

THE SMALL ARMS TRADE (PRIVATE FIRMS).

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Introductory.*

The tables on pages 199 to 202 are based on returns received from firms in Great Britain whose business in 1924 consisted wholly or mainly in the manufacture of small arms, parts of small arms, and cartridges. The number of such separate returns was 132. About 45 firms to which schedules were sent did not furnish returns, but these firms for the most part had very small establishments and they included some which had ceased operations before the end of the censal year. On the basis of the information available it is estimated that they did not employ more than 100 persons in all and that their total net output probably did not exceed £18,000. No production was recorded for Northern Ireland in 1924.

Summary of results.—The following table shows the main results of the Censuses of 1924 and 1907, comparisons between the figures for the three years being subject to the qualifications mentioned in the next paragraph; the information received in connexion with the Census of 1912, when details of output were not required from firms employing five persons or less, was not sufficiently complete to warrant its being used for purposes of comparison.

* See also the Notes on pages vii-xv.

Particulars.	Unit.	1924.	1907.
Value of goods made and work done (Gross output)	£'000	748	738
Cost of materials used	"	263	176
Paid for work given out to other firms	"	16	24
Net output	"	469	538
Average number of persons employed (excluding outworkers)	No.	2,440	4,855
Net output per person employed (excluding outworkers)	£	192	111
Mechanical power available :—			
Prime movers	H.P.	263	2,619
Electric motors driven by purchased electricity	"	2,860	(not recorded).

Qualifications affecting comparisons.—In considering the above table and the other tables in this report which show figures for different censal years, it should be borne in mind that :—

(1) The comparability of figures relating to value or cost is affected by the changes which have taken place in the general purchasing power of money.

(2) The Census of 1907 covered Great Britain and the whole of Ireland, but that of 1924 applied only to Great Britain and Northern Ireland. The output of small arms was not published separately in connexion with the Census of 1926 conducted by the Irish Free State, but the exclusion of Southern Ireland in 1924 cannot seriously affect the comparability of the figures.

Value of output and cost of materials.—The figures in the above table representing the value of goods made and work done and the cost of materials used, are the aggregates of the figures recorded by the firms that made returns, and, for the reasons explained in paragraphs (i) and (ii) on pages xii and xiii, they probably overstate the value of the output of, and the cost of materials used by, the Small Arms Trade considered as a whole. The matter is discussed on pages 195 and 196, where it is estimated that the value, free from duplication, of the output of the Small Arms Trade in 1924 was about £721,000, and the cost of materials purchased from sources outside the trade and worked up into its products was about £248,000.

Production.

Detailed information relating to the output of the Small Arms Trade in 1924 will be found in Table II on page 200.

In addition to the output dealt with in this report, small arms, parts, etc., valued, on a cost basis, at £307,000, were produced in 1924 by the Royal Army Ordnance Department.* The corresponding figure for 1907 was £312,000.

Small arms, parts and accessories.—The following table shows, for the years 1924 and 1907, the value and (where recorded) the quantity

* Such production falls within the scope of the report on Public Utility Services which forms part of a separate volume.

of the small arms, etc., returned, the figures for each year being inclusive of the output of similar products recorded on schedules for other trades (£14,000 in 1924), but exclusive of the output of Government Ordnance Factories.

Kind of goods.	1924.	1907.
	Selling value.	Selling value.
Sporting guns, carbines and rifles	£'000. 307 (25·8)	£'000. 285 (54·2)
Military rifles and carbines, miniature rifles, airguns, revolvers, swords, cutlasses, bayonets, and other arms not firearms	107	316
Total—Small arms	414	601
Tubes, barrels and other parts and accessories of firearms, etc.	101	71
TOTAL—SMALL ARMS, PARTS AND ACCESSORIES ..	515	672

The output of sporting guns, etc., in 1924 was less than one-half of the number made in 1907. The production of other kinds of arms also seems to have diminished considerably, but a quantitative measure of the decline cannot be given.

