operation for only a part of the censal year. The number of firms that furnished no particulars at the previous Census was about 870. Assuming that the average number of employees was the same in these cases as that shown by other small firms, the total number of persons employed by all small firms in this group was roughly 15,200 in 1930 and 12,100 in 1924, representing an increase in the later year of 26 per cent., which may be compared with the increase of 5 per cent. recorded for the larger firms.

Periods covered by firms' returns

As explained in Note 1 on page xi, firms were given the option of making returns for the calendar year 1930 or for their period of account most closely corresponding thereto, provided that the ending date of that period was not later than 31st March, 1931. The following table shows, for the miscellaneous group of trades as a whole, the total number of returns and the numbers of persons employed according to the periods covered by the returns received.

Returns in respect of 12 months ended	Number of returns		Persons employed	
	Number	Per cent. of total	Average number	Per cent. of total
April, 1930	13	0.9	610	0.4
May, 1930	12	0.8	856	0.5
June, 1930	60	4.2	5,571	3.2
July, 1930	16	1.1	1,271	0.7
August, 1930	23	1.6	4,518	2.6
September, 1930	59	4.1	11,334	6.5
October, 1930	40	2.7	5,840	3.4
November, 1930	20	1.4	2,200	1.3
December, 1930	951	65.9	120,081	69.1
January, 1931	28	1.9	3,590	2.1
February, 1931	30	2.1	2,518	1.4
March, 1931	192	13.3	15,362	8.8
TOTAL	1,444	100.0	173,751	100.0

The above particulars relate only to firms in Great Britain, a similar analysis of the returns furnished at the Census of Northern Ireland not being available.

The mean terminal date of all returns for this group of trades at the 1930 Census was about the end of the third week in December, 1930. The number of returns relating to the calendar year, and the numbers of persons recorded in those returns, are shown below for each trade separately.

Returns covering the twelve months ended December 31st, 1930

Trade	Number of returns		Persons employed	
	Number	Per cent. of total	Average number	Per cent. of total
Rubber	102	63	39,576	76
Scientific Instruments, etc.	188	61	16,870	67
Musical Instruments ...	116	52	13,658	59
Coke and By-Products and Manufactured Fuel ...	112	86	12,553	75
Fancy Articles	170	78	11,145	81
Linoleum and Oilcloth ...	17	53	5,297	41
Brush	97	73	7,549	75
Sports Requisites ...	73	57	4,898	58
Games and Toys	52	79	4,939	74
Manufactured Abrasives	12	52	1,816	73
Incandescent Mantles ...	5	50	1,397	81
Cinematograph Film Printing	7	54	383	60
TOTAL	951	66	120,081	69

Production

Gross output.—Comparison between the gross output values shown for any trade in respect of different years is affected by changes in the prices of the materials used in production and in manufacturing costs and profits; further, in certain trades duplication in the gross output value leads to an over-statement of the value of the products as finally delivered, and the proportion of duplication in the total figure may vary from one year to another. For these reasons the gross output figure does not provide a satisfactory representation of the position of a trade in different years.

Net output.—The net output figure, while eliminating any over-statement due to the factor of duplication, is affected by fluctuations between different periods in the various items which the figure comprises, viz., wages and salaries, rent, sales expenses, etc., as well as depreciation and profits. The figure of net output per head eliminates the variable factor of the numbers of persons employed, but, apart from this, its use for purposes of comparison is subject to the same qualifications.

Volume of production.—The following table shows, for each principal class of commodities produced by this group of trades, the total output value recorded for the year 1930, and the result of a re-valuation of the output of similar classes of goods in 1924, based on the average factory values shown by the returns for 1930. In

order to complete the calculation it has been necessary to make estimates in respect of the goods for which particulars of quantities were not obtained. This calculation eliminates the factor of price changes, and (subject to any change in the proportion of duplication) provides a measure by which the output in the two years may be compared directly. The figures for both years represent the total recorded output, whether returned by firms in the trade chiefly concerned in the production of the specified goods, or by firms in other trades. These particulars relate only to production in Great Britain.

