

BOARD OF TRADE

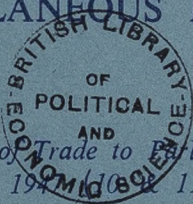
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*The Report on the
Census of Production
for 1954*

Volume 5: Industry C

CHAIN, NAIL, SCREW AND
MISCELLANEOUS FORGINGS

Presented by the Board of Trade to Parliament in pursuance of the
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The Report on the Census of Production for 1954

VOLUME 5 INDUSTRY C

CHAIN, NAIL, SCREW AND MISCELLANEOUS FORGINGS

THIS REPORT on the Chain, Nail, Screw and Miscellaneous Forgings Industry relates to establishments engaged wholly or mainly in the manufacture of bolts, nuts, screws, rivets, nails (other than wire nails), etc., laminated and other springs (including clock and watch springs), anchors and chains (other than transmission chains), steel drop forgings and miscellaneous iron forgings.

Miscellaneous steel forgings other than drop forgings are included in the report on the Iron and Steel (Melting and Rolling) Industry (see Volume 3, Industry B).

This industry corresponds to minimum list headings 91, 92 and 99(4) in the Standard Industrial Classification.

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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.

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 that 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 merchandising 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 merchandising 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	Wales
	1948	1951	1954	1954	1954
	£ million	£ million	£ million	£ million	£ million
Gross output (production)	91.5	129.0	143.1	11.91	5.92
Net output	48.2	61.3	67.0	5.14	2.85
Total stocks and work in progress					
At beginning of year	13.1	18.0	27.0	2.00	1.34
Change during year	+ 2.6	+ 3.1	- 0.5	- 0.08	- 0.10
Capital expenditure less disposals (a)	4.1	4.1	4.8	0.23	0.21
Wages and salaries	26.5	32.7	38.3	2.84	1.72
Total employment (including working proprietors)	Thousands	Thousands	Thousands	Thousands	Thousands
	88.0	92.6	88.5	6.64	4.19

(a) Capital expenditure on new building work, 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.	640	687	667	
Total value of sales and work done	£'000	81,298	117,331	131,611	
Products on hand for sale	"	5,082	7,267	11,133	
and work in progress	"	+ 834	+ 673	+ 369	
Gross output (production) (a)	"	81,282	118,004	131,980	
Purchases of materials and fuel	"	39,211	60,606	64,515	
Stocks of materials and fuel	"	6,588	9,179	13,783	
Change during year	"	+ 1,484	+ 2,134	- 820	
Cost of materials and fuel used	"	37,727	58,472	65,334	
Payment for work done on materials given out	"	719	1,416	2,776	
Payment for transport (b)	"	850	1,991	2,074	
Net output	"	42,836	56,125	61,795	
Average number of employees	{ operatives others	No.	67,317	72,071	68,439
Total employment (d)	"	10,786(c)	12,580	13,129	
Net output per person employed (d)	"	£	78,247	84,765	81,639
	"		547	662	757
Wages and salaries	{ of operatives of others	£'000	18,779	23,513	27,622
	"	"	4,762	6,412	7,726
Capital expenditure					
New building work (e)	"	£	577	660	889
Plant and machinery	{ acquisitions (e) disposals	"	2,972	2,944	3,424
	"	"	130	175	208
Vehicles	{ acquisitions (e) disposals	"	260	467	546
	"	"	45	117	195
FIRMS EMPLOYING ON AVERAGE 10 OR FEWER PERSONS					
Number of returns	No.		3,197	2,427(f)	1,587
Total employment, including working proprietors	"		8,664	6,636(f)	5,164

(a) 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.

(b) 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.

(c) Number in week ended September 25, 1948.

(d) Excluding outworkers and including working proprietors.

