



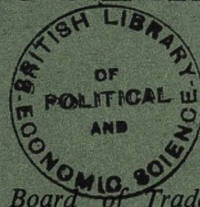
BOARD OF TRADE

THE REPORT
on the
CENSUS OF PRODUCTION
FOR 1951

Volume 4

Trade K

ELECTRICAL ENGINEERING (GENERAL)



*Presented by the Board of Trade to Parliament
in pursuance of the Statistics of Trade Act, 1947
(10 & 11 Geo. 6, Ch. 39, Sec. 7).*

LONDON: HER MAJESTY'S STATIONERY OFFICE

1956

Price 2s 0d net

42

[HA 251]

LIST OF TABLES

Table No.	Title	Page
1	Summary: Larger establishments	4/K/2
2	Summary: Small firms	4/K/3
3	Estimated average employment: All firms	4/K/3
4	Analysis by size, 1951: Larger establishments in the United Kingdom	4/K/4
5	Analysis by standard region, 1951: Larger establishments in the United Kingdom	4/K/4
6	Analysis according to specialisation within the trade, 1951: Larger establishments in the United Kingdom	4/K/5
7	Total make of intermediate products: Larger establishments	4/K/5
8 or 8(i)	Sales of the principal products of the trade, including sales of these products by establishments classified to other trades: Larger establishments	4/K/5
8(ii)	Total sales by small firms in Great Britain	*
9	Sales of principal products of the trade by establishments classified to other trades: Larger establishments	4/K/12
10	Sales in the trade of other than principal products: Larger establishments	4/K/16
11	Production, exports and imports of certain principal products	4/K/17
12	Usage of certain specified purchased materials, 1951: Larger establishments in the United Kingdom	4/K/21
13	Employment in September: Larger establishments	4/K/22
14	Average employment: Larger establishments	4/K/24
15	Shift working, 1951: Larger establishments in Great Britain	4/K/24
16	Wages and salaries and employers' National Insurance contributions paid during the year: Larger establishments	4/K/25
17	Plant, machinery and vehicles - acquisitions and disposals, and capital expenditure on new building work: Larger establishments	4/K/25
<u>Country tables, 1951</u>		
18	Summary: Larger establishments	4/K/26
19	Summary: Small firms in Great Britain	4/K/26
20 or 20(i)	Sales in the trade: Larger establishments	4/K/27
20(ii)	Sales in the trade: Small firms	*
21	Stocks of products on hand for sale and work in progress, and stocks of materials and fuel: Larger establishments	4/K/34
22	Employment in September: Larger establishments	4/K/34
23 or 23(i)	Average employment: Larger establishments	4/K/35
23(ii)	Average employment: Small firms	*
24	Wages and salaries and employers' National Insurance contributions paid during the year: Larger establishments	4/K/36
25	Plant, machinery and vehicles - acquisitions and disposals, and capital expenditure on new building work: Larger establishments	4/K/36
26	Payments for transport services for finished goods sold and materials and fuel purchased: Larger establishments	4/K/36

* Not applicable to this trade

27.6.56.

ELECTRICAL ENGINEERING (GENERAL) TRADE

THIS REPORT on the Electrical Engineering (General) Trade relates to establishments engaged wholly or mainly in the manufacture of electricity generating plants, transformers, dynamos, electric motors, switchgear, electrical equipment for motor vehicles, cycles and aircraft, and other electrical goods. Separate reports are made on the following trades:- Electric Wires and Cables, Radio and Telecommunications, Batteries and Accumulators, and Electric Lighting Accessories and Fittings.

This trade corresponds to minimum list headings 70 and 79 (excluding electric lighting accessories and fittings) in the Standard Industrial Classification, with the addition of mica goods from heading 29 (3).

Production by Government Departments in Northern Ireland in the Radio and Telecommunications Trade has been included in this Report for 1951, 1950 and 1949.

IMPORTANT NOTES and definitions appear on the inside of the back cover of this report. In interpreting the data in the following tables, it is essential to bear these in mind.

ENGINEERING, SHIPBUILDING AND ELECTRICAL GOODS
ELECTRICAL ENGINEERING (GENERAL) TRADE

Summary

Larger establishments (a)

TABLE 1

	United Kingdom			Great Britain (b)	United Kingdom		
	1951	1950	1949	1948	1946	1937	1935
	£'000	£'000	£'000	£'000	£'000	£'000	£'000
Gross output (production) (c)	363,002	277,700	250,089	229,791	155,514	75,520	55,846
Cost of materials and fuel used (d)	170,920	124,777	111,685	99,173	60,838	33,229	23,216
Payment for work done on materials given out	4,678	2,683	2,616	2,385	1,664	218	143
Transport payments (e)	3,529	..	..	..	..	..	..
Net output	183,875	150,239	135,788	128,233	93,012	42,073	32,487
Wages and salaries of persons employed	108,402	92,629	84,466	79,495	63,731	..	..
	No.	No.	No.	No.	No.	No.	No.
Average number of persons employed (f)	292,483	268,171	258,836	258,561	244,910	177,321	148,957
	£	£	£	£	£	£	£
Net output per person employed (f)	629	560	525	496	380	237	218
	£'000	£'000	£'000	£'000	£'000	£'000	£'000
Stocks at end of year							
Products on hand for sale and work in progress	80,450	61,736	62,634	60,094	42,142	14,428(g)	7,521(g)
Materials and fuel	47,961	32,514	30,717	33,117	18,548	..	..
	No.	No.	No.	No.	No.	No.	No.
Number of establishments	1,024	952	924(h)	892	..	..	522

The values of gross output and of materials and fuel used are derived in the following way:-

	£'000	£'000	£'000	£'000	£'000	£'000	£'000
Output of firms in this trade (i)							
Principal products (j)	278,168	278,832	249,588	178,915(h)	148,997	57,093	42,705
Other output (k)	66,849						
Changes in stocks and work in progress (l)	+ 17,985	+ 1,721	+ 2,482	+ 8,897	+ 6,517	+ 3,706(g)	+ 1,579(g)
Less payment for transport outwards (e)	363,002	280,553	252,071	231,287	155,514	75,520	55,846
	..	- 2,854	- 1,982	- 1,495	..	..	..
Gross output (production)	363,002	277,700	250,089	229,791	155,514	75,520	55,846
Materials and fuel used by firms in this trade							
Purchases	184,992	126,145	109,030	103,460	64,223	33,229	23,216
Changes in stocks (l)	- 14,072	- 1,368	+ 2,655	- 4,286	- 3,385		
Materials and fuel used	170,920	124,777	111,685	99,173	60,838	33,229	23,216

- (a) For small firms' summary see Table 2.
 (b) Owing to the risk of disclosure of information relating to individual firms in Northern Ireland separate particulars for Great Britain for 1949 cannot be given.
 (c) Gross output for 1951 includes payments to other firms and undertakings and to firms' own separate transport organisations for transport services. For other years payments for transport services outwards on finished goods sold are excluded.
 (d) Amounts paid for delivery services are excluded for 1951 but included for other years.
 (e) Payments to other firms and undertakings and to firms' own separate transport organisations. For 1951 they cover payments for transport of both goods sold and materials and fuel purchased. For other years payments cover only transport outwards of finished goods sold.
 (f) Excluding outworkers but including working proprietors. For an estimate of the total number of persons employed in this trade see Table 3.
 (g) Work in progress only.
 (h) Corrected figure.
 (i) Total value of sales (1951, 1950, 1949, 1948 and 1946) or production for sale (1937 and 1935).
 (j) For details for 1951 and 1948 see Table 8.
 (k) For details for 1951 and 1948 see Table 10.
 (l) For details for 1951 see Table 21.

Summary

Small firms (a)

TABLE 2

	Great Britain		United Kingdom	Great Britain	
	1951	1950	1949	1949	1948
Number of returns	841	892	978	937	972
Average number of persons employed (b)					
Males	3,874	4,251	4,482	4,275	4,566
Females	1,131	975	566	538	1,033
Total	5,005	5,226	5,048	4,813	5,599

- (a) Small firms (employing on the average ten or fewer persons) that made satisfactory returns. No information about small firms was collected in Northern Ireland for 1951 or 1950.
 (b) Including working proprietors.

Estimated average employment (a)

All firms

TABLE 3

	United Kingdom			Great Britain	
	1951	1950	1949	1949	1948
As returned by firms					
Employing on the average more than ten persons (b)	292,483	268,171	258,836	(c)	258,561
Employing on the average ten or fewer persons (d)	5,005(e)	5,226(e)	5,048	4,813	5,599
Estimated average employment in firms not making satisfactory returns	297,488	273,397	263,884	(c)	264,160
	327	547	838	838	1,225
Estimated average employment in all firms	297,815(e)	273,944(e)	264,722	(c)	265,385

- (a) Including working proprietors.
 (b) See Tables 13(iv) and 14.
 (c) Owing to the risk of disclosure of information relating to individual firms in Northern Ireland separate particulars for Great Britain cannot be given.
 (d) See Table 2.
 (e) Excluding any small firms in Northern Ireland.

ENGINEERING, SHIPBUILDING AND ELECTRICAL GOODS
Analysis by size, 1951

Larger establishments in the United Kingdom

TABLE 4

Average number employed	Establishments	Gross output	Net output	Persons employed	Remuneration			Net output per person employed
					Operatives	Other employees (a)	Total	
	No.	£'000	£'000	No.	£'000	£'000	£'000	£
11 - 24	235	4,743	2,341	4,083	902	423	1,325	573
25 - 49	253	10,388	4,976	8,669	1,892	949	2,842	574
50 - 99	179	14,608	7,517	12,764	2,831	1,328	4,159	589
100 - 199	114	18,317	9,008	15,494	3,514	1,656	5,169	581
200 - 299	62	20,196	10,065	15,454	3,793	1,658	5,450	651
300 - 399	38	14,134	7,615	13,022	3,117	1,403	4,520	585
400 - 499	26	13,945	6,850	11,378	2,904	1,128	4,031	602
500 - 749	21	15,771	7,385	12,724	2,940	1,381	4,321	580
750 - 999	26	27,369	13,168	22,498	5,641	2,243	7,885	585
1,000 - 1,499	34	55,414	27,270	42,100	10,649	5,168	15,817	648
1,500 - 1,999	12	25,790	12,916	19,756	4,662	2,539	7,201	654
2,000 - 2,999	8	21,866	12,489	18,114	4,928	2,024	6,952	689
3,000 - 3,999	6	27,765	14,749	20,130	5,703	2,379	8,082	733
4,000 - 4,999	3	19,832	11,055	13,447	3,259	2,590	5,849	822
5,000 and over	7	72,863	36,471	62,850	15,811	8,987	24,798	580
Total	1,024	363,002	183,875	292,483	72,545	35,857	108,402	629

(a) Administrative, technical and clerical employees.