Kind of goods	Total production in Great Britain			1930 as a percentage of 1924
	1930	1924		
	As returned	As returned	At 1930 average values	
Rubber	£'000 25,920	£'000 20,801	£'000 17,358	Per cent. 149
Scientific instruments, apparatus and appliances	11,031	8,278	7,800	141
Musical instruments	11,031	7,464	7,493	147
Coke and by-products and manufactured fuel	16,447	25,744	15,636	105
Fancy articles, including buttons, picture frames, etc.	4,029	5,149	4,300	93
Linoleum, oilcloth and cork carpet	9,018	11,315	9,182	98
Brooms and brushes	3,195	3,548	3,168	101
Sports requisites	4,420	4,470	3,800	116
Games and toys	2,068	1,371	1,371	151
Manufactured abrasives	1,511	1,332	1,272	119
Incandescent mantles	639	574	562	114
Cinematograph film printing ...	1,039	734	647	161
TOTAL	90,348	90,780	72,589	124

Number of establishments

The following table shows the number of separate establishments covered by the results for 1930, and the total number of returns received for 1930 and 1924. In the case of a firm owning more than one establishment situated in the same Census area and engaged in the same Census trade, a combined return covering all such establishments was usually accepted provided the number of operatives employed at each establishment was shown separately. The number of establishments reported was thus greater than the number of returns received.

Trade	1930		1924
	Number of establishments	Number of returns	Number of returns
Rubber	179	163	201
Scientific Instruments, etc.	356	306	328
Musical Instruments	263	223	297
Coke and By-Products and Manufactured Fuel	137	130	174
Fancy Articles	250	218	306
Linoleum and Oilcloth	46	32	29
Brush	149	133	183
Sports Requisites	150	127	141
Games and Toys	72	66	93
Manufactured Abrasives	23	23	19
Incandescent Mantles	10	10	13
Cinematograph Film Printing	13	13	18
TOTAL	1,648	1,444	1,802

These figures relate only to firms in Great Britain, the number of establishments not being recorded separately in the report on the Census of Production of Northern Ireland.

Size of firms

In the following table the main particulars recorded at the Census of 1930 for the trades in this group are grouped according to the average numbers of persons shown in the returns. The particulars given relate only to firms in Great Britain.

Size of firm (average numbers employed)	Number of returns	Gross output	Cost of materials used and amount paid for work given out	Net output	Average number of persons employed (excluding out-workers)	Net output per person employed
	No.	£'000	£'000	£'000	No.	£
11-24 ...	459	2,767	1,282	1,485	7,997	186
25-49 ...	332	5,015	2,609	2,406	11,692	206
50-99 ...	267	9,285	5,123	4,162	18,936	220
100-199 ...	227	16,846	10,126	6,720	31,413	214
200-299 ...	70	9,590	5,645	3,945	16,991	232
300-399 ...	23	3,384	1,944	1,440	7,926	182
400-499 ...	17	2,971	1,365	1,606	7,504	214
500-749 ...	20	5,958	2,867	3,091	11,989	259
750-999 ...	4	1,962	1,014	948	3,415	278
1,000-1,499 ...	9	6,261	3,269	2,992	10,951	273
1,500 and over	16	27,635	13,656	13,979	44,937	311
TOTAL ...	1,444	91,674	48,900	42,774	173,751	246

Regional distribution

In the following table the principal aggregates for the miscellaneous group as a whole, as recorded at the Censuses of 1930 and 1924, are grouped according to the areas into which Great Britain has been sub-divided:—

Area	Number of returns	Gross output	Net output	Average number of persons employed (excluding out-workers)	Net output per person employed
	No.	£'000	£'000	No.	£
1. Greater London ...	1930 663 1924 859	31,121 27,255	17,475 14,124	67,204 64,413	260 219
2. Lancashire with North Cheshire and the Glossop and New Mills District of Derbyshire ...	1930 151 1924 226	12,996 15,194	6,073 6,602	27,103 26,705	224 247
3. The West Riding of Yorkshire and the City of York ...	1930 123 1924 147	6,343 7,337	2,064 2,934	9,521 10,010	217 293
4. Northumberland, Durham and the Cleveland district of Yorkshire ...	1930 47 1924 65	6,197 9,643	1,156 2,466	6,038 6,984	191 353
5. Warwickshire, Worcestershire and Staffordshire ...	1930 151 1924 158	14,194 11,867	7,145 5,529	22,131 20,258	323 273
6. The rest of England (except Monmouthshire)	1930 186 1924* 191	9,784 9,264	4,437 3,886	21,476 17,795	207 218
7 and 8. Wales ...	1930 25 1924 38	2,477 4,261	478 1,146	2,656 3,393	180 367
TOTAL—England and Wales	1930 1,346 1924* 1,684	83,112 84,821	38,828 36,687	156,129 149,558	249 245
9. Lanarkshire, Renfrewshire and Dumbartonshire ...	1930 49 1924 59	3,018 2,596	1,477 1,071	5,554 4,709	266 227
10. The rest of Scotland ...	1930 49 1924* 59	5,544 6,894	2,469 3,586	12,068 11,168	205 321
TOTAL—Scotland ...	1930 98 1924* 118	8,562 9,490	3,946 4,657	17,622 15,877	224 293
TOTAL—Great Britain	1930 1,444 1924 1,802	91,674 94,311	42,774 41,344	173,751 165,435	246 250
11. Northern Ireland ...	1930 8 1924 24	194 163	144 107	325 311	443 344
TOTAL—UNITED KINGDOM	1930 1,452 1924 1,826	91,868 94,474	42,918 41,451	174,076 165,746	247 250

* Owing to the possible disclosure of information relating to individual firms, the figures in respect of the Games and Toys Trade in Scotland for 1924 have been included with those for England and Wales (Area 6).