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

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

CHAIN, NAIL, SCREW AND MISCELLANEOUS FORGINGS

Analysis by size, 1954

Larger establishments in the United Kingdom

TABLE 3

Average number employed (a)	Estab-lish-ments	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)	162	3,666	1,859	2,271	457	835	265	141	672
25 - 49	186	9,752	4,858	5,943	1,036	2,234	606	335	694
50 - 99	134	12,923	6,335	7,830	1,235	2,955	836	500	698
100 - 199	92	20,206	9,703	10,747	1,920	4,072	1,152	742	766
200 - 299	28	10,584	4,918	5,888	931	2,347	511	530	721
300 - 399	22	12,746	6,061	6,416	1,130	2,667	707	363	803
400 - 499	16	11,410	5,425	6,147	1,177	2,636	684	490	741
500 - 749	13	12,673	6,233	5,972	1,350	2,456	823	803	851
750 - 999	3	4,281	1,480	2,072	414	799	271	32	595
1,000 and over	11	33,740	14,924	15,153	3,479	6,621	1,868	921	801
Total	667	131,980	61,795	68,439	13,129	27,622	7,726	4,858	757

(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 a small number of 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	Specialist producers of						Remain-der of the indus-try	Total
		Anchors and chains	Lamin-ated springs	Springs other than laminated		Bolts, nuts, screws, rivets, nails, etc.(a)	Steel drop forg-ings		
				Uphol-stery and mattress	Other				
Number of establishments	No.	51	38	46	75	269	80	108	667
Total value of sales and work done	£'000	6,557	6,224	5,003	5,927	52,531	40,058	15,312	131,611
Sales of characteristic products	"	5,495(b)	5,538	4,604	4,971	47,928	36,661		
Products on hand for sale and work in progress	"	742	329	156	166	6,035	2,273	1,433	11,133
Gross output (production)	"	+ 26	- 32	+ 10	+ 13	+ 276	+ 23	+ 54	+ 369
Purchases of materials and fuel	"	3,255	3,411	2,448	2,213	24,443	21,774	6,970	64,515
Stocks of materials and fuel	"	978	678	301	495	4,967	4,641	1,723	13,783
Cost of materials and fuel used	"	- 1	- 57	+ 38	+ 46	- 246	- 459	- 140	- 820
Payment for work done on materials given out	"	3,256	3,469	2,409	2,168	24,689	22,233	7,110	65,334
Payment for transport	"	97	17	4	59	474	1,995	131	2,776
Net output	"	125	133	129	78	825	509	275	2,074
Average number of employees	No.	3,104	2,573	2,471	3,634	26,819	15,343	7,851	61,795
Total employment (c)	"	3,325	2,678	4,152	5,140	30,507	14,332	8,305	68,439
Net output per person employed (c)	"	554	599	522	791	5,706	2,665	2,292	13,129
Wages and salaries	£	3,885	3,282	4,676	5,940	36,237	17,001	10,618	81,639
Capital expenditure	"	799	784	528	612	740	902	739	757
New building work (d)	"	1,463	1,278	1,186	1,810	11,201	7,280	3,404	27,622
Plant and machinery	"	334	381	361	480	3,327	1,583	1,260	7,726
Vehicles	"	42	50	49	23	485	144	94	889
acquisitions (d)	"	147	153	112	130	1,654	993	234	3,424
disposals	"	18	7	8	2	137	23	14	208
acquisitions (d)	"	23	41	35	37	229	83	98	546
disposals	"	8	11	9	14	105	23	26	195

(a) Including bifurcated rivets made from wire, but excluding wire nails, staples, etc.

(b) Including amounts charged for proving chain cables and anchors for the trade or on commission.

(c) Excluding outworkers and including working proprietors.

