

## THE SILK AND ARTIFICIAL SILK TRADE.

*Note.*—For information regarding the scope of the Census, instructions given to firms for making returns, and definitions of the terms used in this report, reference should be made to the Introductory Notes on pages v to xviii.

### Introductory.

This trade comprises firms that were engaged wholly or mainly in throwing and weaving silk, in spinning and weaving silk waste, and in the manufacture, spinning and weaving of artificial silk.

The following table shows the main results of the Censuses of 1930 and 1924\* in respect of firms in Great Britain that employed an average of more than 10 persons:—

Particulars.	Unit.	1930.	1924.
Value of goods made and work done (Gross output)	£'000.	23,012	20,299
Cost of materials used ... ..	"	11,620	9,513
Paid for work given out to other firms ... ..	"	593	634
Estimated Excise duty ... ..	"	1,600	—
Net output (excluding estimated Excise duty) ...	"	9,199	10,152
Average number of persons employed (excluding outworkers) ... ..	No.	59,876	39,932
Net output per person employed (excluding outworkers) ... ..	£	154†	254
Mechanical power available:—			
Prime movers ... ..	H.P.	61,594	36,999
Electric motors driven by purchased electricity	"	65,548	18,168
Number of returns ... ..	No.	195	185
Number of establishments ... ..	"	236	‡

† Exclusive of Excise duty.

‡ Not available.

\* The figures for 1924 include the returns made by certain firms manufacturing silk and artificial silk hosiery, which were allocated to the Hosiery Trade at the Census of 1930. The value of the output of these firms in 1924 was about £700,000 and the average number of persons employed about 1,700.

**Deficiencies in 1930 aggregates.**—The aggregate number of persons employed in 1930 by firms that stated that they employed not more than 10 persons on the average was 335, the corresponding figure for 1924 being 194. The value of the gross output of the small firms in 1924 was £67,000, and particulars of the principal classes of goods included in this figure are given below :—

	£'000
Piece goods, wholly of silk ... ..	13
Ribbons and smallwares ... ..	21
Other silk and artificial silk goods ... ..	8
Other products (mainly clothing) ... ..	16
Work done for the trade ... ..	9
	—
TOTAL ... ..	67
	—

In addition, 12 firms to which schedules were sent at the 1930 Census and 16 at that of 1924 furnished no information; these firms either had small businesses or had ceased productive operations before the end of the censal year.

**Sub-divisions of the trade.**—The only section of these trades which formed a self-contained group was that concerned with the manufacture of artificial silk. The principal figures shown by the returns received for 1930 from the small group of firms engaged in this class of trade are given below :—

*Manufacture of Artificial Silk.*

	£'000
Value of gross output ... ..	13,191
Cost of materials used ... ..	5,546
Paid for work given out to other firms ... ..	62
Net output (excluding estimated Excise duty)...	5,983
	No.
Average number of persons employed ... ..	32,914
	£
Net output per person employed ... ..	182*
	No.
Number of returns ... ..	24

\* Exclusive of Excise duty.

Owing to the risk of disclosure of information relating to the business of individual firms, corresponding information for the year 1924 cannot be given.

Comparing the above figures with those given in the previous summary table it will be seen that, measured by net output, the artificial silk manufacturing trade formed about 65 per cent. of the total recorded by all firms included in the Silk and Artificial Silk Trade, and that about 55 per cent. of the total number of employees was recorded by this branch. The net output per employee in the case of establishments manufacturing artificial silk was £182, as compared with an average of £119 for all other establishments to which this report relates.

**Size of firms.**—In the following table the main particulars recorded at the Census of 1930 are grouped according to the average numbers of persons shown in the returns :—

Size of firm (average numbers employed).	No. of returns.	Gross output.	Net output.*	Average number of persons employed (excluding outworkers).	Net output per person employed.
		£'000.	£'000.		£
11-24 ...	32	196	86	551	156
25-49 ...	37	490	189	1,238	153
50-99 ...	41	1,182	376	2,880	131
100-199 ...	40	2,136	609	5,662	108
200-299 ...	13	1,148	394	3,134	126
300-399 ...	4	870	202	1,310	154
400-499 ...	5	663	253	2,254	112
500-749 ...	5	679	221	2,970	74
750-999 ...	4	1,028	435	3,398	128
1,000 and over ...	14	14,620	6,434	36,479	176
TOTAL ...	195	23,012	9,199	59,876	154

\* Excluding Excise duty.

It will be seen that nearly 61 per cent. of the total number of persons employed in this trade were recorded on returns for establishments covering 1,000 workpeople or more, and that this group of returns represented about 70 per cent. of the aggregate net output of this trade. This group contains several concerns engaged in the production of artificial silk.

**Regional distribution.**—In the following table the results recorded at the Census of 1930 are grouped according to the principal areas\* of Great Britain in which firms in this trade are situated. Corresponding figures for the year 1924 are also shown for purposes of comparison.