Employment

The following table shows the average numbers of male and female operatives and administrative, technical and clerical staff in each trade in the two censal years.

Average numbers (excluding outworkers) employed in 1930 and 1924

Trade	Operatives		Administrative, technical and clerical staff		Total
	Males	Females	Males	Females	
Rubber	1930 26,663	16,657	6,037	2,808	52,165
	1924 22,215	18,038	4,939	2,304	47,496
Scientific Instruments, etc.†	1930 13,864	7,215	2,537	1,614	25,230
	1924 12,313	7,935	2,189	1,341	23,778
Musical Instruments†	1930 14,181	4,919	2,656	1,213	22,969
	1924 14,566	2,519	1,186	548	18,819
Coke and By-Products and Manufactured Fuel ...	1930 15,454	34	1,098	52	16,638
	1924 18,921	51	1,164	44	20,180
Fancy Articles†	1930 5,023	7,029	964	802	13,818
	1924 5,971	8,516	987	763	16,237
Linoleum and Oilcloth ...	1930 10,755	889	985	224	12,853
	1924 10,119	1,215	844	177	12,355
Brush	1930 3,626	4,247	1,886	393	10,152
	1924 4,405	4,621	760	323	10,109
Sports Requisites ...	1930 4,582	2,819	635	479	8,515
	1924 4,085	1,800	549	341	6,775
Games and Toys ...	1930 2,052	3,857	358	374	6,641
	1924 1,469	3,011	261	251	4,992
Manufactured Abrasives ...	1930 1,679	247	385	176	2,487
	1924 1,314	249	263	103	1,929
Incandescent Mantles ...	1930 134	1,465	45	72	1,716
	1924 172	1,760	174	95	2,201
Cinematograph Film Printing ...	1930 351	212	54	24	641
	1924 292	228	53	27	600
Miscellaneous (Northern Ireland)‡ ...	1930 109	100	25	17	251
	1924 131	88	35	21	275
TOTAL—UNITED KING- DOM	1930 98,473	49,690	17,665	8,248	174,076
	1924 95,973	50,031	13,404	6,338	165,746
England and Wales ...	1930 87,709	44,585	16,313	7,522	156,129
	1924* 86,452	45,126	12,306	5,674	149,558
Scotland	1930 10,604	4,995	1,316	707	17,622
	1924* 9,367	4,816	1,051	643	15,877
Northern Ireland ...	1930 160	110	36	19	325
	1924 154	89	47	21	311

† Great Britain.

‡ See footnote (‡) to table on page 200.

* Owing to the possible disclosure of information relating to individual firms, the figures in respect of the Games and Toys Trade in Scotland for 1924 have been included with those for England and Wales.

Distribution by age.—The following table classifies by age the numbers of persons (excluding outworkers) of each class recorded as employed in the weeks ended 18th October, 1930 and 1924:—

Number of persons (excluding outworkers) employed in the weeks ended 18th October, 1930 and 1924