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

CHAIN, NAIL, SCREW AND MISCELLANEOUS FORGINGS

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. tons	£'000	Th. tons	£'000	Number
Iron and steel					
Anchors and grapnels and parts thereof	4.2	309	3.6	310	8
Ships' stud-link chain cable			..	45	
Of iron	7.4	532	6.7	646	17
Of steel	..	73			
Chains (excluding transmission chains)	10.7	863	10.8	1,168	5
Welded and forged chain, unstudded					
Of steel, electrically welded	6.2	680	6.9	838	25
Of iron, hand-made	6.1	636	4.0	438	24
	..	85	..	168	
Shackles, forged or cast, and other gear (e.g., swivel pieces, slips) for use with chain cable, mooring, hauling or lifting gear	4.1	448	3.2	473	23
	..	116	..	290	
Crane chains, wrought iron and steel	3.2	345	2.6	362	17
			..	54	
Chain tackle	3.0	390	2.7	459	18
Other chains	4.6	541	5.8	719	32
	..	105	..	388	
Springs					
Laminated					
For road vehicles	58.1	5,410	56.8	6,070	44
For locomotives, carriages and wagons	21.6	1,583	22.8	2,075	13
Other	0.6	147	0.9	226	16
	..	165	..	213	
Other than laminated					
Upholstery and mattress springs (including spring seating and mattress interiors)	30.9	3,910	27.4	3,640	59
	..	808	..	1,759	
Valve, shock absorber and similar engine springs	3.8	914	2.6	851	28
	..	101	..	314	
Other	13.5	3,195	11.9	2,600	79
	..	833	..	1,786	
Unclassified	6.4	1,282	3.0	490	14
	..	341	..	1,700	
Fencing material of iron and steel, other than of wire (e.g., gates, grilles, fences, standards, trellis)	21.8	2,032	21.6	2,387	72
	..	288	..	532	
Boot and shoe grindery					
Made from wire	6.1	597	6.0	666	12
Other (including clog irons)	1.8	178	1.9	272	18
	..	43	..	63	
Nails, including cut nails (a)	16.7	870	12.2	681	23
	..	150	..	199	
Tacks (a)	5.4	521	3.3	327	14
Studs and spikes (other than boot and shoe studs and spikes and screw studs)	0.5	38	0.3	17	9
	..	69	..	52	
Horse shoes (sold as such)	1.9	111	1.3	174	8
	..	115				..	31
Saddlery hardware, not elsewhere specified (b)	..	115			

TABLE 5 (contd.)

	1951		1954		
	Quantity	Value	Quantity	Value	Entries
	Th. tons	£'000	Th. tons	£'000	Number
Iron and steel (contd.)					
Rivets (other than tubular or bifurcated rivets manufactured from wire)					
Of ½ inch in diameter or over	35.6	1,338	24.9	1,234	15
Under ½ inch in diameter	15.0	906	9.0	610	35
Unclassified		245	..	500	
Bifurcated rivets made from wire	14.7	1,346	9.2	729	46
Washers (other than washers assembled with bolts, etc.)	..	248	..	651	..
	Mn.		Mn.		
Tubular rivets	472	208	532	210	6
	..		..	51	..
	Th. gross	Th. tons	Th. gross	Th. tons	
Bolts, whether threaded or not, bolt ends, hexagon or square head set screws and screw studs, hexagon and square nuts, whether tapped or not, and washers assembled with any of these articles	10,042	16.6	2,975	4,592	8.1
	5,251	..	2,321	6,950	..
Bright	..	14.6	2,401	..	9.7
	..	..	820	..	..
	8,337	61.6	5,391	3,978	26.1
Black or metal coated (but not painted, japanned or otherwise coated, except with metal)	7,191	..	2,168	3,850	..
	..	100.4	7,553	..	97.8
	3,730	11.6	2,073	1,367	4.3
	579	..	419	746	..
All other kinds	..	2.2	342	..	2.1
	..	..	516	..	..
	519	..	111	712	4.6
Unclassified	..	1.2	87	..	4.7
	..	..	513	..	..
Other set screws, screw studs and screws for metal, nuts, and washers assembled with any of these articles					
Black or metal coated (but not painted, japanned or otherwise coated, except with metal)	766	3.8	537	139	0.2
	10,110	..	1,885	2,998	..
	..	..	..	..	0.3
All other kinds	13,701	7.8	1,239	6,188	3.5
Screws for wood; screw hooks, screw rings and screw knobs; and coach screws, so far as recorded separately	49,943	..	4,407	42,628	..
	..	..	190	..	3.9

	Th. tons		Th. tons		
Hooks, fasteners and shackles, not elsewhere specified	2.2	581	1.4	490	23
	..	543	..	886	..
Moulders' chaplets (b)	0.6	86	..	108	..
Forgings in the rough and machined, not elsewhere specified					
Iron	0.7	76	0.6	54	15
	..	114	..	127	..
Steel drop forgings (c)					
Of alloy steel	114.5	15,736	172.3	24,305	73
Of non-alloy steel	157.2	15,579	149.5	18,221	104

(continued on next page)

TABLE 5 (contd.)