Analysis by standard region, 1951

Larger establishments in the United Kingdom

TABLE 5

Region	Establishments	Gross output	Net output		Persons employed	Remuneration			Net output per person employed
			Value	Percentage of total		Operatives	Other employees (a)	Total	
	No.	£'000	£'000		No.	£'000	£'000	£'000	£
England and Northern Ireland									
Northern	34	21,914	11,986	6.5	15,619	4,251	1,744	5,995	767
East and West Ridings	74	21,407	9,720	5.3	16,199	4,050	1,551	5,601	600
North Midland; and Northern Ireland	54	18,748	9,274	5.0	14,753	3,549	2,004	5,553	629
Eastern	60	12,360	6,948	3.8	11,187	2,598	1,325	3,923	621
London and South Eastern	363	91,084	49,657	27.0	71,345	17,249	9,650	26,898	696
Southern	39	6,884	3,971	2.2	5,527	1,362	936	2,299	718
South Western	48	7,290	3,100	1.7	5,623	1,373	651	2,024	551
Midland	133	93,074	43,953	23.9	74,737	19,067	8,575	27,642	588
North Western	117	64,881	34,221	18.6	57,962	14,412	7,547	21,959	590
Total England and Northern Ireland	922	337,641	172,828	94.0	272,952	67,911	33,983	101,894	633
Wales	40	9,523	3,410	1.9	6,248	1,555	538	2,093	546
Scotland	62	15,838	7,637	4.2	13,283	3,079	1,336	4,415	575
United Kingdom	1,024	363,002	183,875	100.0	292,483	72,545	35,857	108,402	629

(a) Administrative, technical and clerical employees.

(7387)

ELECTRICAL ENGINEERING (GENERAL)

Analysis according to specialisation within the trade, 1951

Larger establishments in the United Kingdom

TABLE 6

	Establishments	Gross output	Sales of characteristic products	Net output	Persons employed	Remuneration			Net output per person employed
						Operatives	Other employees (a)	Total	
	No.	£'000	£'000	£'000	No.	£'000	£'000	£'000	£
Specialist producers of									
Electrical machinery	298	195,091	127,699	97,312	154,269	39,228	20,175	59,403	631
Electric equipment for motor vehicles, cycles and aircraft	50	34,732	16,001	15,938	25,534	6,654	2,174	8,828	624
Electric cooking and heating apparatus	74	16,266	12,416	6,563	12,587	3,095	1,095	4,190	521
Establishments specialising in electrical contract and other work	168	7,133	6,351(b)	4,703	8,696	1,841	1,070	2,911	541
Remainder of the trade	434	109,780		59,359	91,397	21,728	11,342	33,070	649
Total	1,024	363,002		183,875	292,483	72,545	35,857	108,402	629

(a) Administrative, technical and clerical employees.

(b) Amount charged.

TABLE 7 - Total make of intermediate products: Larger establishments

Owing to the risk of disclosure of information relating to individual firms this information cannot be given.

Sales of the principal products of the trade, including sales of these products by establishments classified to other trades

Larger establishments

TABLE 8

Kind of output	United Kingdom 1951			Great Britain 1948			
	Quantity		Value	Entries	Quantity		Value
	No.	Th.kVA	£'000	No.	No.	Th.kVA	£'000
Electrical machinery							
Generators							
Alternating current							
Not over 250 kVA	{ (i) 16,469 (ii) 1,070	{ 397.2 ..	{ 2,808 220	{ 34	{ (i) 5,947 (ii) 451	{ 898.5 ..	{ 2,996 197
	{ .. (ii) ..	{	{ 414 116	{ 24			
251 - 10,000 kVA	{ (i) 632 (ii) 23	{ 1,198.9 ..	{ 1,968 84	{ 14	{ .. (ii) ..	{	{ 64 110
10,001 - 30,000 kVA	{ (i) 43 (ii) ..	{ 708.8 ..	{ 1,661 157	{ 7	{ 31	{ 690.6	{ 1,246
Over 30,000 kVA	{ (i) 45 (ii) ..	{ 2,401.7 ..	{ 4,223 329	{ 5	{ 18	{ 798.3	{ 1,112
				{ 5	{ ..	{ ..	{ 69

(7387)

TABLE 8 (contd.)

Kind of output { (i) Complete machines (ii) Parts	United Kingdom 1951			Great Britain 1948			
	Quantity		Value	Entries	Quantity		Value
	No.	Th.kW	£'000	No.	No.	Th.kW	£'000
Electrical machinery (contd.)							
Generators (contd.)							
Direct current							
Not over 200 kW	{ (i) 16,179 (ii) 2,756	{ 166.6 ..	{ 1,709 372	{ 38 30	{ 12,665 832	{ 279.1 ..	{ 1,774 152
Over 200 kW	{ (i) 241 (ii) 1	{ 117.4 ..	{ 570 1	{ 11 12	{	{	{ 470 156
Unclassified	{ (i) - (ii) -	{ - -	{ - -	{ - -	{ 49 ..	{	{ 56 67
Motors		Th.h.p.			Th.h.p.		
Railway, tramway and trolley bus	{ (i) 1,780 (ii) ..	{ 291.6 ..	{ 1,909 380	{ 6 6	{ 2,208 ..	{ 302.2 ..	{ 1,554 416
Other traction	{ (i) 4,674 (ii) ..	{ 13.7 ..	{ 229 186	{ 7 6	{ 2,574 173	{ 19.1 ..	{ 273 6 56 6
Fractional horse-power (i.e., under 1 horse-power), sold separately							
Alternating current							
Not over one-third h.p.	{ (i) 1,620,564 (ii) 102,971	{ 254.8 ..	{ 5,840 322	{ 61 32	{ 740,178 25,872	{ 162.7 ..	{ 3,738 100 121
Over one-third but under 1 h.p.	{ (i) 260,957 (ii) 9,965	{ 160.5 ..	{ 1,901 55	{ 50 34	{ 281,398 10,470	{ 150.1 ..	{ 2,075 91 82
Direct current and universal (A.C. or D.C.)							
Not over one-third h.p.	{ (i) 484,981 (ii) 3,948	{ 52.6 ..	{ 1,638 13	{ 46 27	{ 333,287 51,067	{ 20.5 ..	{ 863 137 32
Over one-third but under 1 h.p.	{ (i) 19,675 (ii) ..	{ 11.9 ..	{ 367 38	{ 36 25	{ 20,734 458	{ 12.8 ..	{ 269 14 15
Motors of 1 h.p. and over, other than traction							
Alternating current							
1 - 50 h.p.	{ (i) 492,448 (ii) 11,942	{ 2,422.6 ..	{ 13,044 326	{ 57 39	{ 464,464 34,141	{ 2,561.0 ..	{ 11,407 937 478
51 - 250 h.p.	{ (i) 9,750 (ii) 277	{ 846.0 ..	{ 3,816 108	{ 25 20	{ 7,437 88	{ 709.1 ..	{ 1,973 22 91
251 - 1,000 h.p.	{ (i) 751 (ii) 24	{ 292.1 ..	{ 1,182 38	{ 13 14	{ 640 ..	{ 297.9 ..	{ 747 34
Over 1,000 h.p.	{ (i) 115 (ii) 2	{ 213.8 ..	{ 641 11	{ 9 9	{ 87 ..	{ 169.3 ..	{ 412 24
Direct current							
1 - 50 h.p.	{ (i) 35,411 (ii) 795	{ 286.4 ..	{ 2,893 65	{ 41 37	{ 28,669 4,834	{ 208.5 ..	{ 2,000 534 232
51 - 250 h.p.	{ (i) 2,493 (ii) 76	{ 151.8 ..	{ 890 27	{ 18 18	{ 934 249	{ 100.0 ..	{ 452 173 50

(7387)

TABLE 8 (contd.)

Kind of output { (i) Complete machines (ii) Parts	United Kingdom 1951				Great Britain 1948		
	Quantity		Value	Entries	Quantity		Value
	No.	Th.h.p.	£'000	No.	No.	Th.h.p.	£'000
Electrical machinery (contd.)							
Motors (contd.)							
Motors of 1 h.p. and over, other than traction (contd.)							
Direct current (contd.)							
251 - 1,000 h.p.	{ (i) 99 (ii) 4	{ 43.9 ..	{ 328 13	{ 8 8	{ 90 2	{ 90.3 ..	{ 367 3
Over 1,000 h.p.	{ (i) 47 (ii) ..	{ 125.9 ..	{ 846 19	{	{	{	{ 71 ..
Unclassified	{ (i) - (ii) -	{ - -	{ - -	{ - -	{	{	{ 501 35
Converting machinery	{ (i) 12,658 (ii) 3,195	{ 158.8 ..	{ 1,030 79	{ 15 11	{ 5,672 2,549	{ 86.0 ..	{ 319 47 21 60
Rectifiers, static							
Mercury vapour (glass bulb and steel tank)	{ (i) 2,323 (ii) ..	{ 376.4 ..	{ 1,478 1,348	{ 13 8	{ 1,539 ..	{ 116.4 ..	{ 703 146 (a)
Metal	{ (i) 14,740 (ii) 6,423	{ 13.8 ..	{ 323 51	{ 10 ..	{ 18,717 7,027	{ 16.5 ..	{ 443 59 724 (a)
Other	{ (i) 176 (ii) 5	{ 0.3 ..	{ 1 2	{	{ 784 6,071	{ 1.2 ..	{ 18 72 32 138(b)
Transformers for lighting, heating and power (c)		Th.kVA			Th.kVA		
Not over 5 kVA	{ (i) 118,032 (ii) 187,091	{ 54.2 ..	{ 526 322	{ 61 15	{ 90,427 31,433	{ 3,442.0 ..	{ 5,431 355 171
Over 5 - 800 kVA	{ (i) 23,179 (ii) 1,098	{ 3,294.2 ..	{ 6,781 318	{ 48 21	{	{	{
Over 800 - 5,000 kVA	{ (i) 1,574 (ii) 101	{ 2,465.5 ..	{ 3,617 232	{ 23 16	{ 1,230 8	{ 2,051.7 ..	{ 2,274 11 51
Over 5,000 - 30,000 kVA	{ (i) 395 (ii) 1	{ 4,799.5 ..	{ 4,495 8	{ 17 12	{ 210 6	{ 2,463.8 ..	{ 1,874 58 38
Over 30,000 kVA	{ (i) 79 (ii) ..	{ 3,963.6 ..	{ 2,512 55	{ 10 8	{ 24 ..	{ 1,126.2 ..	{ 435 14
Current limiting reactors	{ (i) 353 (ii) ..	{ 296 5	{ 9 ..	{ 197 ..	{	{	{ 121 2
Capacitors for power factor improvement	{ (i) 1,283 (ii) ..	{ 1,487 16	{ 17 5	{ 17 5	{ 675 ..	{	{ 1,095 4
Starting and controlling gear for electric motors	{ (i) .. (ii) ..	{ 14,692 963	{ 78 47	{	{	{	{ 11,739 851
Switchgear and switchboards (other than telegraph and telephone)							
Not exceeding 660 volts	{ (i) .. (ii) ..	{ 10,530 852	{ 122 58	{	{	{	{ 8,199 384
Over 660 volts and not exceeding 15,000 volts or 350 mVA	{ (i) .. (ii) ..	{ 11,683 616	{ 34 28	{	{	{	{ 9,059 149
Over 15,000 volts or 350 mVA	{ (i) .. (ii) ..	{ 10,446 382	{ 16 12	{	{	{	{ 4,275 129

(7387)

TABLE 8 (contd.)

