

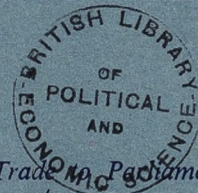
BOARD OF TRADE

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*The Report on the
Census of Production
for 1954*

Volume 5: Industry H

SCIENTIFIC, SURGICAL AND PHOTOGRAPHIC INSTRUMENTS, ETC.



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

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The Report on the Census of Production for 1954

VOLUME 5 INDUSTRY H

SCIENTIFIC, SURGICAL AND PHOTOGRAPHIC INSTRUMENTS, ETC.

THIS REPORT on the Scientific, Surgical and Photographic Instruments, etc. Industry relates to establishments engaged wholly or mainly in the manufacture of photographic equipment; optical instruments; ophthalmic optical instruments; surgical, dental and veterinary instruments and appliances; measuring instruments (including engineers' measuring instruments); and photographic paper and films, etc.

This industry corresponds to minimum list headings 100 and 199(2) in the Standard Industrial Classification.

Production by Government Departments is included.

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IMPORTANT NOTES and definitions appear on the next page. In interpreting the data in the tables, it is essential to bear these in mind.

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The following notes describe terms in general use in the tables of the report. More detailed explanations of the terms used and a description of the scope and method of taking the census are given in the separate booklet entitled 'The Report on the Census of Production for 1954 - Introductory Notes' (price 1s. 6d. net).

Industrial Classification: Establishments are classified to industries according to the nature of their output and, as far as possible, in conformity with the Standard Industrial Classification. Certain products are identified as the principal products of individual industries, the principal products for a given industry being of a similar nature or commonly associated in production. The principle of classification normally followed is that an establishment is classified to an industry if its output of the principal products of that industry accounted for a greater proportion of the value of its output than did its output of the principal products of any other industry.

Specialist producers normally comprise those establishments 50 per cent. or more of whose total output by value is accounted for by the characteristic products of the specialist group.

Intermediate products: For some industries figures are given showing the total quantities made during the year of intermediate products, i.e., products which may be further processed in the establishments in which they are produced.

Larger establishments: The information given in the report relates mainly to 'larger establishments', i.e., establishments of firms employing on the average more than 10 persons. In most cases an establishment comprises the whole of the premises under the same ownership or management at a particular address (e.g., a mine or factory). Offices, warehouses, laboratories and other ancillary places of business situated apart from the producing works are not regarded as separate establishments and are included in the return for the works.

Small firms are those employing on the average 10 or fewer persons.

The estimates for the industry as a whole given in Table 1 are normally obtained by increasing the other items shown in the same proportion as total employment.

Gross output (production) is the total value of goods made and other work done during the year: it is obtained by adjusting the value of sales and work done during the year for changes in the value of stocks of products on hand for sale and work in progress.

Net output is the amount left after deducting from the value of gross output the aggregate of the cost of materials and fuel used, the amount paid for work given out, and, for 1951 and 1954, any transport payments made. 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.

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. The value of sales is the net selling value, i.e., 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.

Materials and fuel: The total cost of materials and fuel purchased includes all purchases during the year of materials for use in production, and of fuel (includ-

ing oil, gas and electricity) for all purposes: packing materials, including the full cost of returnable cases when first purchased; workshop and office materials; water charges; materials for repairs to buildings, plant and vehicles when carried out by firms' own work-people included in their returns; consumable tools; and parts for machinery purchased as replacements. Purchases of goods for merchanting are excluded. The cost of materials and fuel used, given in Table 2, is obtained by adjusting purchases for changes during the year in the value of stocks.

Stocks: Firms were required to give stocks of materials and fuel, products on hand for sale, and work in progress, at income tax values.

Customs and Excise Duty paid on materials purchased is normally included in the cost of materials. Finished goods are similarly valued as they were sold, duty-paid or duty-free. The net amount of any duty paid is deducted in arriving at net output.