	1951		1954		
	Quantity	Value	Quantity	Value	Entries
	Th. cwt.	£'000	Th. cwt.	£'000	Number
Brass (including all alloys of copper, but excluding nickel alloys other than nickel silver)					
Rivets (other than tubular) and washers	16.0	331	7.0	183	29
	..	..	237	..	
	Th. gross	Th. cwt.	Th. gross	Th. cwt.	
Bolts and nuts	3,431	23.6	460	7.3	41
	1,065	..	533	..	
	..	..	..	..	459
	Th. cwt.		Th. cwt.		
Nails and tacks	9.1	156	4.0	87	13
Screws for wood; and coach screws, screw hooks, screw rings, screw knobs, and screws for metal, so far as recorded separately	..	895	..	1,450	12
	Mn.		Mn.		
Tubular rivets	841	715	784	794	6
	Th. cwt.		Th. cwt.		
Springs (b)	..	52	..	61	13
Copper					
Nails and tacks	11.3	192	9.2	189	11
	Mn.		Mn.		
Tubular rivets	381	184	402	221	5
	Th. cwt.		Th. cwt.		
Rivets (other than tubular) and washers	6.8	153	6.4	159	19
	..	27	..	29	
Springs (b)	..	30	..	8	..
Other manufactures					
Rivets of aluminium	11.1	473	6.3	315	21
	..	233	..	296	
Taper pins of all metals	28.4	358	21.4	353	13
	..	423	..	609	
	Th. gross		Th. gross		
Screw machine products (e.g., turned screws, rivets, washers), not elsewhere specified					
Of iron and steel	4,319	1,129	5,721	1,097	84
	..	1,598	..	1,833	
Of brass and other copper alloys, including nickel silver and cupro-nickel, but excluding other nickel alloys	13,146	3,346	15,019	3,148	76
	..	920	..	1,263	
Of copper	..	217	..	121	13
Of other metals	1,154	299	310	120	37
	..	154	..	236	
Of unclassified metals other than iron and steel	..	16	..	33	..
Other screws, nuts, bolts, nails, etc., not of iron, steel, brass or copper (b)	..	26	..	53	12
General and jobbing work (including repair work, wheelwrighting and horse-shoeing) (d)		1,081		1,083	73
Work done for the trade or on commission (d)					
Proving chain cables and anchors		190		196	12
Other		401		513	45
Total		116,602		133,441	..
Sales in other industries (see Table 6)		12,543		14,912	..
Principal products of this industry sold by establishments in the industry		104,059		118,529	613

(a) For sales of nails and tacks (including staples, other than insulated) made from wire, see the Wire and Wire Manufactures Industry (Volume 5, Industry D).

(b) So far as recorded separately.

(c) Excluding axles, tyres and wheels. For sales of axles, tyres, wheels and steel forgings other than drop forgings, see the Iron and Steel (Melting and Rolling) Industry (Volume 3, Industry B).

(d) Amount charged.

(86153)

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	
	Th. tons	£'000	Number	
Iron and steel				
Chains (excluding transmission chains)				
Shackles, forged or cast, and other gear (e.g., swivel pieces, slips) for use with chain cable, mooring, hauling and lifting gear	..	54	..	3M, 4G, 4L
Other chains, excluding crane chains, wrought iron and steel; ships' stud-link chain cable of steel; and anchors and grapnels and parts thereof	{ 2.1 ..	{ 193 34	{ 12	3B, 4K, 5D, 5F
Springs				
Laminated				
For road vehicles	13.4	1,260	6	3B, 5G
For locomotives, carriages and wagons	14.8	1,343	8	3B, 3L, 3M
Other	..	39	..	3B, 5F
Other than laminated				
Upholstery and mattress springs (including spring seating and mattress interiors)	{ 4.7 ..	{ 396 272	{ 15	4I, 5D, 6N, 10B
Other, including valve, shock absorber and similar engine springs	..	234	9	3K, 3M, 4G, 5E
Unclassified	{ 3.0 ..	{ 475 1,079	{ ..	3B, 4I, 5D, 5G
Fencing material of iron and steel, other than of wire (e.g., gates, grilles, fences, standards, trellis)	{ 4.1 ..	{ 354 352	{ 32	3B, 4F, 5D, 12A
Boot and shoe grindery, other than made from wire (including clog irons); and studs and spikes (other than boot and shoe studs and spikes and screw studs)	{ 0.5 ..	{ 79 22	{ 5	3B, 3C, 5E, 7L
Nails, including cut nails	{ 1.3 ..	{ 75 85	{ 6	3B, 3C, 5E, 5G
Rivets (including tubular rivets and bifurcated rivets manufactured from wire)	{ 4.5 ..	{ 227 205	{ 5	3B, 5E, 5G
Washers (other than washers assembled with bolts, etc.)	{ 2.0 ..	{ 133 18	{ 8	3B, 3D, 4I, 5E
Bolts, whether threaded or not, bolt ends, hexagon or square head set screws and screw studs, hexagon and square nuts, whether tapped or not, and washers assembled with any of these articles	{ 2.3 ..	{ 363 855	{ 15	3B, 3I, 4M, 5E
Other set screws, screw studs and screws for metal, nuts, and washers assembled with any of these articles (other than black or metal coated)				
Hooks, fasteners and shackles, not elsewhere specified; and saddlery hardware, not elsewhere specified	{ 0.3 ..	{ 94 51	{ 10	3C, 4K, 5E, 5F
Forgings, in the rough and machined, not elsewhere specified				
Iron				
Steel drop forgings	{ 21.0 ..	{ 3,079 531	{ 17	3B, 3I, 4I, 5A
Of alloy steel				
Of non-alloy steel	{ 9.7 ..	{ 1,072 543	{ 27	3B, 3M, 4C, 4I