Kind of output { (i) Complete machines (ii) Parts	United Kingdom 1951			Great Britain 1948	
	Quantity	Value £'000	Entries No.	Quantity	Value £'000
Electrical machinery (contd.)					
buses and fuse gear	{ (i) (ii)	{ f,950 676	{ 64 34	{	{ 6,049 358
Petrol-diesel electric generating sets (d)	{ (i) { No. of sets 8 2.9 3,058 .. (ii) { .. 1.1	{ 33 1,277 271 1,060 69	{ 21 6	{	{ 962(e)
Other electrical machinery, new	{ (i) { No. 3,077 (ii) {	{ 992 1,091 248	{ 39 20	{	{ 810 137
Electrical machinery, reconditioned	{ (i) .. (ii) ..	{ 1,290 47	{ 49 10	{	{ 649(d)
Electrical machinery, unclassified	(ii) ..	914	20	-	-
Total electrical machinery		144,888	..		97,378(f)
Miscellaneous electrical goods and apparatus					
Cable jointing materials and accessories (other than tape, cloth and other insulating materials)	..	1,617	26	..	892
Capacitors (other than for power factor improvement)	Thous.			Thous.	
Fixed	173,958	5,651	26	55,003	2,862
Variable, including drives and couplings and parts of capacitors	..	1,038	10	..	14
Carbons (electric)	Mill.			Mill.	
Lighting carbons; carbon and graphite electrodes; and parts of carbons (g)	{ 36.6 ..	{ 1,063 1,424	{ 9	{ 474.3	{ 2,445(h) 1,008
Other electric carbons	{ 613.0 ..	{ 2,382 368	{ 11	{ ..	{ ..
Coils, ignition, and parts	..	3,030	19	..	631
Cooking apparatus and appliances, electric	Thous.			Thous.	
Domestic cookers, complete					
Under 3 kW	121	1,751	14	99	434
3 kW and over	224	4,495	11	213	4,119
Industrial cookers, complete	3	274	7	5	240
Parts and accessories of cookers	..	1,832	35	..	1,382
Kettles	564	1,026	24	499	838
Other electric cooking appliances and parts	..	2,198	58	..	1,473
Dynamo lighting sets for cycles	{ Th.sets 1,460 ..	{ 1,338 351	{ 12	{ 1,102	{ 1,043(d)
Electric equipment for motor vehicles, not elsewhere specified	..	17,430	64	..	14,931

TABLE 8 (contd.)

	United Kingdom 1951			Great Britain 1948	
	Quantity	Value £'000	Entries No.	Quantity	Value £'000
Miscellaneous electrical goods and apparatus (contd.)	Thous.			Thous.	£'000
Electricity meters					
Complete					
House service meters					
Pre-payment type	{ 25 ..	{ 165 178	{ 11	{ 102	{ 599
Other types	1,323	3,459	18	1,549	4,557
Other integrating meters	191	942	7	79	437
Parts	..	733	29	..	409
Electro-medical apparatus (other than vacuum tubes, X-ray apparatus, and hearing aids with valve amplification)					
Complete	..	628	33	16.1	391(i)
Parts (j)	..	200	10	..	630
Fans, electric or power driven					
Complete					
Desk	162	678	12	118	645
Ceiling	57	565	5	..	..
Other	{ 128 ..	{ 1,536 509	{ 18	{ 121 ..	{ 832 405
Parts	..	135	17	..	(a)
Flashlight cases, arc lamps, etc.					
Flashlight cases of all types and descriptions (exclusive of bulbs and batteries)					
Complete, adapted for use on cycles	{ 4,405 ..	{ 334 125	{ 12	{ 4,453 ..	{ 301 106
Other complete flashlight cases, and parts	..	610	9	..	547
Arc lamps, electric searchlights and projection lamps, including parts	..	289	9	..	349(k)
Other lamps with or without bulbs					
Complete	{ 854 ..	{ 846 4,632	{ 39	{ 2,912 ..	{ 1,949(1) 391
Parts	..	1,381	10	..	339
Heating apparatus, electric, not elsewhere specified					
Complete					
Domestic					
Portable electric fires	624	1,427	52	260	543
Water heaters, including immersion heaters	407	2,052	37	266	1,349
Other domestic heating apparatus	164	602	30	..	46
Other	{ 277 ..	{ 947 477	{ 57	{ 326 ..	{ 298 266
Parts and accessories	..	1,747	68	..	568
Insulating materials, sold separately	Th.cwts.			Th.cwts.	
Of mica	{ 24.4 ..	{ 1,877 215	{ 25	{ 2.8 ..	{ 350 592
Of built-up mica ('Micanite')	23.2	1,473	21	11.0	655
				..	106

TABLE 8 (contd.)

	United Kingdom 1951			Great Britain 1948	
	Quantity	Value	Entries	Quantity	Value
	Mill.lin. ft.	£'000	No.	Mill.lin. ft.	£'000
Miscellaneous electrical goods and apparatus (contd.)					
Insulating materials, sold separately (contd.)					
Sleeving, other than rubber	107.5	302	12	92.0	332
	..	212			
Other electrical insulating materials, including complete insulators (m)	..	1,629	26	..	1,330
Unclassified electrical insulating materials	-	-	-	Th.cwts. 1.3	62
				..	18
Irons, electric	1,942	2,351	41	Thous. 1,247	1,331
Joint boxes	..	1,850	32	..	275
Magnetos, ignition					2,254
For motor vehicles, including motor cycles and three-wheelers	180	487	8	107	781
	..	1,232			
Other	176	1,200	6	32	589
Magnets, permanent	26,231	2,184	18	12,959	1,006
	..	363			
Measuring instruments, commercial					
Indicating, complete					
For motor vehicles	30	62	..	57	54
Other than for motor vehicles					
Not exceeding 3½ inch scale length	484	1,338	26	562	1,106
Over 3½ inch scale length	206	1,899	31	170	1,170
Other descriptions, complete	27	302	35	37	390
	..	217			
Parts, excluding valves	..	501	21	..	218
Overhead transmission line fittings	..	1,271	16	..	821
Permanent hair-waving apparatus	..	214	8	..	292
Portable (mechanical) appliances, electrically operated, not elsewhere specified					
Complete					
Vacuum cleaners and floor polishers	1,244	12,374	23	718	6,541(n)
Hair clippers and dry shavers	459	1,178	8	130	356
Other	..	1,602	29	114	938
Parts	..	1,616	34	..	63
					1,287
Scientific instruments, electrical					
Pyrometers	7.7	467	9	8.4	208
				..	176
Other, not elsewhere specified (o)	5.7	240	41	275.1	130
	..	2,097			
Time switches	..	1,006	19	..	1,374
Transformers (other than for lighting, heating and power)					
Instrument	142	557	43	140	506
	..	92			
Other (p)	1,540	1,879	51	284	602(q)
				..	566
X-ray apparatus, including parts (other than tubes and valves) (r)	..	2,002	26	..	1,533

(7387)

TABLE 8 (contd.)

	United Kingdom 1951			Great Britain 1948	
	Quantity	Value	Entries	Quantity	Value
	Thous.	£'000	No.	Thous.	£'000
Miscellaneous electrical goods and apparatus (contd.)					
Electrical equipment for aircraft not elsewhere specified (d)	..	2,210	18	..	774
Ground mica sold as such (so far as recorded separately) and waste products, other than scrap metals	..	227	120	..	146
Washing machines for domestic use, electrically driven					
Complete	636	13,295	20	155	3,480
Parts	..	791	12	..	150
Remote control equipment (electrical), other than electronic control equipment (d)	..	1,660	14	..	9,986
Battery chargers (metal and valve rectifiers) (d)	23	347	8		
	..	50			
Electro-plating plant and machinery, complete and parts (d)	..	838	..		
Other electrical goods	..	11,661	215		
Total miscellaneous electrical goods and apparatus, insulating materials, etc.		149,834	..		94,384(f)
Electrical contract and other work carried out in the United Kingdom (1951) or Great Britain (1948) (s)					
Electrical contract work done as main contractors					
Installation and erection of generating plant and appliances		11,213	32		6,943
Other electrical contract work (t)		2,202	79		1,133
Electrical contract work done as sub- contractors					
Work on buildings		110	16		101
Other contract work		694	43		143
Unclassified		-	-		702
Other work for which payment was receivable					
Repair and maintenance work		7,537	284		6,334
Research and development work		4,396	35		1,545(d)
Other work, including work done for the trade		2,145	112		1,840
Total contract and other work		28,296	..		18,742
Less estimated value of goods made by firms and separately recorded as sold, which were used in this work		10,735	..		6,119

(7387)

TABLE 8 (contd.)

	United Kingdom 1951			Great Britain 1948	
	Quantity	Value	Entries	Quantity	Value
Electrical contract and other work carried out in the United Kingdom (1951) or Great Britain (1948) (e) (contd.)		£'000	No.		£'000
Total contract and other work exclusive of the value of goods made by firms and used in the work		17,562	..		12,624
Total principal products of this trade		312,284	..		204,386(f)
Sales in other trades (see Table 8)		34,116	..		25,471(f)
Principal products of this trade sold by establishments in the trade		278,168	812		178,915(f)

- (a) Not recorded separately.
 (b) Including parts of rectifiers static, mercury vapour and metal.
 (c) Power transformers only in 1948.
 (d) So far as recorded separately.
 (e) Including steam driven electric generating sets.
 (f) Corrected figure.
 (g) Excluding welding electrodes, other than carbon and graphite, for which see the Machine Tools Trade (Volume 4, Trade C).
 (h) Excluding graphite electrodes, carbon electrodes for welding and parts of carbons.
 (i) May include hearing aids with valve amplification, complete and parts.
 (j) Including parts of hearing aids with valve amplification.
 (k) Excluding projection lamps.
 (l) Including projection lamps.
 (m) Except of ceramics, for which see the China and Earthenware Trade (Volume 1, Trade G), cloth and tape, and rubber sleeving, for which see the Rubber Trade (Volume 11, Trade A), and of synthetic resins, for which see the Plastic Goods and Fancy Articles Trade (Volume 11, Trade I). The 1948 figure excludes complete insulators.
 (n) Vacuum cleaners only.
 (o) Excluding thermostats in 1951, for which see the Scientific, Surgical and Photographic Instruments, etc. Trades (Volume 5, Trade H).
 (p) Excluding any transformers recorded as parts of radio apparatus, for which see the Radio and Telecommunications Trade (Volume 4, Trade M).
 (q) May include some transformers for lighting and heating.
 (r) Including X-ray tubes and X-ray rectifying valves (value £176,000) in 1948. These items are included in the Radio and Telecommunications Trade (Volume 4, Trade M) for 1951.
 (s) The values (amounts charged) shown for the different classes of work done are inclusive of all goods or materials used. The goods made and so used are included as output against the appropriate headings in Tables 8 and 10 for each year.
 (t) Excluding work on electric power and lighting lines and works, for which see the Electric Wires and Cables Trade (Volume 4, Trade L), and on telegraph and telephone lines and works and on the installation of radio, telegraph, and telephone apparatus and appliances, for which see the Radio and Telecommunications Trade (Volume 4, Trade M).

Sales of principal products of the trade by establishments
 classified to other trades
 Larger establishments

TABLE 9

Kind of output { (i) Complete machines (ii) Parts	United Kingdom 1951			Great Britain 1948	
	Quantity	Value	Entries	Quantity	Value
Electrical machinery	No.	£'000	No.	No.	£'000
Generators					
Alternating current not exceeding 30,000 kVA and direct current	{ (i) 644 (ii) ..	{ 708 147	{ 7 5	{ 826 ..	{ 344 29
Motors					
Railway, tramway, trolley bus and other traction (i) and (ii)	-	-	-	..	59

(7387)

TABLE 9 (contd.)