Employment: Total employment includes working proprietors, administrative, technical and clerical employees, and operatives, but excludes outworkers, canteen employees and persons engaged in merchanting or any other activity not covered by a firm's return, who are shown separately as excluded employees. Employees are persons on the pay-roll (i.e., persons whose National Insurance cards were held by employers), whether employed full-time or part-time.

Working proprietors are proprietors of businesses other than limited companies, together with members of their families who worked in the business without receiving fixed wages or salaries. Any persons working less than half the normal hours are excluded. For Northern Ireland directors of limited companies (other than those paid by fee only) are also included.

Administrative, technical and clerical employees include directors, other than those paid by fee only (except in Northern Ireland); managers, superintendents and works foremen; research, experimental, development, technical and design employees (other than operatives); draughtsmen and tracers; travellers; and office (including works office) employees.

Operatives include all other classes of employees, i.e., broadly speaking, all manual workers.

Outworkers are persons employed by the firm who work on materials supplied by the firm in their own homes.

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

Capital expenditure includes expenditure on new building work, and on plant, machinery and vehicles, charged to capital account during the year, including any transport and installation costs involved. It includes expenditure in respect of establishments in Great Britain which had not begun production before the end of the year (which has not previously been included in the Census of Production reports for individual industries).

Symbols used:

- .. for not available
- for nil or negligible (less than half the final digit shown).

Where figures are rounded, e.g., given to the nearest £ thousand, there may be apparent slight discrepancies between the sums of constituent items and the totals shown. In some cases, figures have been combined with others of a similar nature where publication of separate details might disclose information relating to an individual undertaking.

Industry summary
Estimates for the industry as a whole

TABLE 1

	United Kingdom			Scotland 1954	Wales 1954
	1948	1951	1954		
	£ million	£ million	£ million	£ million	£ million
Gross output (production)	57.5	86.8	110.5	4.19	0.87
Net output	35.7	48.7	65.4	2.90	0.64
Total stocks and work in progress					
At beginning of year	16.5	20.4	28.5	1.60	0.11
Change during year	+ 2.7	+ 6.1	+ 0.8	+ 0.23	+ 0.06
Capital expenditure less disposals (a)	1.8	2.7	3.2	0.14	0.02
Wages and salaries	21.8	29.6	36.7	1.70	0.25
Total employment (including working proprietors)	Thousands	Thousands	Thousands	Thousands	Thousands
	72.0	81.4	81.9	4.09	0.74

(a) Capital expenditure on new building work, and on plant, machinery and vehicles (including (except in 1948) that incurred in Great Britain for establishments not yet in production), less amounts received for plant, machinery and vehicles disposed of.

Summary of returns received

TABLE 2

	Unit	Great Britain	United Kingdom	
		1948	1951	1954
FIRMS EMPLOYING ON AVERAGE MORE THAN 10 PERSONS				
Number of establishments	No.	662	737	700(a)
Total value of sales and work done	£'000	52,190	78,956	102,953
Products on hand for sale	"	8,050	9,850	14,381
and work in progress	"	1,167	2,479	839
{ at beginning of year	"			
{ change during year	"			
Gross output (production) (b)	"	53,251	81,435	103,792
Purchases of materials and fuel	"	20,939	37,450	39,651
Stocks of materials and fuel	"	7,265	9,289	12,369
{ at beginning of year	"			
{ change during year	"	+ 1,331	+ 3,252	- 105
Cost of materials and fuel used	"	19,608	34,198	39,755
Payment for work done on materials given out	"	603	1,096	2,073
Payment for transport (c)	"	106	427	551
Net output	"	33,041	45,713	61,412
Average number of employees	No.	52,312	59,109	58,210
{ operatives	"	14,334(d)	17,214	18,728
{ others	"	66,731	76,409	76,995
Total employment (e)	"	66,731	76,409	76,995
Net output per person employed (e)	£	495	598	798
Wages and salaries	£'000	14,401	19,602	23,647
{ of operatives	"	5,817	8,220	10,811
{ of others	"			
Capital expenditure	"			
New building work (f)	"	335	649	764
Plant and machinery	"	1,309	1,684	1,915
{ acquisitions (f)	"	74	76	84
{ disposals	"	144	298	396
Vehicles	"	23	72	109
{ acquisitions (f)	"			
{ disposals	"			
FIRMS EMPLOYING ON AVERAGE 10 OR FEWER PERSONS				
Number of returns	No.	786	852(g)	754
Total employment, including working proprietors	"	3,980	4,581(g)	3,649