Other products.—In addition to the small arms, etc., shown in the preceding table, firms that made their returns on schedules for the Small Arms Trade recorded, for each of the censal years, an output of other goods as set out below. These goods, being of kinds mainly produced by other trades, are dealt with in the reports on those trades :—

Kind of goods.	1924.	1907.
	Selling value.	Selling value.
Small arms ammunition	£'000. 156	£'000. 24
Other manufactures of iron and steel	29	14
Other goods	1	1
TOTAL VALUE	186	39

Repair work and work done for the trade.—Firms that made their returns on schedules for the Small Arms Trade stated that in 1924 they received £49,000 for repair work and £12,000 for filing, engraving and other work done on commission or for the trade. The corresponding figures for 1907 were £27,000 for repair work and £14,000 for work done for the trade.

Value of output free from duplication.—There was probably some duplication in respect of parts of small arms sold by the makers to other firms in the Small Arms Trade for use in manufacture or repair ; the amount of this duplication may be estimated as not exceeding £15,000. The sum of £12,000 received for filing, engraving and

other work done for the trade was also, for the most part, probably duplicated. The value of the output, free from duplication, of the Small Arms Trade in 1924 may, therefore, be estimated at about £721,000. The corresponding figure for 1907 lay between £677,000 and £724,000.

Cost of materials and work given out.—The cost of materials used by firms that made their returns on schedules for the Small Arms Trade was returned as £263,000 in 1924, a sum which, by the exclusion of purchases of the products of other firms in the same trade, is reduced to about £248,000; the cost of materials in 1907 lay between £129,000 and £176,000.

The amount paid to other firms for work given out to them was returned as £16,000 in 1924 and £24,000 in 1907.

Net output.—The net output in 1924 of the firms that made their returns on schedules for the Small Arms Trade (whose gross output was valued at £748,000) was £469,000, that sum representing, without duplication, the total amount by which the value, as delivered, of the aggregate output exceeded the cost, as purchased, of the materials used and the amount paid to other firms for work given out to them.

The net output per head of persons employed (excluding out-workers) in the censal year 1924 was £192 as compared with £111 in 1907.

Exports and imports.—The following table shows the exports and net imports of the various kinds of small arms and parts thereof in 1924.

Small arms and parts.	Exports.		Net imports.	
	Quantity.	Value f.o.b.	Quantity.	Value c.i.f.
	Number.	£'000.	Number.	£'000.
Small arms:—				
Sporting guns	28,777	180	22,808	39
Sporting carbines and rifles ..	5,694	53	1,776	5
Military rifles and carbines ..	40,781	145	52	†
Miniature and cadet rifles and carbines	726	2	997	1
Air guns and rifles	4,380	11	38,594	10
Revolvers and pistols	5,681	16	1,355	2
Swords, cutlasses, bayonets and other arms, not firearms ..	19,657	14	2,253	1
TOTAL VALUE—SMALL ARMS..	..	421	..	58
Parts of small arms:—				
Tubes to be made into barrels..	212	†	2,064	†
Barrels without actions fitted..	9,364	15	53,991	7
Barrels with actions fitted ..	2,303	6	485	†
Actions for small arms, not fitted	12,867	3	*	*
Other parts .. .. .	..	33	..	4

* Re-exports in excess of imports by 12,120, and, in value, by £587.

† Less than £500.

Comparisons cannot be made with the figures of production in the above detail because of the risk of disclosing the business of individual firms. It will be noted, however, that the number of sporting guns, carbines and rifles exported was largely in excess of the number returned as manufactured in the year. The aggregate value (£188,000) of the exports of military rifles, miniature rifles, air guns, revolvers, swords, cutlasses, etc., is also considerably greater than the value (£107,000) recorded for production in the censal year. The reason for these differences is that a large proportion of the exports probably consisted of guns, rifles, etc., made in earlier years or sold second-hand after reconditioning. It should be borne in mind that the above figures for exports may include some rifles, etc., manufactured in Government Ordnance factories; the output of these establishments is excluded from the figures of production given on page 195.

Exports of sporting and military rifles, etc., in 1907 numbered 133,874; revolvers and pistols, 6,969; and swords, cutlasses, etc., 6,465. Retained imports of sporting and military rifles, etc., in that year numbered 26,384; revolvers and pistols, 15,277; and swords, etc., 15,548.

Wages in 1924.