Trade	Operatives				Administrative, technical and clerical staff			
	Males		Females		Males		Females	
	Under 18	Total	Under 18	Total	Under 18	Total	Under 18	Total
Rubber	1930 2,932	25,944	4,106	16,208	618	6,037	471	2,808
	1924 2,187	22,371	4,228	17,992	506	4,939	336	2,304
Scientific Instruments, etc.†	1930 2,368	13,598	2,094	7,075	232	2,537	298	1,614
	1924 2,172	12,528	2,632	8,025	163	2,189	214	1,341
Musical Instruments†	1930 2,097	14,366	1,355	4,983	186	2,656	178	1,213
	1924 2,570	16,130	776	2,984	91	1,186	59	548
Coke and By-Products and Manufactured Fuel...	1930 337	14,524	6	32	82	1,098	5	52
	1924 492	18,450	13	49	67	1,164	2	44
Fancy Articles†	1930 891	5,066	2,596	7,088	62	964	162	802
	1924 1,360	6,228	3,001	9,033	80	987	135	763
Linoleum and Oilcloth ...	1930 841	10,577	95	874	67	985	14	224
	1924 1,295	10,074	223	1,171	73	844	13	177
Brush	1930 431	3,581	1,176	4,189	43	1,886	75	393
	1924 559	4,384	1,201	4,590	54	760	41	323
Sports Requisites	1930 748	4,546	888	2,796	41	635	100	479
	1924 596	4,045	484	1,670	25	549	50	341
Games and Toys	1930 639	2,198	1,478	4,131	35	358	63	374
	1924 673	1,601	1,543	3,550	27	261	45	251
Manufactured Abrasives ...	1930 135	1,590	37	234	19	385	20	176
	1924 139	1,297	48	250	17	263	13	103
Incandescent Mantles ...	1930 14	130	485	1,424	2	45	4	72
	1924 7	172	551	1,817	5	174	6	95
Cinematograph Film Printing	1930 21	363	22	220	4	54	4	24
	1924 21	283	17	226	2	53	5	27
Miscellaneous (Northern Ireland)‡ ...	1930 4	109	15	99	2	25	—	17
	1924 16	130	20	96	1	35	—	21
TOTAL ...	1930 11,458	96,592	14,353	49,353	1,393	17,665	1,394	8,248
	1924 12,087	97,693	14,787	51,453	1,111	13,404	919	6,338

† Great Britain.

‡ See footnote (‡) to table on page 200.

Monthly fluctuations in employment.—Firms were required to state the actual numbers of operatives employed in the middle week of each month of the periods covered by their returns, and the following table shows the monthly aggregates for each trade:—

Operative Staff (excluding outworkers) employed in 1930 and 1924

Middle week in	1930		1924
	Total number	Number employed by firms furnishing returns in respect of the twelve months ended December*	Total number
January	154,079	106,842	141,723
February	152,348	105,575	143,895
March	151,672	104,958	145,579
April	151,490	104,084	145,883
May	150,595	103,183	145,572
June	148,098	101,277	145,184
July	145,491	99,209	145,067
August	142,947	97,569	144,512
September	144,245	98,045	145,895
October	145,945	98,456	149,146
November	146,567	98,911	149,485
December	144,481	97,382	150,102
AVERAGE FOR THE TWELVE MONTHS ...	148,163	101,291	146,004

* Great Britain only.

Outworkers.—The following table shows the numbers of outworkers employed in 1930 and 1924 in this group of trades :—

Average numbers of outworkers employed

Trade	1930			1924		
	Males	Females	Total	Males	Females	Total
Scientific Instruments, etc.	42	7	49	17	21	38
Fancy Articles	13	165	178	20	141	161
Brush	9	701	710	*	*	*
Sports Requisites	51	113	164	16	777	793
Games and Toys	2	117	119	2	65	67
Incandescent Mantles	—	54	54	—	2	2
TOTAL	117	1,157	1,274	55	1,006	1,061

* Not ascertained.

Wages

The table on pages 210 and 211 summarises the information available as to the amount of wages paid by firms in these trades in 1930 and 1924. The particulars of wages shown in column (8) are

those ascertained by the Ministry of Labour as a result of the voluntary inquiries undertaken by that Ministry into wages and hours of labour in the United Kingdom. Owing, however, to various causes, including the fact that certain firms owning several establishments made combined returns to one Department and separate returns to the other, it has not been found practicable to secure comparable particulars in respect of all firms that furnished particulars of wages to the Ministry of Labour.

The numbers of operatives shown in columns (1) and (3) are those returned to the Census of Production as employed by the firms concerned in the weeks ended 18th October, 1930 and 1924, and the average during the year 1930 respectively. The amount of wages paid shown in column (8) was the aggregate returned to the Ministry of Labour in respect of the same firms. The proportion of each trade represented by the firms that furnished particulars of their wage bills is shown in columns (2) and (4) based on the numbers of operatives employed and, in column (7), on net output. The average numbers of operatives employed during the year 1924, corresponding to those given in column (3) in respect of 1930, are not available.

The figures for wages for both years relate to firms employing on an average more than ten persons during the respective years and cover firms in Great Britain only.