(a) Including 33 establishments employing ten or fewer persons particulars of which were included with those of larger establishments on single returns. For 1948 and 1951 such establishments were not separately counted; on the same basis the number of establishments in 1954 is 667.

(b) For the year 1948 gross output excludes payments for transport services outwards on finished goods sold. For subsequent years gross output includes payments to other firms and undertakings and to firms' own separate transport organisations for transport services.

(c) Payments to other firms and undertakings and to firms' own separate transport organisations. For the year 1948 payments cover only transport outwards of finished goods sold. For subsequent years they cover payments for transport of both finished goods sold and materials and fuel purchased.

(d) Number in week ending September 25, 1948.

(e) Excluding outworkers and including working proprietors.

(f) Excluding expenditure for establishments not yet in production.

(g) Excluding Northern Ireland. No information about small firms was collected in Northern Ireland for 1951.

TABLE 3

Analysis by size, 1954: Larger establishments in the United Kingdom

Average number employed (a)	Establishments	Gross output	Net output	Employees		Wages and salaries		Capital expenditure (b)	Net output per person employed (a)
				Operatives	Others	Operatives	Others		
	Number	£'000	£'000	Number	Number	£'000	£'000	£'000	£
11 - 24 (c)	243	3,990	2,507	3,131	728	1,164	403	116	643
25 - 49	163	6,232	3,727	4,712	1,035	1,684	614	126	647
50 - 99	129	11,214	6,152	7,509	1,816	2,736	1,069	255	660
100 - 199	81	13,703	8,627	8,909	2,508	3,451	1,460	331	755
200 - 299	29	8,471	5,450	5,616	1,408	2,144	866	269	776
300 - 399	23	11,725	6,578	5,738	2,015	2,302	1,174	216	848
400 - 499	6	3,417	2,338	2,050	637	856	357	85	870
500 - 749	11	7,710	5,107	5,046	1,799	2,119	954	208	746
750 - 999	5	5,007	3,077	3,090	1,108	1,376	632	194	733
1,000 - 1,499	5	8,610	5,637	4,412	1,827	1,969	1,055	210	904
1,500 and over	5	23,713	12,211	7,997	3,847	3,845	2,226	1,065	1,031
Total	700	103,792	61,412	58,210	18,728	23,647	10,811	3,074	798

(a) Excluding outworkers and including working proprietors.

(b) Capital expenditure on new building work and on acquisition of plant, machinery and vehicles, excluding expenditure for establishments not yet in production.

(c) Including 33 establishments with fewer than 11 persons employed, particulars of which were included with those for larger establishments on a single return.