Under the Census of Production Act, 1906, the powers of the Board of Trade to require information do not extend to particulars of the amount of wages paid, and, consequently, no information on this head was secured in connection with the Census of 1924. As a result, however, of the voluntary enquiry undertaken by the Ministry of Labour into wages and hours in the United Kingdom in 1924, information was obtained as to the total wage-bill of a group of firms in the Small Arms Trade which made returns both to the Ministry of Labour and to the Census of Production office. According to the Census records this group of firms employed, in the week ended 18th October, 1924, 1,586 operatives, or 73 per cent. of the total of 2,161 operatives for the trade as a whole, and their net output totalled £296,000, or 63 per cent. of the aggregate net output of £469,000 for the trade as a whole. The total wage-bill of these firms, as returned to the Ministry of Labour, was £215,000, representing about 73 per cent. of their aggregate net output.

Employment.

The detailed information relating to employment in 1924 is summarised in Table III on pages 201 and 202. The following table sets out certain particulars for that year together with those relating to the 1907 Census. For the purpose of this comparison, the average numbers of operatives of each sex returned for 1924 have been divided between the two age-groups in the proportions shown by the data relating to the week ended 18th October.

Average number (excluding outworkers).	Males.		Females.		Males and females.	
	Under 18.	All ages.	Under 18.	All ages.	Under 18.	All ages.
1924.						
Operatives	321	1,922	62	144	383	2,066
Administrative, etc. ..	24	287	22	87	46	374
TOTAL	345	2,209	84	231	429	2,440
1907.						
Wage earners	425	4,306	24	138	449	4,444
Salaried	27	369	7	42	34	411
TOTAL	452	4,675	31	180	483	4,855
Average number of outworkers.						
1924		324		5		329
1907						

The numbers of operatives recorded month by month in 1924 ranged from 95 above the average, in October, to 162 below the average, in January (see Table III B, page 201).

Mechanical Power.

The detailed information relating to mechanical power in 1924 is summarised in Table IV on page 202. The following table sets out the particulars for 1924 and 1907 relating to the capacity and kinds of *prime movers* installed.

Power equipment.	1924.			1907.
	Ordinarily in use.	In reserve or idle.	Total.	Total.
	H.P.	H.P.	H.P.	H.P.
PRIME MOVERS :—				
Reciprocating steam engines ..	—	—	—	745
Gas engines	187	—	187	1,874
Petrol and light oil engines ..	—	6	6	
Heavy oil engines	30	40	70	
TOTAL	217	46	263	2,619

Electric generators.—No electric generators were recorded for 1924 but in 1907 generators with a total capacity of 981 kilowatts were returned, of which 100 kilowatts were developed by generators driven by reciprocating steam engines and the remainder by generators driven by internal combustion engines.

Electric motors.—Electric motors of a total capacity of 2,860 horse-power (all driven by purchased electricity) were recorded for 1924, those with a capacity of 1,896 horse-power being returned as ordinarily in use during the year and the remainder in reserve or idle.

Corresponding information was not required for 1907. The total number of Board of Trade units of electricity purchased for power and lighting purposes in that year was returned as 36,000.

TABLES.

I.—Summary of results.

Note.—No production was recorded for Northern Ireland.

Particulars.	Unit.	England and Wales.	Scotland.	Great Britain.
Value of goods made and work done (Gross output)	£'000.	725	23	748
Cost of materials used	"	250	13	263
Paid for work given out to other firms	"	15	1	16
Net output	"	460	9	469
Average number of persons employed (excluding outworkers)	No.	2,377	63	2,440
Net output per person employed (excluding outworkers)	£	194	132	192
Mechanical power available :—				
Prime movers	H.P.	255	8	263
Electric motors driven by purchased electricity	"	2,851	9	2,860

II.—Production.

Goods sold or added to stock.	Great Britain.*	
	Selling value.	
	£'000.	(Thousands)
Sporting guns	281	(24.9)
Sporting carbines and rifles	26	(0.9)
Military rifles and carbines, miniature and cadet rifles and carbines, air guns and rifles, revolvers and pistols, swords, cutlasses, bayonets, and arms of other sorts, not firearms	104	
Total value—Small arms	411	
Parts of small arms :—		
Tubes, barrels (with or without actions fitted) and actions not fitted to barrels	34	
Other parts of small arms	31	
Gun implements and shooting accessories	25	
Total value—Parts and accessories	90	
Small arms ammunition :—		
Military (including empty cases)	11	
Sporting (including empty cases and shot)	145	
Other manufactures of iron and steel	29	
Other goods made	1	
TOTAL VALUE OF GOODS MADE	687	
Repair work	49	
Work done on commission or for the trade (filing, engraving, etc.)	12	
TOTAL VALUE OF WORK DONE	61	
TOTAL VALUE OF GOODS MADE AND WORK DONE (GROSS OUTPUT)	748	

* In order to avoid the possible disclosure of information relating to individual firms, figures are given only for Great Britain as a whole.