Kind of output { (i) Complete machines (ii) Parts	United Kingdom 1951			Great Britain 1948	
	Quantity	Value	Entries	Quantity	Value
Electrical machinery (contd.)	No.	£'000	No.	No.	£'000
Motors (contd.)					
Fractional horse-power (i.e., under 1 horse-power), sold separately					
Alternating current					
Not over one-third h.p. (i) and (ii)	..	1,002	9		
Over one-third but under 1 h.p. { (i) 14,861 (ii) 9,965	No. 8.1 ..	151 55 5	6 ..	{ (i) 45,092 (ii) ..	236 1
Direct current and universal (A.C. or D.C.) (i) and (ii)	..	296	5		
Motors of 1 h.p. and over, other than traction					
Alternating current { (i) 8,809 (ii) 14	118.8 ..	361 6 26	6 ..	3,302	189 11
Direct current, 1 - 1,000 h.p. (i) and (ii)	..	495	..	{ (i) 1,320 (ii) ..	156(a) 36
Other than traction, A.C. and D.C., unclassified	-	-	-	{ (i) .. (ii) ..	425 21
Converting machinery; rectifiers, static, mercury vapour (glass bulb and steel tank) and metal; and transformers for lighting, heating and power not over 30,000 kVA (i) and (ii)	..	1,890	13	..	1,137
Capacitors for power factor improvement { (i) 655 (ii) ..	Thous. ..	816 8	7 ..	Thous. 188	693 2
Starting and controlling gear for electric motors { (i) .. (ii) ..	..	634 26	10 ..	..	264 -
Switchgear and switchboards (other than telegraph and telephone) not exceeding 15,000 volts or 350 mVA (i) and (ii)	..	744	20	{ (i) .. (ii) ..	1,067 22
Fuses and fuse gear { (i) .. (ii) ..	..	674 411	6 8	..	937 32
Petrol - diesel electric generating sets { (i) 8 (ii) 985	No. of sets 2.9 ..	33 452 956 59	8 ..	..	542
Other electrical machinery, new { (i) 126 (ii) ..	No. ..	46 31 17	7 ..	No. ..	44 8
Electrical machinery, reconditioned (i)	..	284	10	..	33
Electric machinery, unclassified (ii)	..	53	9	-	-
Total electrical machinery		10,480	..		6,358
Miscellaneous electrical goods and apparatus					
Cable jointing materials and accessories (other than tape, cloth and other insulating materials)	..	1,171	14	..	685
Capacitors (other than for power factor improvement), fixed and variable, including drives and couplings	..	1,238	10	..	283(b)

(7387)

TABLE 9 (contd.)

	United Kingdom 1951			Great Britain 1948	
	Quantity	Value £'000	Entries No.	Quantity	Value £'000
Miscellaneous electrical goods and apparatus (contd.)					
Carbons (electric), complete (other than lighting, and carbon and graphite electrodes); and coils, ignition, complete and parts	..	124	5	..	224(c)
Cooking apparatus and appliances, electric					
Domestic cookers, complete	-	-	-	..	295
Industrial cookers, complete; and parts and accessories of cookers	..	15	6	..	157
Kettles; and other electric cooking appliances and parts	..	111	12	..	157
Dynamo lighting sets for cycles	Th.sets 411	425	7	Th.sets 258	292
Electric equipment for motor vehicles, not elsewhere specified	..	1,527	51	..	384
Electricity meters					
House-service, complete; and parts of all electricity meters	..	429	6	..	434
Other integrating meters, complete	-	-	-	2	12
Electro-medical apparatus and parts (other than vacuum tubes, X-ray apparatus and hearing aids with valve amplification)	Thous. ..	450	20	Thous. 0.4	39
Fans, electric or power driven					
Complete, other than ceiling	5	29	7	10	17
Parts	..	9	..	..	89
Flashlight cases, arc lamps, etc.					
Flashlight cases of all types and descriptions (exclusive of bulbs and batteries)					
Complete, adapted for use on cycles	3,686	258	..	3,065	179
Other complete flashlight cases and parts; and arc lamps, electric searchlights and projection lamps, including parts	..	7	..	..	2
Other lamps, with or without bulbs, and parts	..	509	7	..	536
Heating apparatus, electric, not elsewhere specified	..	791	19	..	994
Complete					
Domestic					
Portable electric fires	45	115	18	36	37
Water heaters, including immersion heaters	65	128	7	1	14
Other, including other domestic heating apparatus	51	119	10	5	26
Parts and accessories	..	98	..	..	216
Insulating materials, sold separately	Th.cwts. 3.7	30	5	..	208
Of mica; and built-up mica ('Micanite')	..	215	..	..	..
Sleeving, other than rubber	Mill.lin.ft. 35.2	70	7	..	565 (d)
	..	154	..	..	..

(7387)

TABLE 9 (contd.)

	United Kingdom 1951			Great Britain 1948	
	Quantity	Value £'000	Entries No.	Quantity	Value £'000
Miscellaneous, electrical goods and apparatus (contd.)					
Insulating materials, sold separately (contd.)					
Other electrical insulating materials, including complete insulators	..	210	7	..	(d)
Irons, electric	Thous. 152	150	11	Thous. 152	170
Joint boxes	..	1,486	16	..	165
Magnetos, ignition, other than for motor vehicles	..	1,486	16	..	2,025
Magnets, permanent	17,748	1,251	12	6,520	482
Measuring instruments, commercial, complete and parts (excluding valves), other than complete indicating instruments for motor vehicles	..	269	..	..	331
Overhead transmission line fittings	..	178	11	..	98
Portable (mechanical) appliances, electrically operated, not elsewhere specified	..	536	7	..	424
Complete					
Vacuum cleaners and floor polishers; and hair clippers and dry shavers	270	1,887	8	90	813
Other	..	92	5	..	205
Parts	..	113	14	..	93
Scientific instruments, electrical	1.7	173	13	7.1	83
Time switches	..	306	..	..	825
Transformers (other than for lighting, heating and power)	..	49	..	..	136
X-ray apparatus, including parts (other than tubes and valves)	18	87	8	104	31
Electrical equipment for aircraft, not elsewhere specified	..	1	..	..	18
Washing machines for domestic use, electrically driven, complete and parts	..	166	10	..	290
Remote control equipment (electrical) other than electronic control equipment	..	1,660	8	..	105
Permanent hair-waving apparatus; battery chargers (metal and valve rectifiers) electro-plating plant and machinery, complete and parts; and other electrical goods	..	1,299	15	..	2,611
	..	447	..	..	..
Total miscellaneous electrical goods and apparatus, insulating materials, etc.	..	3,155	97	..	2,848
Electrical contract and other work carried out in the United Kingdom (1951) or Great Britain (1948) (e)					
Electrical contract work done as main contractors					
Installation and erection of generating plant and appliances	..	22,085	..	..	17,718
Other electrical contract work	466	..	..	390	..
Electrical contract work done as sub-contractors	548	20	..	64	..
	283	11	..	702	..

(7387)

TABLE 9 (contd.)

	United Kingdom 1951		Great Britain 1948	
	Quantity	Value	Quantity	Value
Electrical contract and other work carried out in the United Kingdom (1951) or Great Britain (1948) (e) (contd.)		£'000	No.	£'000
Other work for which payment was receivable				
Repair and maintenance work		223	12	70
Research and development work		-	-	1
Other work, including work done for the trade		762	29	747
Total contract and other work		2,282	..	1,974
Less estimated value of goods made by firms and separately recorded as sold, which were used in the work		731	..	580
Total contract and other work exclusive of the value of goods made by firms and used in the work		1,551	..	1,394
Total		34,116	..	25,471

(a) Motors, direct current, of 1 - 5,000 h.p.

(b) Including parts.

(c) All electric carbons (other than carbon electrodes for welding), and ignition apparatus (other than sparking plugs) and parts for motor vehicles and cycles.

(d) The figure shown for mica, built-up mica and sleeving includes complete insulators and other electrical insulating materials.

(e) The values shown for the different classes of work done are inclusive of all goods or materials used. The goods made and so used are included as output for each year.

Sales in the trade of other than principal products

Larger establishments

TABLE 10

	United Kingdom 1951	Great Britain 1948
	Value	Value
	£'000	£'000
Electric lamps	3,072	2,629
Telegraph and telephone apparatus and parts	1,080	412
Valves, electronic, other than X-ray valves, sold separately	431	
Radio communication and navigational aids (including radar equipment), complete	1,797	4,491
Other radio, telecommunication and electronic apparatus and parts	3,625	
Electric lighting accessories and fittings	5,232	3,897
Electric bell apparatus	307	
Portable power tools	27	222
Steam turbines and parts	6,716	4,166
Welding machinery, electrical	1,298	780
Welding electrodes	490	362
Mechanical handling equipment	826	
Prime movers	1,327	9,768
Other machinery and plant	11,866	
Scientific, surgical and photographic instruments, etc.	955	771
Insulating materials of synthetic resins and cloth and tape	1,801	1,177
Iron and steel castings	1,569	857
Other manufactures of iron and steel	483	293
Other manufactures of non-ferrous metals	2,256	1,099
Other tools and implements	714	247

(7387)

TABLE 10 (contd.)

	United Kingdom 1951	Great Britain 1948
	Value	Value
	£'000	£'000
Scrap metals sold		
Iron and steel	583	228
Copper	895	234
Brass	885	232
Other	270	602
Naval, military and air force stores, etc.	912	338
Other goods	15,360	10,350
Work done (a)	2,072	319
Total	66,849	43,474

(a) Amount charged.

Production, exports and imports of certain principal products (a)

TABLE 11

		Production (b)(c)	Exports (d)	Retained imports (e)
		£'000	£'000	£'000
Electrical machinery				
Generators				
Complete (including generating sets)	{ 1951 1948	14,030(f) 8,067(f)	10,735 5,740	167 500
Parts	{ 1951 1948	940(f) 455(f)	3,749 1,989	361 103
Total generators and parts	{ 1951 1948 1937	14,970(f) 8,521(f) 2,508	14,485 7,730 1,135	528 603 80
Motors				
Railway, tramway and trolley bus				
Complete	{ 1951 1948 1937	1,909 1,554 834	93 156	4
Parts	1937	46	134	6
Fractional horse-power (i.e., under 1 horse-power), sold or consigned separately				
Complete	{ 1951 1948	7,813 4,838	1,704 1,049	86 59
Not over one-third h.p.	{ 1951 1948	2,324 2,450	736 648	20 54
Over one-third but under 1 h.p.	{ 1951 1948	7,813 4,838	1,704 1,049	86 59
Total fractional horse-power motors				
Complete	{ 1951 1948 1937	10,137 7,287 969	2,440 1,696	106 114
Parts	1937	59	131	198
Other motors of 1 h.p. and over 1 - 250 h.p.				
Complete	{ 1951 1948 1937	21,584 17,832 5,177	5,375 4,686	85 126
Parts	1937	238	1,040	153

(7387)

TABLE 11 (contd.)