Analysis according to specialisation within the industry, 1954

Larger establishments in the United Kingdom

TABLE 4

Unit	No.	Specialist producers of							Remainder of the industry	Total
		A	B	C	D	E	F	G		
		195	37	23	136	33	25	207	44	700
Number of establishments	No.	195	37	23	136	33	25	207	44	700
Total value of sales and work done	£'000	10,837	6,509	2,537	8,016	3,538	24,531	40,757	6,228	102,953
Sales of characteristic products	"	10,398	5,244	2,380	6,702	3,036	21,714	34,186		
Products on hand for sale at beginning of year	"	809	1,682	617	759	542	1,646	6,964	1,364	14,381
and work in progress change during year	"	+ 68	+ 80	- 58	+ 43	+ 62	+ 628	- 209	+ 225	+ 839
Gross output (production)	"	10,906	6,589	2,478	8,059	3,600	25,159	40,547	6,453	103,792
Purchases of materials and fuel	"	4,431	1,671	962	2,906	1,426	13,097	13,049	2,108	39,651
Stocks of materials and fuel at beginning of year	"	1,184	532	401	985	285	3,883	4,368	732	12,369
and change during year	"	+ 104	- 3	- 9	+ 32	+ 1	- 140	- 197	+ 107	- 105
Cost of materials and fuel used	"	4,327	1,674	971	2,874	1,425	13,238	13,246	2,001	39,755
Payment for work done on materials given out	"	29	89	9	98	96	68	1,574	110	2,073
Payment for transport	"	27	27	13	57	27	103	233	63	551
Net output	"	6,523	4,798	1,485	5,030	2,052	11,750	25,494	4,279	61,412
Average number of operatives	No.	9,345	4,873	2,014	5,878	1,995	6,179	22,761	5,165	58,210
of employees (others)	"	1,549	1,557	426	1,379	567	3,493	8,300	1,457	18,728
Total employment (a)	"	10,909	6,431	2,442	7,275	2,563	9,672	31,067	6,636	76,995
Net output per person employed (a)	£	598	746	608	691	801	1,215	821	645	798
Wages and salaries of operatives	£'000	3,322	2,014	699	2,182	818	2,812	9,588	2,211	23,647
of others	"	883	876	239	805	342	2,121	4,708	837	10,811
Capital expenditure										
New building work (b)	"	19	54	-	19	12	412	218	30	764
Plant and machinery (acquisitions)	"	135	136	67	75	96	596	705	106	1,915
disposals	"	21	6	1	6	11	9	23	7	84
vehicles (acquisitions)	"	61	16	5	36	15	54	168	41	396
disposals	"	24	3	2	11	6	8	38	17	109

(a) Excluding outworkers and including working proprietors.

(b) Excluding expenditure for establishments not yet in production.

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Sales of the principal products of the industry, including sales of these products by establishments classified to other industries

Larger establishments in the United Kingdom

TABLE 5

	1951		1954		
	Quantity	Value	Quantity	Value	Entries
	Th.doz.	£'000	Th.doz.	£'000	Number
Ophthalmic instruments and appliances					
Spectacles, pince-nez, eyeglasses and monocles					
Complete with lenses (other than sun-glasses with unworked lenses)	53	481	195	1,859	68
Frames (a)			..	235	
Wholly or mainly of metal	214	903	185	1,028	26
Wholly or mainly of plastic	412	1,496	348	1,463	79
Other	2	12	3	32	13
	..	2	..	9	
Finished lenses, optically worked, mounted or unmounted, sold separately	1,245	1,117	1,587	1,915	62
Other parts of spectacles, pince-nez, eyeglasses and monocles (including unworked and semi-finished lenses)	..	931	..	950	34
Other ophthalmic instruments and appliances and parts thereof, including artificial eyes, but excluding ophthalmic prescription work, for which see under 'work done'	..	890	..	634	28
Other optical instruments and appliances and parts thereof					
Finished lenses optically worked, mounted or unmounted, sold separately					
Photographic and cinematograph	89	595	..	1,170	21
Other (excluding ophthalmic)	59	250	..	326	19
	..	49	..	..
Microscopes, complete	Thousands 24.1	665	Thousands 12.2	631	14
Telescopes, binoculars and monoculars, complete	84.3	398	18.4	325	15
			..	226	
Parts of microscopes, telescopes, binoculars and monoculars, except lenses	..	128	..	144	16
Industrial optical measuring instruments and equipment	..	331	..	370	17
Optical land-surveying instruments and equipment	..	487	..	714	9
Optical gunnery-control apparatus	..	261	..	873	16
Other optical instruments and appliances (other than photographic, cinematograph and ophthalmic) and parts thereof	..	1,541	..	2,097	41
Total ophthalmic and other optical instruments and appliances		10,537		15,002	..
Dental instruments, appliances and equipment					
Dental instruments	..	502	..	361	14
Other dental surgery and laboratory equipment	..	778	..	658	7
Artificial teeth, crowns and facings					
Porcelain	48,957	626	17,972	233	..
Plastic			{ 18,205	261	
			..	157	9
All other dental goods	..	1,292	..	790	19
Medical, surgical, veterinary and dissecting instruments, appliances and equipment (other than optical, ophthalmic and electrical, and dressings)	Th.gross		Th.gross		
Surgeons' suture needles	82	166	88	159	13
			..	19	

(88128)

TABLE 5 (contd.)