Trade	Firms furnishing				
	Operative staff employed				
	During week ended 18th October (1)	Proportion of trade (2)	Average during year (3)	Proportion of trade (4)	
	No.	Per cent.	No.	Per cent.	
Rubber	1930	29,368	69.7	30,276	69.9
	1924	31,101	77.1	*	—
Scientific Instruments, etc.	1930	12,672	61.3	12,860	61.0
	1924	11,192	54.5	*	—
Musical Instruments	1930	8,390	43.4	7,775	40.7
	1924	12,990	68.0	*	—
Coke and By-Products and Manufactured Fuel ...	1930	6,693	46.0	7,088	45.8
	1924	5,674	30.7	*	—
Fancy Articles	1930	5,552	45.7	6,596	54.7
	1924	7,388	48.4	*	—
Linoleum and Oilcloth ...	1930	7,593	66.3	7,629	65.5
	1924	7,663	68.2	*	—
Brush	1930	4,956	64.3	5,004	64.1
	1924	6,246	69.8	*	—
Sports Requisites	1930	3,348	45.6	3,350	45.3
	1924	3,746	65.5	*	—
Games and Toys	1930	3,657	57.8	3,368	57.0
	1924	3,181	61.8	*	—
Manufactured Abrasives†	1930	569	31.2	567	29.4
Incandescent Mantles† ...	1930	507	32.6	486	30.4
Cinematograph Film Printing†	1930	511	87.6	494	87.7
TOTAL	1930	83,816	57.5	85,493	57.8
	1924	89,181	61.6	*	—

* Not available.

† Separate particulars not available for the year 1924. Such particulars as were furnished in respect of wages are included, for Manufactured Abrasives, in the Tool and Implement Trades (Part II, pages 18-19); for Incandescent Mantles, in the Jute, Linen and Hemp Trades (Part I, pages 18-19); and, for Cinematograph Film Printing, in the Scientific Instruments, etc., Trade.

Gross output	returns of wages				Trade
	Net output		Wages paid		
	Amount	Proportion of trade	Amount	Proportion of net output	
(5)	(6)	(7)	(8)	(9)	
£'000	£'000	Per cent.	£'000	Per cent.	
21,462	10,644	73.5	3,662	34.4	1930
*	9,484	81.1	3,544	37.4	1924
6,263	3,810	63.5	1,597	41.9	1930
*	2,711	53.6	1,214	44.8	1924
4,418	2,616	38.4	1,070	40.9	1930
*	2,925	69.1	1,789	61.2	1924
7,963	1,815	48.9	1,055	58.1	1930
*	2,213	30.7	976	44.1	1924
1,856	1,016	45.2	507	49.9	1930
*	1,437	50.7	699	48.6	1924
5,415	2,142	60.2	909	42.4	1930
*	3,707	70.6	1,097	29.6	1924
2,023	1,100	65.4	476	43.3	1930
*	1,096	68.5	592	54.0	1924
1,340	721	43.0	408	56.6	1930
*	1,162	70.7	533	45.9	1924
1,335	756	66.4	304	40.2	1930
*	435	61.7	189	43.4	1924
476	235	32.5	74	31.3	1930
171	102	25.4	33	32.8	1930
969	317	91.9	82	25.8	1930
53,691	25,274	59.1	10,177	40.3	1930
*	25,170	62.6	10,633	42.2	1924

This table shows that some considerable changes took place between the two years in the importance of wages in the net output (column 9). In the Musical Instruments and the Brush Trades wages formed a notably smaller proportion in 1930 than in 1924, but in the Linoleum, Sports Requisites and Coke and Bye-Products Trades the proportion in the later year was substantially higher than in the earlier. Average earnings in the group as a whole were £119 per operative in 1930 and £123 per operative in 1924, a fall of rather more than 3 per cent., the movement in the majority of trades being slightly downward; in the important Rubber Trade, however, the average earnings of the operatives increased from £114 in 1924 to £121 in 1930.

Power

The particulars recorded at the Censuses of 1930 and 1924 in respect of power installed and employed are shown in the following table:—

Power ordinarily in use and not in use in 1930 and 1924

Type	Capacity ordinarily in use		Capacity in reserve or idle		Proportion in reserve or idle	
	1930	1924	1930	1924	1930	1924
	Th. H.P.	Th. H.P.	Th. H.P.	Th. H.P.	Per cent.	Per cent.
PRIME MOVERS						
Reciprocating steam engines	65.3	83.8	20.2	24.3	23.6	22.4
Steam turbines	50.8	50.2	28.5	12.7	36.0	20.2
Internal combustion engines:—						
Gas	9.5	19.3	2.4	6.3	20.6	24.5
Petrol, kerosene, or other light oils ...	0.2	0.1	0.1	*	22.9	15.0
Heavy oils	3.8	1.0	2.0	2.4	34.5	71.2
Water engines	0.5	0.3	*	*	5.3	5.9
Other	—	*	*	—	100.0	—
TOTAL—Prime movers	130.1	154.7	53.2	45.7	29.1	22.8
ELECTRIC GENERATORS						
Driven by	Th. Kw.	Th. Kw.	Th. Kw.	Th. Kw.		
Reciprocating steam engines	13.0	17.7	9.6	9.8	42.7	35.7
Steam turbines	34.4	34.2	18.3	10.6	34.7	23.6
Internal combustion engines:—						
Gas	4.0	6.9	1.3	1.5	24.3	17.4
Petrol, kerosene, or other light oils ...	*	*	0.1	*	57.5	20.8
Heavy oils	1.9	0.5	1.2	1.7	37.9	78.6
Water engines	0.1	0.1	*	*	18.6	34.7
TOTAL—Electric generators	53.4	59.4	30.5	23.6	36.3	28.4