		Production (b) (c)	Exports (d)	Retained imports (e)
		£'000	£'000	£'000
Electrical machinery (contd.)				
Motors (contd.)				
Other motors of 1 h.p. and over (contd.)				
Over 250 h.p.				
Complete	{ 1951	3,059	934	11
	{ 1948	1,530	602	10
	{ 1937	879	196	2
Parts	1937	43		
Parts of motors of all types	{ 1951	2,215	972	161
	{ 1948	1,687	647	95
Total motors and parts	{ 1951	38,906	9,814	368
	{ 1948	30,391(g)	7,787	344
	{ 1937	8,245	1,501	359
Converting machinery and parts	{ 1951	1,171	211	61(h)
	{ 1948	448	102	-
	{ 1937	243	96	12
Transformers for lighting, heating and power, and parts	{ 1951	19,351	8,587(i)	(j)
	{ 1948	10,712(k)	3,906(i)	32(i)
	{ 1937	3,805(k)	723(k)	50(k)
Starting and controlling gear for electric motors, and parts	{ 1951	15,655	2,110	-
	{ 1948	12,590	1,728	12
	{ 1937	3,939	454	23
Switchgear and switchboards (other than telegraph and telephone)	{ 1951	34,509	12,395	172
	{ 1948	22,195	6,789	47
	{ 1937	8,631	1,584(l)	82(l)
Miscellaneous electrical goods and apparatus				
Cooking apparatus and appliances				
Cookers, complete	1951	6,520	1,625	..
Kettles	1951	1,026	195	..
Other cooking appliances, and parts and accessories of cooking apparatus and appliances	1951	4,030	1,034	..
Total cooking apparatus and appliances, electric, and parts	{ 1951	11,576	2,854	48(m)
	{ 1948	8,523	1,772(m)	15(m)
Heating apparatus, not elsewhere specified				
Water heaters, including immersion heaters	1951	2,052	287	..
Other, complete	{ 1951	3,453	633	66(n)
	{ 1948	3,473	866(n)	36(n)
Parts and accessories	{ 1951	1,747	463	57(o)
	{ 1948	1,515	412(o)	45(o)
Total cooking and heating apparatus and appliances, electric	{ 1951	18,828	4,237	171
	{ 1948	13,511	3,050	96
	{ 1937	4,432	341	171
Dynamo lighting sets for cycles	{ 1951	Th. sets 1,843(p)	Th. sets 1,074	Th. sets 3
	{ 1948	1,102	474	24
Electricity meters; and commercial electrical measuring instruments				
House service meters				
Complete				
		£'000	£'000	£'000
Pre-payment type	{ 1951	343	57	21(q)
	{ 1948	599	29	
	{ 1937	1,380	11	34
Other types	{ 1951	3,459	1,319	(q)
	{ 1948	4,557	2,179	6
	{ 1937	1,440	180	5

(7387)

TABLE 11 (contd.)

		Production (b) (c)	Exports (d)	Retained imports (e)
		£'000	£'000	£'000
Miscellaneous electrical goods and apparatus (contd.)				
Electricity meters; and commercial electrical measuring instruments (contd.)				
Other integrating meters; parts of electricity meters; and measuring instruments, commercial (other than indicating instruments for motor vehicles), and parts thereof	{ 1951	5,931	1,606	193
	{ 1948	3,903	1,093	98
	{ 1937	1,426	188	188
Electro-medical apparatus (other than X-ray tubes, X-ray valves and vacuum tubes)				
X-ray apparatus, including parts	{ 1951	2,002	895	117
	{ 1948	1,357	584	200
Other	{ 1951	828(r)	559	98
	{ 1948	1,021	346	86
Total electro-medical apparatus, other than X-ray tubes, etc.	{ 1951	2,830(r)	1,237	215
	{ 1948	2,378	931	286
	{ 1937	326	36	123
Fans, electric or power driven				
Complete				
Desk	1951	162	92	..
Ceiling	1951	57	57	..
Total desk and ceiling fans	{ 1951	218	149	..
	{ 1948	118	96	..
Other	1951	171(p)	52	..
Parts	1951	£'000 135	£'000 169	£'000 ..
Flashlight cases, of all types and descriptions, adapted for use on cycles, complete	1951	458	109(s)	3(s)
Arc lamps, electric searchlights and projection lamps, including parts	{ 1951	289	114(t)	8(t)
	{ 1948	344(t)	60(t)	5(t)
	{ 1937	231(t)	27(t)	20(t)
Insulating materials, sold separately				
Sleeving, other than rubber (u)	{ 1951	515	157	..
	{ 1948	332	186	9
	{ 1937	66	3	18
Irons, electric	{ 1951	2,351	898	..
	{ 1948	1,606	393	..
Magnets, ignition				
For motor vehicles, including motor cycles and three-wheelers	{ 1951	1,719	201	15
	{ 1948	895	121	8
	{ 1937	175	10	69
Other	{ 1951	1,200	164	39
	{ 1948	813	68	25
	{ 1937	363	18	2
Magnets, permanent	{ 1951	2,546	323	2
	{ 1948	1,405	184	1
	{ 1937	525	65	1

(7387)

TABLE 11 (contd.)

		Production (b)(c)	Exports (d)	Retained imports (e)
		Thous.	Thous.	Thous.
Miscellaneous electrical goods and apparatus (contd.)				
Portable (mechanical) appliances, electrically operated, not elsewhere specified				
Complete				
Vacuum cleaners and floor polishers	{ 1951	1,244	521	1(v)
	{ 1948	718(v)	191(v)	3(v)
	{ 1937	512(v)	55(v)	27(v)
Hair clippers and dry shavers	{ 1951	459	148	25
	{ 1948	130	43	-
		£'000	£'000	£'000 ^f
Other	{ 1951	1,602	947	66
	{ 1948	1,001	596	13
Parts	{ 1951	1,616	646	77
	{ 1948	1,287	170	85

- (a) Figures of production (or sales) refer only to larger establishments in the United Kingdom (1951 and 1937) or Great Britain (1948). All recorded exports from and imports into the United Kingdom are given in the table. The figures, therefore, are not strictly comparable.
- (b) Sales in 1951 and 1948, and production for sale in 1937.
- (c) Including production (or sales) by establishments classified to other trades.
- (d) Valued f.o.b.
- (e) Valued c.i.f.
- (f) Excluding petrol-diesel electric generating sets, so far as recorded separately in 1951, and all electric generating sets so far as recorded separately in 1948.
- (g) Including unclassified sales.
- (h) Including transformers for lighting, heating and power, including coils; and rectifiers for power house use.
- (i) Described as 'Transformers for lighting, heating and power, including coils.'
- (j) Included with converting machinery.
- (k) Power transformers and parts only.
- (l) Described as 'Switchgear'.
- (m) Described as 'Cooking apparatus and heating elements therefor'.
- (n) Described as 'Heating apparatus and heating elements therefor'.
- (o) Including parts and accessories for cooking apparatus, but excluding heating elements for cooking and heating apparatus.
- (p) Partly estimated.
- (q) The figure shown for pre-payment type meters includes other types of house service meters.
- (r) Excluding hearing aids with valve amplification, complete.
- (s) Described as 'Electric lamps adapted for use on cycles and cases (or bodies) thereof'.
- (t) Arc lamps and electric searchlights, complete, only.
- (u) The oversea trade figures include rubber sleeving.
- (v) Vacuum cleaners only.

Usage of certain specified purchased materials, 1951
Larger establishments in the United Kingdom

TABLE 12

Materials used	Quantity
	Th. tons
Iron	
Pig iron	39.0
Iron castings in the rough	69.5
Non-alloy steel	
Ingots, billets, blooms and slabs	0.8
Angles, shapes and sections	22.4
Girders, joists, beams and pillars (not fabricated)	2.2
Bars and rods	49.5
Hoop and strip (including tape)	27.4
Tin - terne -, and black-plates and sheets	13.4
Electrical sheets	84.5
Other plates and sheets	
1/8 in. thick and over	56.0
Under 1/8 in. thick	55.7
Tubes and fittings	10.0
Wire (single wire)	5.4
Forgings in the rough, other than drop forgings	7.4
Drop forgings	2.6
Castings in the rough	10.9
Alloy steel (including high-speed steel)	
Ingots, billets, blooms and slabs	0.2
Bars, rods, angles, shapes, sections, girders, joists and pillars (not fabricated)	6.8
Plates, sheets and strip	
1/8 in. thick and over	3.2
Under 1/8 in. thick	2.2
Tubes and fittings	1.2
Wire (single wire)	0.7

TABLE 12 (contd.)

Materials used	Quantity
Alloy steel (including high-speed steel) (contd.)	Th.tons
Forgings in the rough, other than drop forgings	2.9
Drop forgings	0.6
Castings in the rough	3.0
Non-ferrous metals in all forms (except finished parts)	Th.cwts.
Aluminium and aluminium alloys	378.6
Brass and other copper alloys, including nickel silver but excluding other nickel alloys	500.8
Copper	940.3
Nickel and nickel alloys, excluding nickel silver	14.3
Tin	7.7
Zinc and alloys of zinc	56.9
Lead compounds	0.2
Timber (other than reclaimed) including that used for packing or packing case manufacture but excluding joinery, other fabricated woodwork and purchased packing cases	Th.cu.ft.
Hardwood	211.8
Softwood	1,135.6
Cotton yarn, thread and cloth	Th.lbs.
Rayon, nylon, etc. yarn, thread and cloth	3,005.3
	133.8

TABLE 13
(i) OperativesEmployment in September
Larger establishments (a)

Number

	United Kingdom			Great Britain		United Kingdom	
	1951(b)	1950(b)	1949(b)	1949(c)	1948(d)	1937(d)	1935(d)
Males							
Under 18	9,231	9,193	8,232	..	8,853	19,274	16,679
All ages	149,663	141,025	136,872	..	134,777	98,544	86,665
Females							
Under 18	3,694	2,774	2,940	..	3,550	9,170	8,824
All ages	69,137	59,576	53,331	..	62,347	37,489	30,956
Total							
Under 18	12,925	11,967	11,172	..	12,403	28,444	25,503
All ages	218,800	200,601	190,203	..	197,124	136,033	117,621

TABLE 13 (contd.)

(ii) Administrative, technical and clerical employees (e)

Number

	United Kingdom			Great Britain		United Kingdom	
	1951	1950	1949	1949(c)	1948	1937	1935
Males							
Under 18	914	1,168	1,000	..	1,062	2,394	1,380
All ages	50,143	46,516	43,603	..	39,249	28,965	22,399
Females							
Under 18	3,538	3,273	2,931	..	3,019	3,547	1,931
All ages	27,083	24,377	23,563	..	22,110	12,323	8,937
Total							
Under 18	4,452	4,441	3,931	..	4,081	5,941	3,311
All ages	77,226(f)	70,893(f)	67,166(f)	..	61,359(f)	41,288	31,336

(iii) Total employees

Number

	United Kingdom			Great Britain		United Kingdom	
	1951	1950	1949	1949(c)	1948	1937	1935
Males							
Under 18	10,145	10,361	9,232	..	9,915	21,668	18,059
All ages	199,806	187,541	180,475	..	174,026	127,509	109,064
Females							
Under 18	7,232	6,047	5,871	..	6,569	12,717	10,755
All ages	96,220	83,953	76,894	..	84,457	49,812	39,893
Total							
Under 18	17,377	16,408	15,103	..	16,484	34,385	28,814
All ages	296,026(f)	271,494(f)	257,369(f)	..	258,483(f)	177,321	148,957

(a) Excluded employees. The following persons were employed at the larger establishments in this trade in 1951 but are not included in the above tables or in any other Census of Production report (e.g., employees in Great Britain engaged, for example, in merchanting and in Northern Ireland canteen and welfare workers):-

Canteen workers 184 Males 2,427 Females
Other workers 755 Males 405 Females

(b) In week ended September 22, 1951, September 30, 1950, and September 24, 1949.

(c) Owing to the risk of disclosure of information relating to individual firms in Northern Ireland separate particulars for Great Britain cannot be given.

(d) Average for the year.

(e) In week ended September 22, 1951, September 30, 1950, September 24, 1949, September 25, 1948, October 16, 1937, and October 12, 1935.

(f) Working proprietors. In addition working proprietors, shown in Table 13 (iv) below, were engaged in this trade in larger establishments. The 1937 and 1935 figures include working proprietors.

(iv) Working proprietors

Number

	United Kingdom			Great Britain	
	1951	1950	1949	1949(c)	1948
Males	66	68	93	..	75
Females	6	3	4	..	3
Total	72	71	97	..	78

Average employment
Larger establishments (a)

	Number						
	United Kingdom			Great Britain		United Kingdom	
	1951	1950	1949	1949(b)	1948	1937	1935
Operatives	216,371(c)	198,209	191,924	..	197,124(c)	136,033	117,621
Administrative, technical and clerical employees	76,040	69,891	66,815	..	61,359(d)	41,288(d)	31,336(d)
Total	292,411	268,100	258,739	..	258,483	177,321	148,957

(a) For employment in small firms (employing on the average ten or fewer persons) that made satisfactory returns see Table 2.