TABLE 6 (contd.)

	1954			Principal industries in which produced (a)
	Quantity	Value	Entries	
	Th.cwt.	£'000	Number	
Other manufactures				
Bolts, nuts and tubular rivets of brass (including all alloys of copper, but excluding nickel alloys other than nickel silver); rivets of aluminium; and taper pins of all metals	{ 18.7 ..	{ 337 696	{ 7	3B, 3I, 4K, 5G
Screw machine products (e.g., turned screws, rivets, washers), not elsewhere specified				
Of iron and steel	..	86	5	3I, 4I, 5E
Of other metals	..	260	6	3G, 4K, 5E
General and jobbing work (including repair work, wheelwrighting and horse-shoeing); and work done for the trade or on commission (b)		14	..	
Total		14,912	..	

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

(b) Amount charged.

Sales in the industry of other than principal products

Larger establishments in the United Kingdom

TABLE 7

	1954	
	Quantity	Value
	Th. tons	£'000
Manufactures of iron and steel		
Wire nails and tacks (including staples, other than insulated)	5.3	324
Wire and other manufactures of wire	{ 2.5 ..	{ 172 107
Tools and implements	..	188
Railway spikes	5.7	407
Stampings and pressings	{ 3.9 ..	{ 888 689
Builders' ironmongery	1.6	138
Fabricated iron and steel	{ 0.2 ..	{ 35 52
Steel forgings, other than drop forgings		
Of alloy steel	4.3	659
Of non-alloy steel	{ 13.3 ..	{ 1,502 241
Other iron and steel manufactures, not elsewhere specified	..	1,532
Manufactures of non-ferrous metals, not elsewhere specified		
Stampings and pressings	{ 0.2 ..	{ 154 181
Other		
Of brass	{ 0.1 ..	{ 42 128
Of other non-ferrous metals	..	25
Parts and accessories of motor vehicles and cycles	..	1,210
Principal products of the mechanical engineering industries		
Agricultural machinery (other than tractors) and parts	..	493
Machine tools and parts	..	181
Other machinery and parts	..	392

TABLE 7 (contd.)

	1954	
	Quantity	Value
	Th. tons	£'000
Other goods	..	767
Scrap metals sold	167.4	1,011
Iron and steel	..	342
Brass	7.0	1,083
Copper	0.1	20
Other metals	..	11
Other metals	0.9	58
Other metals	..	8
Other metals	..	42
Work done (a)		13,082
Total		

(a) Amount charged.

TABLE 8 - Total make of intermediate products
Larger establishments in the United Kingdom
This table is not applicable to the industry.