Type	Capacity ordinarily in use		Capacity in reserve or idle		Proportion in reserve or idle	
	1930	1924	1930	1924	1930	1924
	Th. H.P.	Th. H.P.	Th. H.P.	Th. H.P.	Per cent.	Per cent.
ELECTRIC MOTORS						
Driven by						
Electricity generated in same works ...	87.1	74.7	9.7	11.4	10.1	13.2
Electricity generated in other works under same ownership ...	38.8	27.2	8.6	6.0	18.2	18.1
Purchased electricity...	207.0	116.5	18.6	14.2	8.2	10.8
TOTAL—Electric motors	332.9	218.4	36.9	31.6	10.0	12.7

* Less than 50 h.p. or kw.

The power generated by prime movers is required partly for direct application and partly for driving generators for the production of electrical energy. The electrical energy so produced may be used either for the purpose of driving electric motors or for heating, lighting and process purposes. Particulars of the power applied mechanically (i.e., directly) and electrically are given in the table on page 215.

At the 1930 Census, firms were definitely informed that obsolete engines should not be recorded in their returns, and as no similar instruction was given at the previous Census, the figures for reserve or idle plant in the two years may not be precisely comparable. In any case, however, the proportion of reserve or idle plant does not furnish a reliable measure of the activity of trade, since all engines that were in operation during the greater part of the period in which production was carried on were recorded as "ordinarily in use," irrespective of intermittent working.

The particulars furnished at the two Censuses by each of the trades included in this group in respect of prime movers, electric generators and electric motors installed are shown in the following table:—

Power available in 1930 and 1924

Trade	Prime movers	Electric generators	Electric motors			All electric motors
			Driven by electricity			
			Generated in same works	Generated in other works under same ownership	Purchased	
Th. H.P.	Th. Kw.	Th. H.P.	Th. H.P.	Th. H.P.	Th. H.P.	
Rubber ...	1930 46.1	22.1	29.4	—	130.2	159.6
	1924 51.2	21.9	36.5	—	59.5	96.0
Scientific Instruments, etc.† ...	1930 4.5	2.2	2.3	—	13.4	15.7
	1924 4.6	2.0	2.1	—	11.1	13.2
Musical Instruments† ...	1930 11.7	7.9	12.1	—	15.6	27.7
	1924 5.2	3.2	5.8	—	8.6	14.4
Coke and By-Products and Manufactured Fuel...	1930 64.7	26.3	17.3	47.4	32.0	96.7
	1924 86.8	39.8	19.9	33.2	33.4	86.5
Fancy Articles†	1930 4.8	2.8	3.4	—	8.5	11.9
	1924 5.6	2.7	3.0	—	4.3	7.3
Linoleum and Oil-cloth ...	1930 42.5	18.9	28.0	—	12.4	40.4
	1924 37.5	10.4	15.3	—	5.7	21.0
Brush ...	1930 4.4	2.2	2.2	—	2.8	5.0
	1924 4.1	1.5	1.7	—	1.8	3.5
Sports Requisites	1930 1.7	0.6	0.7	¶	4.4	5.1
	1924 2.4	0.4	0.7	—	2.9	3.6
Games and Toys	1930 0.2	¶	¶	—	3.0	3.0
	1924 0.6	0.3	0.2	—	1.2	1.4
Manufactured Abrasives ...	1930 1.7	0.5	1.1	—	2.5	3.6
	1924 1.4	0.5	0.6	—	1.5	2.1
Incandescent Mantles ...	1930 0.3	0.2	0.2	—	0.3	0.5
	1924 0.4	0.2	0.2	—	0.3	0.5
Cinematograph Film Printing...	1930 —	—	—	—	0.4	0.4
	1924 —	—	—	—	0.3	0.3
Miscellaneous (Northern Ireland)‡ ...	1930 0.7	0.2	0.1	—	0.1	0.2
	1924 0.6	0.1	0.1	—	0.1	0.2
TOTAL—UNITED KINGDOM ...	1930 183.3	83.9	96.8	47.4	225.6	369.8
	1924 200.4	83.0	86.1	33.2	130.7	250.0
England and Wales ...	1930 158.9	71.9	80.9	45.1	198.0	324.0
	1924* 179.3	78.1	78.3	32.8	113.3	224.4
Scotland ...	1930 23.8	11.8	15.8	2.3	27.4	45.5
	1924* 20.5	4.8	7.7	0.4	17.2	25.3
Northern Ireland	1930 0.6	0.2	0.1	—	0.2	0.3
	1924 0.6	0.1	0.1	—	0.2	0.3

† Great Britain.