(b) Owing to the risk of disclosure of information relating to individual firms in Northern Ireland separate particulars for Great Britain cannot be given.

(c) Including 3,930 operatives (1951) and 3,280 operatives (1948) in Great Britain employed in outside work of erection, fitting, etc. Similar information is not available for other years or for Northern Ireland in 1951.

(d) In week ended September 25, 1948, October 16, 1937, and October 12, 1935. The 1937 and 1935 figures include working proprietors.

Outworkers. In addition to the employees shown above the firms in this trade employed outworkers whose numbers are shown below.

	United Kingdom			Great Britain		United Kingdom	
	1951	1950	1949	1949	1948	1937	1935
	Males	33	61	99	..	21	..
Females	975	694	483	..	536	..	..
Total	1,008	755	582	..	557	..	..

Shift working, 1951 (a)

Larger establishments in Great Britain

	Total number of man-shifts worked in the week	Total number of shift-hours worked in the week	Number of returns showing the systems stated
Continuous 3 shift systems per 24 hours averaging 8 hours per shift	13,356	106,854	28
Continuous 4 shift systems per 24 hours averaging 6 hours per shift	-	-	-
All 2 shift systems	227,384	2,235,285	48
Other shift systems	61,432	496,902	10
Total	302,172	2,839,041	(b)

(a) Shift working during week ended September 22, 1951.

(b) The number and percentage of returns showing shift working and of operatives on shift-work were as follows:-

	Returns		Operatives		
	Total in trade	Showing shift-work	Total in trade	Total on returns showing shift-work	Number employed on shift-work
Number	..	76	..	109,752	60,144
Percentage of total in trade	100.0	9.0(c)	100.0	51.0(c)	28.0(c)
Percentage of total on returns showing shift-work				100.0	54.8

(c) Rounded to avoid disclosure.

Wages and salaries and employers' National Insurance contributions paid during the year

Larger establishments

	£'000				
	United Kingdom			Great Britain	
	1951	1950	1949	1949(a)	1948
Wages and salaries (b) of					
Operatives	72,545	61,611	57,160	..	55,344
Administrative, technical and clerical employees	35,857	31,018	27,306	..	24,150
Total	108,402	92,629	84,466	..	79,495
Employers' contributions to all National Insurance Schemes	2,791	2,607	2,460	..	2,000

(a) Owing to the risk of disclosure of information relating to individual firms in Northern Ireland separate particulars for Great Britain cannot be given.

(b) Including bonus and commission payments, but excluding payments to outworkers shown below.

£'000				
United Kingdom			Great Britain	
1951	1950	1949	1949	1948
85	31	67	..	48

Plant, machinery and vehicles - acquisitions and disposals, and capital expenditure on new building work

Larger establishments

	£'000			
	United Kingdom		Great Britain	
	1951	1949	1949(a)	1948
Plant, machinery and vehicles				
Acquisitions				
Plant and machinery				
New	6,553	4,969	..	5,167
Second-hand	292	356	..	484
Vehicles				
New	738	437	..	333
Second-hand	250	110	..	107
Total acquisitions	7,833	5,872	..	6,091
Disposals				
Plant and machinery	284	337	..	216
Vehicles	165	110	..	77
Total disposals	449	447	..	293
New building work				
Capital expenditure on new building and other constructional work of a capital nature (excluding site values and development charges)	2,806	1,868	..	2,088

(a) Owing to the risk of disclosure of information relating to individual firms in Northern Ireland separate particulars for Great Britain cannot be given.

ELECTRICAL ENGINEERING (GENERAL) TRADE

1951

Summary

Larger establishments

TABLE 18

	England (a)	Wales	Scotland	Great Britain	Northern Ireland (a)	United Kingdom
	£'000	£'000	£'000	£'000	£'000	£'000
Gross output (production)	337,641	9,523	15,838	..	..	363,002
Cost of materials and fuel used	157,101	5,960	7,858	..	..	170,920
Payment for work done on materials given out	4,483	66	129	..	..	4,678
Transport payments	3,229	87	214	..	..	3,529
Net output	172,828	3,410	7,637	..	..	183,875
Wages and salaries of persons employed	101,894	2,093	4,415	..	..	108,402
	No.	No.	No.	No.	No.	No.
Average number of persons employed (b)	272,952	6,248	13,283	..	..	292,483
	£	£	£	£	£	£
Net output per person employed (b)	633	546	575	..	..	629
	£'000	£'000	£'000	£'000	£'000	£'000
Stocks at end of year						
Products on hand for sale and work in progress	77,104	909	2,436	..	..	80,450
Materials and fuel	44,020	1,903	2,038	..	..	47,961
	No.	No.	No.	No.	No.	No.
Number of establishments	922	40	62	..	..	1,024

The values of gross output and of materials and fuel used are derived in the following way:-

	£'000	£'000	£'000	£'000	£'000	£'000
Output of firms in this trade						
Total value of sales (see Table 20)	320,543	9,305	15,169	..	..	345,017
Changes in stocks and work in progress (see Table 21)	+ 17,098	+ 218	+ 669	..	..	+ 17,985
Gross output (production)	337,641	9,523	15,838	..	..	363,002
Materials and fuel used by firms in this trade						
Purchases	169,765	6,779	8,449	..	..	184,992
Changes in stocks (see Table 21)	- 12,664	- 818	- 590	..	..	- 14,072
Materials and fuel used	157,101	5,960	7,858	..	..	170,920

(a) Owing to the risk of disclosure of information relating to individual firms, particulars for Northern Ireland, where the net output was less than 1 per cent. of that of the United Kingdom, cannot be given separately and have been included with those for England.

(b) Excluding outworkers but including working proprietors.

Summary

Small firms in Great Britain (a)

TABLE 19

	England	Wales	Scotland	Great Britain
Number of returns	765	23	53	841
Average number of persons employed (b)				
Males	3,497	108	269	3,874
Females	1,065	23	43	1,131
Total	4,562	131	312	5,005

(a) Small firms in Great Britain (employing on the average ten or fewer persons) that made satisfactory returns.

(b) Including working proprietors.

Sales in the trade
Larger establishments

TABLE 20

Kind of output { (i) Complete machines (ii) Parts	England and Wales		Scotland		Great Britain		Northern Ireland		United Kingdom	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
	No.	£'000		£'000	No.	£'000		£'000	No.	£'000
Principal products										
Electrical machinery										
Generators										
Alternating current (not exceeding 30,000 kVA) and direct current	{ (i) ..	(a)	..	(a)	..	..	..	(a)	{ 36,770	8,685
	{ (ii) ..	(a)	..	(a)	..	..	..	(a)	..	267
									..	516
Alternating current, over 30,000 kVA	{ (i) { Th.kVA 45 2,401.7	4,223	-	-	{ Th.kVA 45 2,401.7	4,223	-	-	{ Th.kVA 45 2,401.7	4,223
	{ (ii) ..	329	-	-	..	329	-	-	..	329
Motors										
Railway, tramway and trolley bus	{ (i) { No. 1,780 Th.h.p. 291.6	1,909	-	-	{ No. 1,780 Th.h.p. 291.6	1,909	-	-	{ No. 1,780 Th.h.p. 291.6	1,909
	{ (ii) ..	380	-	-	..	380	-	-	..	380
Other traction	{ (i) { No. 4,674 Th.h.p. 13.7	229(b)	-	-	..	..	..	(b)	{ No. 4,674 Th.h.p. 13.7	229
	{ (ii) ..	186	-	-	..	..	..	(b)	..	186
		77(b)	-	-	..	..	..	(b)	..	77
Fractional horse-power (i.e., under 1 horse-power), sold separately										
Alternating current										
Not over one-third h.p.(i) and (ii)	..	(a)	..	(a)	..	..	..	(a)	..	5,606
Over one-third but under one h.p.	{ (i) ..	(a)	..	(a)	..	..	..	(a)	{ No. 246,096 Th.h.p. 152.4	1,750
	{ (ii) ..	(a)	..	(a)	..	..	..	(a)	..	45
Direct current and universal (A.C. or D.C.)	(i) and (ii)	(a)	..	(a)	..	..	..	(a)	..	1,856
Motors of 1 h.p. and over, other than traction										
Alternating current	{ (i) ..	(a)	..	(a)	..	..	..	(a)	{ No. 494,255 Th.h.p. 3,655.8	18,322
	{ (ii) ..	(a)	..	(a)	..	..	..	(a)	{ No. 12,231	477
									..	694
Direct current										
1 - 1,000 h.p.	(i) and (ii)	(a)	..	(a)	..	..	..	(a)	..	4,111

TABLE 20 (contd.)

Kind of output { (i) Complete machines (ii) Parts	England and Wales		Scotland		Great Britain		Northern Ireland		United Kingdom	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Principal products (contd.)		£'000		£'000		£'000		£'000		£'000
Electrical machinery (contd.)										
Motors (contd.)										
Motors of 1 h.p. and over, other than traction (contd.)										
Direct current (contd.)										
Over 1,000 h.p. { (i) No. 47 Th.h.p. 125.9 (ii) ..	846	..	-	-	846	..	-	-	846	..
Converting machinery: rectifiers static, mercury vapour (glass bulb and steel tank) and metal and transformers for lighting, heating and power not over 30,000 kVA (i) and (ii)	..	(a)	..	(a)	..	..	..	(a)	..	19,665
Rectifiers, static (other than mercury vapour (glass bulb and steel tank) and metal) (i) { No. 176 Th.kw 0.3 No. 5	1	-	-	-	1	-	-	-	1	-
Transformers for lighting, heating and power, over 30,000 kVA (i) { No. 79 Th.kVA 3,963.6 (ii) ..	..	(a)	..	(a)	2,512	..	..	..	2,512	..
Current limiting reactors (i) { No. 353 (ii) ..	296	-	-	-	296	-	-	-	296	-
Capacitors for power factor improvement (i) { No. 628 (ii) ..	8	-	-	-	8	-	-	-	8	-
Starting and controlling gear for electric motors (i) { No. 13,583(b) (ii) ..	..	(a)	..	(a)	938	..	..	(b)	..	14,058
Switchgear and switchboards (other than telegraph and telephone)										
Not exceeding 15,000 volts or 350 mVA (i) and (ii)	..	22,578	..	358	..	22,936	-	-	..	22,936
Over 15,000 volts or 350 mVA (i) { No. 10,446 (ii) ..	382	-	-	-	382	-	-	-	..	10,446
Fuses and fuse gear (i) { No. 6,277 (ii) ..	..	(a)	..	(a)	..	..	..	(a)	..	266

Petrol-diesel electric generating sets (c) (i) { No. of sets 2,073 Th.kw 1.1 (ii) ..	825	-	-	825	-	-	825	-	825
Other electrical machinery, new (i) { No. 2,951 (ii) ..	946	-	-	946	-	-	946	-	946
Electrical machinery, reconditioned (i) { No. 1,006 (ii) ..	47(b)	-	-	(b)	47
Electrical machinery, unclassified (ii)	861	-	-	861	-	-	861	-	861
Total electrical machinery	128,838(b)	5,569	..	..	(b)	..	134,408	
Miscellaneous electrical goods and apparatus									
Cable jointing materials and accessories (other than tape, cloth and other insulating materials)	..	395	..	50	..	446	..	446	
Capacitors (other than for power factor improvement), fixed and variable, including drives and couplings, and parts	..	(a)	..	(a)	..	5,451	..	5,451	
Lighting carbons; carbon and graphite electrodes, and parts of carbons (electric)	..	(a)	..	(a)	36.6	1,063	36.6	1,063	
Other electric carbons; and coils, ignition, complete and parts	..	5,656	-	-	..	5,656	..	5,656	
Cooking apparatus and appliances, electric	Thous.	Thous.	Thous.	Thous.	Thous.	Thous.	Thous.	Thous.	
Domestic cookers, complete									
Under 3 kW	107	1,724	14	27	121	1,751	121	1,751	
3 kW and over	..	(a)	..	(a)	224	4,495	224	4,495	
Industrial cookers, complete; and parts and accessories of cookers	..	(a)	..	(a)	..	2,091	..	2,091	
Kettles; and other electric cooking appliances and parts	..	(a)	..	(a)	..	3,114	..	3,114	
Dynamo lighting sets for cycles	..	(a)	..	(a)	Th.sets 1,049 .. 350	914	Th.sets 1,049 .. 350	914	
Electric equipment for motor vehicles, not elsewhere specified	..	(a)	..	(a)	..	15,904	..	15,904	
Electricity meters									
House service meters, complete, and parts of all electricity meters	..	(a)	..	(a)	..	4,106	..	4,106	
Other integrating meters, complete	191	942	-	-	191	942	191	942	
Electro-medical apparatus and parts (other than vacuum tubes, X-ray apparatus and hearing aids with valve amplification)	..	379	-	-	..	379	..	379	

TABLE 20 (contd.)