	1951		1954		
	Quantity	Value	Quantity	Value	Entries
	Th.gross	£'000	Th.gross	£'000	Number
Medical, surgical, veterinary and dissecting instruments, appliances and equipment (other than optical, ophthalmic and electrical, and dressings) (contd.)					
Hypodermic needles (b)	116	302	118	239	..
Instruments					
Medical and surgical	..	1,868	..	1,539	53
Other	..	97	..	63	10
Sterilising equipment including autoclaves	..	735(c)	..	914	41
Anaesthetic and resuscitation apparatus	..	..	..	476	12
Aseptic hospital furniture	..	949	..	1,107	50
Surgical sutures	Thousands 5,906	602	Thousands 3,112	277	8
	..	137	..	567	..
Surgical hosiery	Th.doz. 150	1,149	Th.doz. 110	627	22
	..	..	..	318	9
Artificial limbs	..	696	..	527	9
Other appliances, including trusses, but excluding artificial eyes	..	1,518	..	2,017	55
Other equipment	..	747	..	330	27
Total dental, medical, surgical, veterinary and dissecting instruments, appliances and equipment (other than optical, ophthalmic and electrical, and dressings)		12,166		11,731	..
Photographic and cinematograph apparatus and appliances	Thousands		Thousands		
Cameras, complete					
Cine cameras	6.2	189	11.4	329	10
Still cameras					
Precision	1.3	84	1.9	54	10
Other	..	157	..	457	..
Folding	185	644	135	385	7
Box	..	87	..	219	..
Box	1,275	1,008	1,485	1,005	..
Projectors, complete					
Cinematograph projectors (excluding sound reproducing apparatus sold separately)					
Standard (35 mm. gauge)	0.5	99	0.7	320	5
Sub-standard	..	23	..	..	..
16 mm. gauge	8.3	531	2.4	238	7
Other	24.5	292	6.6	654	8
Other	..	..	..	74	..
Still projectors	10.6	267	33.9	228	8
Other photographic and cinematograph apparatus and accessories (except lenses and photographic chemicals)	..	..	..	393	..
Cinematograph (including cinematograph film, blank (raw film or stock))	..	5,053	..	5,476	16
Other than cinematograph					
Developing, printing and enlarging apparatus	..	565	..	803	18
Other	..	1,007	..	1,247	59

TABLE 5 (contd.)