¶ Less than 50 h.p. or kw.

‡ See footnote (‡) to table on page 200.

* Owing to the possible disclosure of information relating to individual firms, the figures in respect of the Games and Toys Trade in Scotland for 1924 have been included with those for England and Wales.

Total power in use.—The figures in the following table represent the estimated amount of power actually employed by each of the Miscellaneous Trades in the two years. For the purpose of arriving at the power applied mechanically, the capacity of the prime movers required to drive electric generators has been calculated and deducted from the total capacity of the prime movers; the power applied electrically represents the capacity of electric motors driven by generators at firms' works added to that of motors driven by purchased electricity. As the basis for calculating the amount of the primary power that is converted into electrical energy, 746 kilowatts of electrical energy have been taken as equivalent to 1,000 horse-power of primary power and an average loss of ten per cent. in transmission has been allowed, except for steam turbines in which the loss is negligible. The power capacity recorded as "ordinarily in use" has been taken as the basis of the calculation in all cases.

The horse-power of motors designed to be driven by electricity generated in the same works may be greater than that of the prime movers used (or calculated in this manner to have been necessary) to drive them, since machines required for special processes are frequently equipped with individual motors which will only be in use on those occasions when the need for those processes arises. Further, the capacity measurement which firms were instructed to state was the effective horse-power which their engines could develop and this measurement does not necessarily represent the capacity at which the engines were normally operated. For these reasons, the figures given below should not be taken as providing more than a rough indication of the actual amount of power employed by any trade or of the degree of its electrification.

Power in use in 1930 and 1924

Trade	Power applied mechanically	Power applied electrically	Total power	Per head of average number of operatives employed
	Th. H.P.	Th. H.P.	Th. H.P.	H.P.
Rubber ...	1930 14.0	150.2	164.2	3.79
	1924 17.7	88.3	106.0	2.64
Scientific Instruments, etc.† ...	1930 1.0	14.3	15.3	0.73
	1924 1.4	12.0	13.4	0.66
Musical Instruments† ...	1930 0.7	25.6	26.3	1.38
	1924 0.6	12.2	12.8	0.75
Coke and By-Products and Manufactured Fuel ...	1930 21.9	77.6	99.5	6.42
	1924 26.3	69.1	95.4	5.03
Fancy Articles† ...	1930 0.6	10.9	11.5	0.95
	1924 1.4	7.0	8.4	0.58

Trade		Power applied mechanically	Power applied electrically	Total power	Per head of average number of operatives employed
		Th. H.P.	Th. H.P.	Th. H.P.	H.P.
Linoleum and Oilcloth ...	1930	14.1	37.6	51.7	4.44
	1924	19.6	19.4	39.0	3.44
Brush ...	1930	1.1	4.6	5.7	0.72
	1924	1.7	3.1	4.8	0.53
Sports Requisites ...	1930	0.9	4.8	5.7	0.77
	1924	1.6	3.2	4.8	0.82
Games and Toys ...	1930	0.1	2.9	3.0	0.52
	1924	0.1	1.3	1.4	0.31
Manufactured Abrasives	1930	0.8	3.4	4.2	2.18
	1924	0.5	1.8	2.3	1.47
Incandescent Mantles ...	1930	¶	0.4	0.4	0.26
	1924	0.1	0.4	0.5	0.27
Cinematograph Film Printing ...	1930	—	0.4	0.4	0.63
	1924	—	0.3	0.3	0.47
Miscellaneous (Northern Ireland)‡	1930	0.4	0.2	0.6	2.98
	1924	0.3	0.3	0.6	2.56
TOTAL ...	1930	55.6	332.9	388.5	2.62
	1924	71.3	218.4	289.7	1.98

† Great Britain.

¶ Less than 50 h.p.

‡ See footnote (‡) to table on page 200.

The only trade for which a decrease in total power employed was recorded was the Incandescent Mantles Trade, in which the power per operative was much smaller than in any other trade.