Purchases of materials and fuel, 1954
Larger establishments in the United Kingdom

TABLE 9

	Quantity	Cost
	Th. tons	£'000
Materials		
Iron	2.0	131
Iron castings in the rough	..	73
Other iron except finished parts	12.8	550
Steel	278.8	13,189
Ingots, blooms, billets, slabs and sheets and tinsplate bars	357.4	15,391
Angles, shapes, sections, bars, rods, girders, beams, joists and pillars (not fabricated)	160.0	8,420
Wire (single wire)	9.6	561
Forgings (except drop forgings) in the rough	30.6	1,237
Sheets and plates (excluding tinned-, terne- and black-plates and sheets) 1/8 in. thick and over, and hoop and strip (including tape) of all thicknesses	63.6	3,189
Iron and steel in all forms not specified elsewhere except finished parts and scrap	..	891
Brass and other copper alloys, including nickel silver and cupro-nickel, but excluding all other nickel alloys	8.1	2,042
Wire	10.4	2,712
In all forms except finished parts and scrap	1.3	417
Copper, in all forms except finished parts and scrap		

(continued on next page)

Purchases of materials and fuel, 1954
Larger establishments in the United Kingdom

TABLE 9 (contd.)

	Quantity	Cost
	Th. tons	£'000
Materials (contd.)		
Aluminium (a)	0.4	186
Packing materials	..	34
Cardboard boxes, cartons and fibreboard packing cases	Th.cwt.	
Jute piece goods, including hessian and jute sacks	29.5	137
All other packing materials	..	204
Replacement parts for firms' own machinery, plant and vehicles	..	309
Consumable tools bought as replacements including engineers' small tools, jigs, fixtures and measuring instruments	..	258
All other purchased materials	..	1,736
Unclassified	..	1,382
Fuel and electricity	Th. tons	
Coal	160.2	607
Coke	60.9	336
Liquid fuel (including creosote/pitch mixtures)	Th.gal.	
For use in internal combustion engines	1,462	297
Motor spirit (petrol) for use in road vehicles and deriv. fuel	93	6
Other	..	28
For burning in furnaces, boilers, kilns, etc.	24,591	1,066
Gas purchased (b)	Th. therms	
From Gas Boards	14,945	740
From other sources, including other departments of the same firms	..	248
Electricity purchased (c)	Mn.cu.ft.	
All other purchased fuel	130	8
Unclassified	..	32
Total cost	Th.kWh.	
Total cost	306,947	1,518
Total cost	..	29
Total cost	..	48
Total cost		64,515

(a) So far as recorded separately.

(b) Owing to the risk of disclosure of information relating to individual firms the total quantity of gas produced, in firms' own establishments cannot be given.

(c) The total quantity of electricity generated in firms' own establishments in this industry in 1954 was 930 Th.kWh.

Average number of employees, and wages, salaries
and superannuation payments (a)

Larger establishments in the United Kingdom

TABLE 10

	1951	1954
	Number	Number
Average number of employees		
Operatives	72,071	68,439
Administrative, technical and clerical employees	12,580	13,129
Total	84,651	81,568

TABLE 10 (contd.)

	1951	1954
	£'000	£'000
Wages and salaries paid to		
Operatives	23,513	27,622
Administrative, technical and clerical employees	6,412	7,726
Total	29,925	35,347
	£	£
Wages and salaries per head		
Operatives	326	404
Administrative, technical and clerical employees	510	588
Superannuation and other pension funds for employees and dependents (b)		£'000
Employers' contributions	..	382
Employees covered	..	Number 22,697
		£'000
Pension, etc. payments to former employees and dependents (b)	..	108

(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):

	1951	1954
	Number	Number
Canteen workers		
Males	41	40
Females	843	821
Total	884	861
Other workers		
Males	191	188
Females	132	87
Total	323	275
Total excluded employees	1,207	1,136

Outworkers. The firms in this industry employed 134 male and 537 female outworkers in 1951 and 77 male and 415 female outworkers in 1954, the amounts paid to them being £91,000 and £71,000 respectively.
(b) The figures given relate to larger establishments in Great Britain only.

Employment in a specified week (a)

Larger establishments in the United Kingdom

	1951			1954		
	Males	Females	Total	Males	Females	Total
Working proprietors	112	2	114	69	2	71
Operatives	46,519	24,921	71,440	46,094	23,285	69,379
Administrative, technical and clerical employees	7,420	5,236	12,656	7,819	5,486	13,305
Total employees	53,939	30,157	84,096	53,913	28,771	82,684

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

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