III.—Employment.

A.—NUMBERS EMPLOYED IN WEEK ENDED 18TH OCTOBER, 1924
(EXCLUDING OUTWORKERS).

Kind of staff.	Males.		Females.		Males and females.	
	Under 18.	All ages.	Under 18.	All ages.	Under 18.	All ages.
<i>England and Wales :—</i>						
Operatives	326	1,964	68	150	394	2,114
Administrative, etc.*	21	272	22	82	43	354
TOTAL	347	2,236	90	232	437	2,468
<i>Scotland :—</i>						
Operatives	9	41	—	6	9	47
Administrative, etc.*	3	15	—	5	3	20
TOTAL	12	56	—	11	12	67
<i>Great Britain :—</i>						
Operatives	335	2,005	68	156	403	2,161
Administrative, etc.*	24	287	22	87	46	374
TOTAL	359	2,292	90	243	449	2,535

* Administrative, technical and clerical staff.

B.—OPERATIVES EMPLOYED IN ONE WEEK IN EACH MONTH OF 1924.

England and Wales. (Annual average : Males, 1,884 ; Females, 139 ; Total, 2,023.)

Week ended	Males.	Females.	Total.	Week ended	Males.	Females.	Total.
Jan. 12th ..	1,746	116	1,862	July 19th ..	1,894	153	2,047
Feb. 16th ..	1,806	142	1,948	Aug. 16th ..	1,914	154	2,068
March 15th ..	1,823	136	1,959	Sept. 13th ..	1,965	142	2,107
April 12th ..	1,837	135	1,972	Oct. 18th ..	1,964	150	2,114
May 17th ..	1,867	131	1,998	Nov. 15th ..	1,959	138	2,097
June 21st ..	1,879	141	2,020	Dec. 13th ..	1,950	132	2,082

Scotland. (Annual average : Males, 38 ; Females, 5 ; Total, 43.)

Jan. 12th ..	36	6	42	July 19th ..	38	3	41
Feb. 16th ..	36	6	42	Aug. 16th ..	41	4	45
March 15th ..	36	6	42	Sept. 13th ..	42	6	48
April 12th ..	34	4	38	Oct. 18th ..	41	6	47
May 17th ..	35	4	39	Nov. 15th ..	41	6	47
June 21st ..	37	3	40	Dec. 13th ..	41	6	47

Great Britain. (Annual average : Males, 1,922 ; Females, 144 ; Total, 2,066.)

Jan. 12th ..	1,782	122	1,904	July 19th ..	1,932	156	2,088
Feb. 16th ..	1,842	148	1,990	Aug. 16th ..	1,955	158	2,113
March 15th ..	1,859	142	2,001	Sept. 13th ..	2,007	148	2,155
April 12th ..	1,871	139	2,010	Oct. 18th ..	2,005	156	2,161
May 17th ..	1,902	135	2,037	Nov. 15th ..	2,000	144	2,144
June 21st ..	1,916	144	2,060	Dec. 13th ..	1,991	138	2,129

C.—NUMBER OF OUTWORKERS AT TWO SPECIFIED PERIODS IN 1924.

Country.	January.			July.		
	Males.	Females.	Total.	Males.	Females.	Total.
<i>England and Wales*</i> ..	306	5	311	342	5	347

* No outworkers were returned for Scotland.

IV.—Mechanical Power.

The power equipment recorded for Great Britain* was as follows :—

PRIME MOVERS :—							Ordinarily in use.	In reserve or idle.
							H.P.	H.P.
Gas engines .. .. .	..	..	..	..	..	..	187	—
Petrol and light oil engines	..	..	..	..	..	..	—	6
Heavy oil engines .. .. .	..	..	..	..	..	..	30	40
TOTAL .. .. .	..	..	..	..	..	..	217	46
TOTAL OF PRIME MOVERS INSTALLED							263	
ELECTRIC MOTORS :—								
Driven by purchased electricity .. .. .	..	..	..	..	..	..	1,896	964

* See footnote to Table II.