	England and Wales		Scotland		Great Britain		Northern Ireland		United Kingdom	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
	Thous.	£'000	Thous.	£'000	Thous.	£'000		£'000	Thous.	£'000
Principal products (contd.)										
Miscellaneous electrical goods and apparatus (contd.)										
Fans, electric or power driven										
Complete										
Ceiling	57	565	-	-	57	565	-	-	57	565
Desk; and other	285	2,185	-	-	285	2,185	-	-	285	2,185
Parts	..	192	-	-	..	192	-	-	..	192
Parts	..	126	-	-	..	126	-	-	..	126
Flashlight cases, arc lamps, etc.										
Flashlight cases of all types and descriptions (exclusive of bulbs and batteries)										
Complete, adapted for use on cycles	719	75	-	-	719	75	-	-	719	75
..	..	118	-	-	..	118	-	-	..	118
Other complete flashlight cases and parts; and arc lamps, electric searchlight and projection lamps, including parts	..	(a)	..	(a)	..	390	-	-	..	390
Other lamps with or without bulbs, complete and parts	..	(a)	..	(a)	..	6,068	-	-	..	6,068
Heating apparatus, electric, not elsewhere specified										
Complete										
Domestic										
Portable electric fires	..	(a)	..	(a)	579	1,313	-	-	579	1,313
Water heaters, including immersion heaters	..	(a)	..	(a)	342	1,923	-	-	342	1,923
Other, including other domestic heating apparatus	309	1,186	81	244	390	1,429	-	-	390	1,429
..	..	300	..	79	..	379	-	-	..	379
Parts and accessories	..	1,476	..	45	..	1,521	-	-	..	1,521
Insulating materials, sold separately										
Of mica; and built-up mica ('Micanite')										
..	..	(a)	..	(a)	43.9	3,319	-	-	43.9	3,319
Sleeving, other than rubber	72.4	232	-	-	72.4	232	-	-	72.4	232
..	..	58	-	-	..	58	-	-	..	58
Other electrical insulating materials including complete insulators (d)	..	1,419	-	-	..	1,419	-	-	..	1,419
Irons, electric										
Joint boxes	..	(a)	..	(a)	..	..	..	(a)	1,789	2,200
Magnetos, ignition	..	346	..	17	..	363	-	-	..	363
For motor vehicles, including motor cycles and three-wheelers	..	(a)	..	(a)	180	487	-	-	180	487
..	..	..	..	..	..	1,232	-	-	..	1,232

4/K/30 ENGINEERING, SHIPBUILDING AND ELECTRICAL GOODS COUNTRY TABLES

ELECTRICAL ENGINEERING (GENERAL) COUNTRY TABLES 4/K/31

Other	..	(a)	..	(a)	8,659	2,133	-	-	8,659	2,133
Magnets, permanent	..	..	..	..	..	94	-	-	..	94
Measuring instruments, commercial										
Indicating, complete, for motor vehicles	30	62	-	-	30	62	-	-	30	62
Other, including parts but excluding valves	..	(a)	..	(a)	..	4,078	-	-	..	4,078
Overhead transmission line fittings	..	735	-	-	..	735	-	-	..	735
Portable (mechanical) appliances, electrically operated, not elsewhere specified										
Complete										
Vacuum cleaners and floor polishers; and hair clippers and dry shavers	..	(a)	..	(a)	..	..	..	(a)	1,433	11,664
Other	..	(a)	..	(a)	..	1,511	-	-	..	1,511
Parts	..	1,269	..	234	..	1,503	-	-	..	1,503
Scientific instruments, electrical (e)										
Time switches	..	957	-	-	..	957	-	-	..	957
Transformers (other than for lighting, heating and power)	..	(a)	..	(a)	..	..	..	(a)	1,665	2,349
..	..	..	..	..	..	..	..	..	..	91
X-ray apparatus, including parts (other than tubes and valves)	..	(a)	..	(a)	..	1,836	-	-	..	1,836
Electrical equipment for aircraft not elsewhere specified (c)	..	550	-	-	..	550	-	-	..	550
Ground mica sold as such (so far as recorded separately); and waste products other than scrap metals	..	226	..	1	..	227	-	-	..	227
Washing machines for domestic use, electrically driven, complete and parts	..	(a)	..	(a)	..	12,787	-	-	..	12,787
Remote control equipment (electrical), other than electronic control equipment (c)	..	(a)	..	(a)	..	1,213	-	-	..	1,213
Permanent hair-waving apparatus; battery chargers (metal and valve rectifiers); electro-plating plant and machinery, complete and parts; and other electrical goods	..	(a)	..	(a)	..	..	..	(a)	..	9,955
Total miscellaneous electrical goods and apparatus, insulating materials, etc.		120,096(b)		7,653		..		(b)		127,749
Electrical contract and other work carried out in the United Kingdom (f)										
Electrical contract work done as main contractors										
Installation and erection of generating plant and appliances		(a)		(a)		..		(a)		10,748
Other electrical contract work (g)		1,543		110		1,653		-		1,653
Electrical contract work done as sub-contractors		(a)		(a)		..		(a)		521

(7387)

(7387)

TABLE 20 (contd.)

	England and Wales		Scotland		Great Britain		Northern Ireland		United Kingdom	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Principal products (contd.)		£'000		£'000		£'000		£'000		£'000
Electrical contract and other work carried out in the United Kingdom (f) (contd.)										
Other work for which payment was receivable										
Repair and maintenance work		6,835(b)		479		..		(b)		7,314
Research and development work		(a)		(a)		4,396		-		4,396
Other work, including work done for the trade		(a)		(a)		..		(a)		1,382
Total contract and other work		(a)		(a)		..		(a)		26,014
Less estimated value of goods made by firms and separately recorded as sold, which were used in this work		(a)		(a)		..		(a)		10,003
Total contract and other work exclusive of the value of goods made by firms and used in the work		14,617(b)		1,393		..		(b)		16,011
Total principal products		263 552(b)		14,616		..		(b)		278,168
Other output										
Electric lamps	..	(a)	..	(a)	..	3,072	-	-	..	3,072
Telegraph and telephone apparatus and parts	..	1,080	-	-	..	1,080	-	-	..	1,080
Valves, electronic, other than X-ray valves sold separately	..	(a)	..	(a)	..	431	-	-	..	431
Radio communication and navigational aids (including radar equipment) complete	..	(a)	..	(a)	..	1,797	-	-	..	1,797
Other radio, telecommunication and electronic apparatus and parts	..	(a)	..	(a)	..	..	..	(a)	..	3,625
Electric lighting accessories and fittings	..	5,191(b)	..	41	..	..	..	(b)	..	5,232
Electric bell apparatus	..	(a)	..	(a)	..	307	-	-	..	307
Portable power tools	..	27	-	-	..	27	-	-	..	27

Steam turbines and parts	..	6,716	-	-	..	6,716	-	-	..	6,716
Welding machinery, electrical	..	(a)	..	(a)	..	1,298	-	-	..	1,298
Welding electrodes	..	490	-	-	..	490	-	-	..	490
Mechanical handling equipment	..	826	-	-	..	826	-	-	..	826
Prime movers	..	1,327	-	-	..	1,327	-	-	..	1,327
Other machinery and plant	..	11,825	..	42	..	11,866	-	-	..	11,866
Scientific, surgical and photographic instruments, etc.	..	(a)	..	(a)	..	955	-	-	..	955
Insulating materials of synthetic resins and cloth and tape	..	1,801	-	-	..	1,801	-	-	..	1,801
Iron and steel castings	..	1,569(b)	-	-	..	..	..	(b)	..	1,569
Other manufactures of iron and steel	..	(a)	..	(a)	..	483	-	-	..	483
Other manufactures of non-ferrous metals	..	(a)	..	(a)	..	2,256	-	-	..	2,256
Other tools and implements	..	714	-	-	..	714	-	-	..	714
Scrap metals sold										
Iron and steel	..	555(b)	..	28	..	..	..	(b)	..	583
Copper	..	881(b)	..	14	..	..	..	(b)	..	895
Brass	..	865(b)	..	20	..	..	..	(b)	..	885
Other	..	256	..	15	..	270	-	-	..	270
Naval, military and air force stores, etc.	..	912	-	-	..	912	-	-	..	912
Other goods	..	15,297(b)	..	62	..	..	..	(b)	..	15,360
Work done (f)		(a)		(a)		..		(a)		2,072
Total		329,848(b)		15,169		..		(b)		345,017

(a) Owing to the risk of disclosure of information relating to individual firms, separate particulars cannot be given.

(b) Owing to the risk of disclosure of information relating to individual firms, particulars for Northern Ireland cannot be given separately and have been included with those for England and Wales.

(c) So far as recorded separately.

(d) Except of ceramics, cloth and tape and rubber sleeving, and of synthetic resins.

(e) Excluding thermostats.

(f) Amount charged.

(g) Excluding work on electric power and lighting lines and works, on telegraph and telephone lines and works and on the installation of radio, telegraph, and telephone apparatus and appliances.

Stocks of products on hand for sale and work in progress,
and stocks of materials and fuel

Larger establishments

£'000

TABLE 21

		England and Wales (a)	Scotland	Great Britain	Northern Ireland (a)	United Kingdom
Products on hand for sale	{ at beginning of year	11,166	380	..	..	11,545
	{ at end of year	12,896	514	..	..	13,409
Work in progress	{ at beginning of year	49,532	1,388	..	..	50,920
	{ at end of year	65,118	1,922	..	..	67,040
Total products on hand for sale and work in progress	{ at beginning of year	60,698	1,767	..	..	62,465
	{ at end of year	78,013	2,436	..	..	80,450
Materials and fuel	{ at beginning of year	32,441	1,447	..	..	33,888
	{ at end of year	45,923	2,038	..	..	47,961

(a) Owing to the risk of disclosure of information relating to individual firms, particulars for Northern Ireland cannot be given separately and have been included with those for England and Wales.

Employment in September

Larger establishments (a)(b)

Note - Owing to the risk of disclosure of information relating to individual firms, particulars for Northern Ireland cannot be given separately and have been included with those for England and Wales throughout this table.