	1951		1954		
	Quantity	Value	Quantity	Value	Entries
		£'000		£'000	Number
Photographic and cinematograph apparatus and appliances (contd.)					
Sensitised photographic plates and films and photographic paper and cloth					
Plates and films (other than cinematograph film) and paper and cloth (other than paper sensitised with silver salts)	..	10,158	..	13,913	11
Paper sensitised with silver salts	Th.cwt. 12.8	766	Th.cwt. 11.2	642	5
Document copying paper	..	..	..	86	..
Other	81.9	3,222	72.1	3,040	5
Total photographic and cinematograph apparatus and appliances		24,152		29,603	..
Scientific, engineering, industrial, etc. instruments and apparatus not elsewhere specified					
Electrical	Thousands		Thousands		
Thermostats (including automatic control apparatus for refrigerating and heating)	861	920	4,701	4,112	33
Aeronautical instruments	..	2,203	..	922	..
Hearing-aids with valve amplification	..	1,540	..	7,076	17
Thermometers	..	954	..	980	13
Clinical					
Liquid in glass	6.178	1,593(d)	2.475	255	7
Other kinds	..	268	1.786	565	16
Laboratory instruments and apparatus (e)					
Baths, incubators and ovens	..	..	6.7	365	13
Centrifuges	..	..	2.4	110	5
Other (including blood diagnostic apparatus, microtomes and stills)	..	..	1.6	169	5
Meteorological					
Barometers, hydrometers, hygrometers and similar instruments	..	408	..	39	14
Other, e.g. barographs, hygrographs, thermographs, sunshine recorders, rain gauges, anemometers, etc.	..	128	..	14	..
Precision balances	7.7	178	8.0	94	10
Pyrometers and temperature gauges, recorders and controls	..	199	..	263	11
Other dial indicators and dial gauges	29	688	18.5	80	..
Precision measuring instruments	..	1,320	..	1,007	28
Micrometers	87	240	29.3	242	25
Other	..	899	..	1,362	..
Mathematical instruments and parts thereof	112	326	127.4	443	5
Land-surveying instruments not elsewhere specified (b)	..	105	..	498	..
Gunnery-control apparatus (other than optical) (f)	362	130	242.2	251	34
Nautical instruments not elsewhere specified	..	444	..	498	..
Echo-sounders	..	753	..	615	25
Other	..	216	..	60	..
Aeronautical instruments not elsewhere specified	..	1,271	..	1,703	17
Oxygen breathing apparatus (for aircraft, fire brigade, mine rescue, etc.) (b)	..	..	1.4	1,672	..
	..	2,603	..	2,470	29
	..	2,688	..	2,569	25
	..	514	..	910	6

TABLE 5 (contd.)

	1951		1954		
	Quantity	Value	Quantity	Value	Entries
Scientific, engineering, industrial, etc. instruments and apparatus not elsewhere specified (contd.)		£'000		£'000	Number
Scientific instruments and apparatus, and parts thereof, not elsewhere specified	..	4,679	..	6,786	115
Waste products	..	435	..	609	153
Work done (g)					
Ophthalmic prescription and repair work		3,547		2,723	107
Repair work on surgical instruments		175		168	38
Other repair work for customers		1,722		2,541	157
Other work done for the trade		639		993	64
Total		78,642		102,074	..
Sales in other industries (see Table 6)		5,524		8,142	..
Principal products of this industry sold by establishments in the industry		73,118		93,931	585

(a) Described in 1951 as 'Frames and mountings'.

(b) So far as separately recorded.

(c) Described as 'Sterilising equipment'.

(d) Divided in 1951 into 'Mercury in steel', 'Mercury in glass', 'Other kinds'.

(e) No separate information under this heading was recorded in 1951.

(f) Sales by establishments classified to the Scientific, Surgical and Photographic Instruments, etc. Industry only.

(g) Amount charged.

Sales of principal products of the industry by establishments
classified to other industries

Larger establishments in the United Kingdom

TABLE 6

	1954			Principal industries in which produced (a)
	Quantity	Value	Entries	
Ophthalmic instruments and appliances and parts thereof including metal frames for spectacles, pince-nez, eyeglasses and monocles and artificial eyes but excluding ophthalmic prescription work	..	154	..	4K, 11D, 11I
Other optical instruments and appliances (except photographic, cinematograph and ophthalmic) and parts thereof	..	454	8	1I, 4C, 4I, 4K
Dental appliances and equipment, including dental surgery and laboratory equipment and artificial teeth	..	15	..	2E, 4I, 11I
Medical, surgical, veterinary and dissecting instruments, appliances and equipment (other than optical, ophthalmic and electrical, and dressings)	Th.gross			
Surgeons' suture needles and hypodermic needles	21	49	5	5F, 5G
Instruments	..	6		
Sterilising equipment including autoclaves	..	16	..	2F, 5A, 5B
Aseptic hospital furniture	..	265	20	4I, 4K, 5E, 10D
Surgical sutures	..	620	34	2F, 3I, 5E
Surgical hosiery	..	99	..	2F, 11E
	Th.doz.			
Appliances including trusses and artificial limbs but excluding artificial eyes	57	222	12	6J, 6M, 7H
Other equipment including anaesthetic and resuscitation apparatus	..	48		
	..	53	6	2F, 4J, 7L, 11I
	..	318	12	3G, 3N, 4C, 5E

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TABLE 6 (contd.) SCIENTIFIC, SURGICAL AND PHOTOGRAPHIC INSTRUMENTS, ETC.