Consumption of fuel

Coal and coke.—At the 1930 Census, all firms were required to state the total quantity of coal and coke used for generating power (i.e., for driving engines), and were also requested to furnish particulars of the amounts used for other purposes on a voluntary basis, as the provisions of the Census of Production Act do not enable the latter to be obtained compulsorily. In certain trades in which heat is required for process purposes as well as for power some firms found difficulty in furnishing a trustworthy figure of the quantities used for these two categories separately, and, as appears from the table below, it was necessary to accept a certain number of inclusive quantity statements without distinction as to purpose. The following particulars relate only to firms in Great Britain.

Coal and coke used

NOTE.—The figures in italics below the name of the trade represent respectively (1) the percentage of the total capacity of steam engines in use represented by the firms that furnished separate particulars of coal and coke used for power and (2) the percentage of the total net output represented by the firms that furnished separate particulars of coal and coke used for other purposes.

Trade	For power		For other purposes		Unclassified	
	Coal	Coke	Coal	Coke	Coal	Coke
	Th. tons	Th. tons	Th. tons	Th. tons	Th. tons	Th. tons
Rubber—						
(1) 99.9; (2) 93.9 ...	90.2	1.8	281.8	3.9	6.6	*
Scientific Instruments, etc.—						
(1) 5.0; (2) 86.8 ...	1.6	0.1	7.0	4.1	9.6	—
Musical Instruments—						
(1) 100.0; (2) 100.0 ...	10.8	*	35.5	4.6	—	—
Coke and By-Products and Manufactured Fuel—						
(1) ‡; (2) 55.6 ...	80.0	‡	9,120.0	90.3	—	—
Fancy Articles—						
(1) 100.0; (2) 98.9 ...	5.2	0.8	17.2	2.3	—	—
Linoleum and Oilcloth—						
(1) 99.5; (2) 76.6 ...	80.8	—	131.4	0.7	2.0	—
Brush—						
(1) 100.0; (2) 92.7 ...	2.1	0.1	3.8	1.0	—	—
Sports Requisites—						
(1) 100.0; (2) 82.7 ...	2.5	*	1.5	1.0	1.0†	0.4†
Games and Toys—						
(1) —; (2) 99.8 ...	—	—	1.5	0.3	—	—
Manufactured Abrasives—						
(1) 100.0; (2) 82.4 ...	6.1	1.6	8.3	2.3	—	—
Incandescent Mantles—						
(1) —; (2) 100.0 ...	—	—	1.6	0.5	—	—
Cinematograph Film Printing—						
(1) —; (2) 100.0 ...	—	—	0.2	0.8	—	—
TOTAL—						
(1) 97.9; (2) 89.0 ...	279.3	4.4‡	9,609.8	111.8	19.2	0.4

* Less than 50 tons.

† In so far as any part of this coal and coke was used for power purposes, it was used for engines other than steam engines.

‡ See page 272.

The total amount of coal used for power in this group of trades may be estimated at about 290,000 tons, while no addition requires to be made to the recorded amount of coke used.

No particulars of oil, gas or other fuel used were ascertained for the year 1930. At the Census of 1924, a voluntary inquiry was made as to the amounts of coal, coke, heavy and light oils, and gas consumed and reference should be made to the Final Report on that Census for particulars of the partial information reported.

Electricity.—Particulars of the quantity of electricity used were required from all firms, electricity produced by their own generating plant being distinguished from that purchased from outside sources. No separate record of the purpose for which the current was used was obtained.

The following table shows for each trade the total quantities of electricity used in 1930 :—

Electricity used

Trade	Electricity purchased	Electricity generated		Number of units generated per kilowatt of generators in use
		In same works	In other works owned by the firm	
	B.T.U. (Kw.-hrs.) '000	B.T.U. (Kw.-hrs.) '000	B.T.U. (Kw.-hrs.) '000	B.T.U. per Kw.
Rubber	148,479	23,725	3	1,860
Scientific Instruments, etc. ...	9,990	3,025	—	1,457
Musical Instruments	10,653	10,124	—	1,807
Coke and By-Products and Manufactured Fuel	43,166	27,759	75,372*	1,867
Linoleum and Oilcloth	8,103	23,602	—	1,778
Fancy Articles	6,005	3,667	—	1,572
Brush	1,436	1,480	—	1,039
Sports Requisites	2,577	508	3	1,373
Games and Toys	2,235	104	—	2,726
Manufactured Abrasives	1,679	1,533	—	3,186
Incandescent Mantles	170	136	—	1,281
Cinematograph Film Printing ...	957	—	—	—
TOTAL	235,450	95,663	75,378	1,794

* See pages 271-2.

The figures shown for current generated represent only the amounts generated *and used*, and fall short of the total output of current in cases where electricity was sold to outside consumers.