TABLE 22

(i) Operatives

Number

	England and Wales	Scotland	Great Britain	Northern Ireland	United Kingdom
Males					
Under 18	8,692	539	..	..	9,231
All ages	143,905	5,758	..	..	149,663
Females					
Under 18	3,393	301	..	..	3,694
All ages	64,663	4,474	..	..	69,137
Total					
Under 18	12,085	840	..	..	12,925
All ages	208,568	10,232	..	..	218,800

(ii) Administrative, technical and clerical employees

Number

	England and Wales	Scotland	Great Britain	Northern Ireland	United Kingdom
Males					
Under 18	881	33	..	..	914
All ages	48,122	2,021	..	..	50,143
Females					
Under 18	3,366	172	..	..	3,538
All ages	25,958	1,125	..	..	27,083
Total					
Under 18	4,247	205	..	..	4,452
All ages (c)	74,080	3,146	..	..	77,226

TABLE 22 (contd.)

(iii) Total employees

Number

	England and Wales	Scotland	Great Britain	Northern Ireland	United Kingdom
Males					
Under 18	9,573	572	..	..	10,145
All ages	192,027	7,779	..	..	199,806
Females					
Under 18	6,759	473	..	..	7,232
All ages	90,621	5,599	..	..	96,220
Total					
Under 18	16,332	1,045	..	..	17,377
All ages (c)	282,648	13,378	..	..	296,026

(a) Excluded employees. The number of persons employed at the larger establishments in this trade but not included in the above tables or in any other Census of Production report (employees in Great Britain engaged, for example, in merchandising and in Northern Ireland canteen and welfare workers) are shown in Table 22(v) below.

(b) Number employed in the week ended September 22, 1951.

(c) Working proprietors. In addition working proprietors, shown in Table 22(iv) below, were engaged in this trade in larger establishments.

(iv) Working proprietors

Number

	England and Wales	Scotland	Great Britain	Northern Ireland	United Kingdom
Males	62	4	..	..	66
Females	6	-	6	-	6
Total	68	4	..	..	72

(v) Excluded employees

Number

	England and Wales	Scotland	Great Britain	Northern Ireland	United Kingdom
Canteen workers					
Males	177	7	184	-	184
Females	2,316	111	..	..	2,427
Total	2,493	118	..	..	2,611
Other workers					
Males	719	36	..	..	755
Females	377	28	..	..	405
Total	1,096	64	..	..	1,160
Total excluded employees	3,589	182	..	..	3,771

TABLE 23

Average employment: Larger establishments (a)

Number

	England and Wales (b)	Scotland	Great Britain	Northern Ireland (b)	United Kingdom
Operatives (c)	206,173	10,198	..	..	216,371
Administrative, technical and clerical employees	72,959	3,081	..	..	76,040
Total	279,132	13,279	..	..	292,411

Outworkers. In addition to the employees shown above the firms in this trade employed outworkers whose numbers are shown below.

	England and Wales	Scotland	Great Britain	Northern Ireland	United Kingdom
Males	33	-	33	-	33
Females	975	-	975	-	975
Total	1,008	-	1,008	-	1,008

(a) For employment in small firms in Great Britain (employing on the average ten or fewer persons) that made satisfactory returns see Table 19.

(b) Owing to the risk of disclosure of information relating to individual firms, particulars for Northern Ireland cannot be given separately and have been included with those for England and Wales.

(c) Including 3,930 operatives in Great Britain employed in outside work of erection, fitting, etc.; 3,627 in England and Wales and 303 in Scotland.

Wages and salaries and employers' National Insurance contributions
paid during the year: Larger establishments

£'000

TABLE 24

	England and Wales (a)	Scotland	Great Britain	Northern Ireland (a)	United Kingdom
Wages and salaries (b) of					
Operatives	69,466	3,079	..	..	72,545
Administrative, technical and clerical employees	34,521	1,336	..	..	35,857
Total	103,987	4,415	..	..	108,402
Employers' contributions to all National Insurance Schemes	2,666	125	..	..	2,791

(a) Owing to the risk of disclosure of information relating to individual firms, particulars for Northern Ireland cannot be given separately and have been included with those for England and Wales.

(b) Including bonus and commission payments but excluding payments to outworkers shown below.

£'000

England and Wales	Scotland	Great Britain	Northern Ireland	United Kingdom
85	-	85	-	85

Plant, machinery and vehicles - acquisitions and disposals,
and capital expenditure on new building work

Larger establishments

£'000

TABLE 25

	England and Wales	Scotland	Great Britain	Northern Ireland	United Kingdom
Plant, machinery and vehicles					
Acquisitions					
Plant and machinery					
New	6,230(a)	323	..	(a)	6,553
Second-hand	283(a)	8	..	(a)	292
Vehicles					
New	689(a)	49	..	(a)	738
Second-hand	243(a)	7	..	(a)	250
Total acquisitions	7,446(a)	387	..	(a)	7,833
Disposals					
Plant and machinery	265	19	284	-	284
Vehicles	155	10	165	-	165
Total disposals	420	29	449	-	449
New building work					
Capital expenditure on new building and other constructional work of a capital nature (excluding site values and development charges)	2,772(a)	33	..	(a)	2,806

(a) Owing to the risk of disclosure of information relating to individual firms, particulars for Northern Ireland cannot be given separately and have been included with those for England and Wales.

Payments for transport services for finished goods
sold and materials and fuel purchased

Larger establishments

£'000

TABLE 26

	England and Wales	Scotland	Great Britain	Northern Ireland	United Kingdom
Amounts paid to other firms and undertakings	3,022(a)	198	..	(a)	3,219
Amount paid or credited to firms' own separate transport organisations	- 293	16	310	-	310
Total	3,315(a)	214	..	(a)	3,529

(g) Owing to the risk of disclosure of information relating to individual firms, particulars for Northern Ireland cannot be given separately and have been included with those for England and Wales.

GENERAL NOTES

The following brief notes refer to Great Britain and, unless otherwise stated, to the census of production for 1951. Reference should be made to the separate booklet in this series entitled 'The Report on the Census of Production for 1951: Introductory Notes' (price 1s.6d. net) for particulars of the minor differences in the Northern Ireland censuses and other details about the census of production.

Trade classification: Establishments are classified to trades according to the nature of their output. Certain products, called principal products, are identified as characteristic of the production of individual trades, the principal products for a given trade being of a similar nature or commonly associated in production. An establishment is classified to a trade if its output of principal products of that trade accounted for a greater proportion of the value of its output than did its output of principal products of any other trade.

The establishment: The basic unit for the collection of information is generally the establishment which in most cases comprises the whole of the premises under the same ownership or management at a particular address (e.g., a factory). Offices, warehouses and other ancillary places of business situated apart from the producing works are included in the return for the works.

Larger establishments and small firms: Larger establishments are those which employed more than 10 persons on the average during the year; small firms are those employing on the average 10 or fewer persons.

Working proprietors are proprietors of businesses other than limited companies, and include members of their families who work in the business without receiving fixed wages or salaries. Any persons working less than half the normal hours are excluded.

Persons employed: Administrative employees include directors other than those paid by fee only, managers, superintendents and works foremen; research, experimental, development, technical and design employees (other than operatives); draughtsmen and tracers; and travellers and office (including works office) employees. Operatives include all other classes of employees, that is, broadly speaking, all manual workers.

All these figures exclude canteen employees and persons engaged in merchandising or any other activity not covered by a firm's return who are shown separately as excluded employees.

Figures for employees include only persons on the pay-roll (that is whose National Insurance cards were held by the firm), whether full-time or part-time employees.

Outworkers, who are shown separately, are persons employed by the firm who work on materials supplied by the firm, but do not work on the premises; operatives directly employed who work out of doors (e.g., maintenance workers) and sub-contractors are not included as outworkers.

Wages and salaries include all overtime payments, bonuses, and commissions, without any deduction for income tax, insurance, contributory pensions, etc. They exclude payments to working proprietors.

Capital expenditure: Expenditure on plant, machinery and vehicles relates to expenditure charged to capital account during the year of return, including transport and installation costs involved. Expenditure on new building work is similarly that charged to capital account during the year.

Materials and fuel: The cost of materials and fuel purchased includes all purchases during the year of materials for use in production and of fuel (including oil, gas, and electricity for all purposes, including heating and lighting); all packing materials, including the full cost of returnable containers when first purchased; workshop materials; office materials; water charges; materials for repairs to firms' own buildings, plant and vehicles when carried out by

their own work people included in the return; and consumable tools and parts for machinery purchased as replacement. Materials, components, etc. which were purchased and re-sold in the same state (that is, merchanted or factored goods) were excluded. For 1951 firms in many trades were required to state the quantities of certain purchased materials used.

Stocks and work in progress: Firms were instructed to give these at income tax value.

Output: Sales means sales during the year of goods made in the establishment covered by the return or made on commission for it, whether produced in the year or not. For all post-war censuses the value of sales was the net selling value, that is, the amount charged to customers, whether on an ex-works or delivered basis, and net of any trade discounts, agents' commissions, allowances for returnable cases, purchase tax, etc. For goods charged on a delivered basis to customers overseas, firms were required to give the f.o.b. value.

Gross output of a trade is the total value of goods made and other work done during the year; this means the value of sales and work done during the year adjusted for changes in the values of stocks.

Net output is the amount left after deducting from the value of gross output the aggregate of the cost of materials and fuel used and the amount paid for work given out and, for 1951, any transport payments included in firms' returns. This represents the value added to materials by the process of production, and constitutes the fund from which wages, salaries, rents, rates and taxes, advertising and other selling expenses and all other similar charges have to be met as well as depreciation and profits.

Customs and Excise Duty paid on materials purchased is included in the cost of materials, but where it is especially important separate figures are shown.

Later reports: Reports will be published later summarising the main census results and giving information about power equipment and fuel consumption.

Disclosure of information: The report has been prepared in conformity with the disclosure provisions of the Statistics of Trade Act, 1947. Figures have been combined with others of a similar nature in certain cases where publication of separate details might disclose the operations of an individual firm.

Symbols used: '..' for 'Not available', '-' for 'Nil or negligible (less than half the final digit shown)'

The figures in the tables have been rounded off to the nearest final digit, and there may be an apparent slight discrepancy between the sums of the constituent items and the totals shown.

Tables 1 to 17 show figures for the United Kingdom (or Great Britain).

Tables 18 to 26 are country tables and give, where practicable, separate details for England and Wales, Scotland and Northern Ireland.

Table 6: Specialist producers refer to those establishments 50 per cent. or more of whose total output by value is accounted for by the groups of products specified.

Table 8 (or 8(i)) shows the total sales of principal products of the trade, and includes therefore the sales of these products returned by establishments whether classified to the trade or to other trades. Those produced by establishments in other trades are shown in Table 9.

Table 10 shows the sales by establishments in the trade of products other than those regarded as principal products of the trade.

Table 20 (or 20(i)) shows sales by establishments in the trade of products, whether principal products or not, and broadly the aggregates here are equal to the corresponding figures in Table 8 (or 8(i)) less those in Table 9, plus those in Table 10.

Crown copyright reserved

Printed and published by
HER MAJESTY'S STATIONERY OFFICE

To be purchased from
York House, Kingsway, London W.C.2
423 Oxford Street, London W.1
P.O. Box 569, London S.E.1
13A Castle Street, Edinburgh 2
109 St. Mary Street, Cardiff
39 King Street, Manchester 2
Tower Lane, Bristol 1
2 Edmund Street, Birmingham 3
80 Chichester Street, Belfast
or through any bookseller

Printed in Great Britain