	1954			Principal industries in which produced (a)
	Quantity	Value	Entries	
Photographic and cinematograph apparatus and appliances	Thousands	£'000	Number	
Cameras, complete and developing, printing and enlarging apparatus	8	223	5	4K, 4M, 5F
Other photographic and cinematograph apparatus and accessories (except lenses and photographic chemicals)	..	95		
Cinematograph (including cinematograph projectors)	..	853	9	4C, 4K, 4M, 5E
Other	..	482	34	4C, 4K, 5E, 11I
Scientific, engineering, industrial, etc. instruments and apparatus not elsewhere specified (except optical)				
Electrical aeronautical instruments and thermostats	1,214	702	19	3K, 4I, 4K, 5F
Hearing-aids with valve amplification	..	354		
Thermometers (except clinical and liquid in glass)	14	81	5	3N, 4I, 4J, 5A
Pyrometers and temperature gauges, recorders and controls; and other dial indicators and dial gauges	..	23		
Precision measuring instruments	45	22	10	3N, 4C, 5I
Nautical instruments not elsewhere specified	..	205		
Aeronautical instruments not elsewhere specified	..	83	5	4M, 5C, 5I
Scientific instruments and apparatus and parts thereof not elsewhere specified	..	715	..	3K, 4K, 4M, 5I
Work done for the trade or on commission	..	1,449	29	(b)
	..	121	..	
Total		8,142	..	

(a) The volume number and industry references given are to the industries shown in the list at the back of this report.

(b) Production is widely distributed among other industries.

Sales in the industry of other than principal products

Larger establishments in the United Kingdom

TABLE 7

	1954	
	Quantity	Value
Electrical goods and apparatus		£'000
Electro-medical apparatus (excluding hearing-aids with valve amplification)	..	210
Radio, telecommunication and electronic apparatus and equipment	..	1,237
Other electrical goods and apparatus	..	1,873
Pressure gauges	..	213
Machine tools and other tools and implements	..	79
Motor and cycle instruments, accessories and parts	..	999
Other machinery and parts	..	620
Plastic goods and fancy articles	..	68
Other goods	..	3,722
Total		9,021

(88128)

Total make of intermediate products

Larger establishments in the United Kingdom

TABLE 8

	Returned in this industry (a)		
	1951	1954	
	Quantity	Quantity	Entries
	Th.doz.	Th.doz.	Number
Finished ophthalmic lenses, optically worked, mounted or unmounted	1,686	1,720	52

(a) No production by establishments classified to other industries was recorded.

Purchases of materials and fuel, 1954

Larger establishments in the United Kingdom

TABLE 9

	Quantity	Cost
	Th.cwt.	£'000
Materials		
Aluminium and aluminium alloys		
Castings, rough dressed	19	416
Other descriptions, except finished parts	..	118
Unclassified	2	37
Brass and other alloys of copper (excluding nickel alloys)		
Plates, sheets, strip, discs and circles	28	487
Other descriptions except finished parts	..	94
Unclassified	46	790
Steel		
Angles, shapes, sections, bars and rods (except sheet and tinplate bars)	13	223
Castings in the rough	..	280
Steel plates and sheets (including tin-, terne- and black-plates and sheets)	44	219
Iron and steel in all forms except finished parts	..	43
Unclassified	15	98
Metal components not elsewhere specified	..	54
Plastics materials		
Synthetic resins and moulding powders	29	110
Sheet, rod, tube, profile shapes and like products (other than cinematograph and photographic film base)	..	68
Components, accessories and semi-manufactured goods wholly or partly of plastics materials (other than lenses and spectacle, etc. frames)	39	172
	..	195
	63	259
	..	115
	29	748
	..	2,342
	5	93
	..	93
	7	341
	..	205
	1	86
	..	421

TABLE 9 (contd.)

	Quantity	Cost
	Th.sq.yds.	£'000
Materials (contd.)		
Cotton piece goods	1,155	192
Sheet glass	..	63
Optical glass (including spectacle crown glass) (other than lenses and blanks therefor)	Th.sq.ft. 5,059	148
Lenses and blanks therefor, unworked or semi-finished	..	44
Finished lenses optically worked	Th.cwt. 27	328
Ophthalmic	..	151
Other, including photographic and cinematograph	..	752
Frames, and mountings and parts thereof for spectacles, goggles, pince-nez, eyeglasses and monocles	Thousands 4,662	442
Photographic paper (not sensitised) and cinematograph and photographic film base (not sensitised)	..	300
Silver metal and silver nitrate	..	181
Rubber in all forms	..	1,413
Cases for instruments, appliances, etc.	Th.cwt. 211	4,029
Packing materials	..	2,075
Timber and containers made of timber (other than cases for instruments, appliances, etc.)	..	2,377
Cardboard boxes, cartons and fibre board packing cases	..	260
Other	..	302
Replacement parts for own machinery, plant and vehicles and consumable tools bought as replacement	..	333
All other purchased materials	..	1,370
Fuel and electricity	Th.tons	883
Coal	47	748
Coke	12	12,918
Liquid fuel (including creosote/pitch mixtures)	..	212
For use in internal combustion engines	Th.gal. 657	70
Motor spirit (petrol) for use in road vehicles and derv. fuel	..	9
Other	51	136
For burning in furnaces, boilers, kilns, etc.	..	17
Gas purchased from Gas Boards and other sources including other departments of the same firms	3,703	4
Electricity purchased from Electricity Boards and other sources including other departments of the same firms (a)	Th.therms 4,040	11
All other purchased fuel	..	155
	Th.kWh 72,749	250
	..	58
	..	477
	..	94
		4
Total cost		39,651

(a) Owing to the risk of disclosure of information relating to individual firms the total quantity of electricity generated in firms' own establishments cannot be given.

SCIENTIFIC, SURGICAL AND PHOTOGRAPHIC INSTRUMENTS, ETC.

Average number of employees and wages, salaries
and superannuation payments (a)TABLE 10
Larger establishments in the United Kingdom

	1951	1954
	Number	Number
Average number of employees		
Operatives	59,109	58,210
Administrative, technical and clerical employees	17,214	18,728
Total	76,323	76,938
	£'000	£'000
Wages and salaries paid to		
Operatives	19,602	23,647
Administrative, technical and clerical employees	8,220	10,811
Total	27,822	34,458
	£	£
Wages and salaries per head		
Operatives	332	406
Administrative, technical and clerical employees	478	577
		£'000
Superannuation and other pension funds for employees and dependents (b)		643
Employers' contributions	..	Number
		31,907
Employees covered	..	£'000
Pension, etc. payments to former employees and dependents (b)	..	84

(a) The following persons, not included above, were also employed by larger establishments in this industry, ('other workers' includes, for example, employees engaged in merchanting). Payments to outworkers are also shown:

	1951	1954
	Number	Number
Canteen workers		
Male	55	37
Female	676	759
Total	731	796
Other workers		
Male	927	674
Female	512	493
Total	1,439	1,167
Total excluded employees	2,170	1,963
Outworkers	678	503
	£'000	£'000
Payments to outworkers	77	72

(b) The figures given relate to larger establishments in Great Britain only.

Employment in a specified week (a)
Larger establishments in the United Kingdom

	Number					
	1951			1954		
	Males	Females	Total	Males	Females	Total
Working proprietors	81	5	86	56	1	57
Operatives	39,384	19,806	59,190	39,103	19,319	58,422
Administrative, technical and clerical employees	10,383	7,124	17,507	11,477	7,614	19,091
Total employees	49,767	26,930	76,697	50,580	26,933	77,513

(a) Week ended September 22, 1951, or October 30, 1954.

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