Area.	No. of returns.	Gross output.	Net output.*	Average number of persons employed (excluding out-workers).	Net output per person employed.	
		£'000.	£'000.		£	
2 ... ..	1930	57	5,281	1,610	14,573	110
	1924	48	4,328	1,521	9,254	164
3 ... ..	1930	39	2,192	513	6,011	85
	1924	24	2,617	780	5,236	149
5 ... ..	1930	39	4,583	2,281	12,054	189
	1924	53	6,178	3,606	13,287	271
6 ... ..	1930	42	8,483	3,449	22,137	156
	1924	35	3,071	1,474	6,862	215
Other areas ... ..	1930	18	2,473	1,346	5,101	264
	1924	25	4,105	2,771	5,293	524
TOTAL ... ..	1930	195	23,012	9,199	59,876	154
	1924	185	20,299	10,152	39,932	254

\* Excluding Excise duty in 1930.

**Northern Ireland.**—No production of silk or artificial silk goods was recorded for Northern Ireland in either 1930 or 1924.

### Production.

The output of the Silk and Artificial Silk Trade is dealt with below in the following four groups:—

- (1) Natural silk yarn and artificial silk.
- (2) Piece-goods, sewing silks, ribbons and smallwares.
- (3) Other products.
- (4) Waste.

(1) **Natural silk yarn and artificial silk: Total make.**—The following table shows the quantities of thrown silk, spun silk yarn and artificial silk manufactured in 1930 and 1924. The figures include the quantities used in the makers' works in the

\* For particulars see page xviii.

manufacture of more finished goods as well as the quantities sold (or added to stock) as such:—

Kind of goods.	1930.	1924.
	Th. lbs.	Th. lbs.
Thrown silk:—		
Wholly of silk, undischarged ... ..	1,059	} 394
Of silk mixed with other materials, undischarged	305	
TOTAL—Thrown silk ... ..	1,364	394
Spun silk yarn:—		
Wholly of silk ... ..	1,344	} 1,832
Of silk mixed with other materials ... ..	7	
TOTAL—Spun silk yarn ... ..	1,351	1,832
Artificial silk:—		
Singles yarn and straw ... ..	49,975	} 22,003
Waste (including staple fibre) ... ..	2,650	
TOTAL—Artificial silk ... ..	52,625	...

\* Not recorded.

The total output of artificial silk recorded for 1930 may be taken to represent substantially production in the twelve months ended 30th September, 1930, several important returns being made for periods ending on a date earlier than 31st December. According to the Customs and Excise returns, the total quantity of artificial silk charged with Excise duty in the twelve months ended 30th September, 1930, was 50,480,000 lbs. (singles yarn and straw, 48,060,000 lbs. and waste, 2,420,000 lbs.), or about 4.1 per cent. lower than the Census of Production aggregate. As the following figures show, there was a substantial decline in the production of artificial silk in the second half of 1930 compared with a year earlier, and the fluctuation from quarter to quarter considerably affects the comparability of the Census of Production aggregate with Customs and Excise records.

Period.	Singles yarn and straw.	Waste.	Total: Artificial silk.
1929.	Lbs.	Lbs.	Lbs.
September quarter ... ..	14,126,361	1,565,692	15,692,053
December quarter ... ..	14,174,676	1,008,777	15,183,453
1930.			
March quarter ... ..	12,289,290	524,668	12,813,958
June quarter ... ..	10,961,038	393,872	11,354,910
September quarter ... ..	12,234,750	487,610	12,722,360
December quarter ... ..	11,506,750	375,994	11,882,744

**Deliveries of yarn.**—The following table shows for 1930 and 1924 the quantities and selling values of silk and artificial silk yarn made and sold (or added to stock) :—

Kind of goods.	1930.						1924.	
	Returned on schedules for						Total.	
	The Silk and Artificial Silk Trade.			All trades.				
	Quantity.	Value.	Ent-ries.	Quantity.	Value.	Ent-ries.	Quantity.	Value.
Th. lbs.	£'000.	No.	Th. lbs.	£'000.	No.	Th. lbs.	£'000.	
Thrown silk :—								
Wholly of silk (discharged and undischarged) ...	794	1,003	18	796	1,007	20	177	276
Of silk mixed with other materials (undischarged)...	304	158	4	304	158	4		
TOTAL—Thrown silk ...	1,098	1,161	22	1,100	1,165	24	177	276
Spun silk yarn (including noil yarn) :—								
Wholly of silk	1,101	796	20	1,101	796	21	1,278	1,096
Of silk mixed with other materials ...	7	5	3	7	5	3		
TOTAL—Spun silk yarn ...	1,108	801	23	1,108	801	24	1,278	1,096
Artificial silk yarn (yarn and straw)	45,459*	10,162*	33	45,530*	10,177*	39	21,345	7,012
Artificial silk doubled or twisted thread advanced beyond the stage of singles yarn†	940	218	24	1,007	236	29	2,624	1,104
TOTAL VALUE	...	12,342	...	...	12,379	...	...	9,488

\* Including yarn spun from staple fibre and waste.

† The figures for 1930 do not represent the total deliveries of yarn in these forms, as such particulars could not be furnished in the detail required for a considerable portion of the output. The output in question was returned as artificial silk singles yarn and is included in the figures given against that heading. The added value resulting from the doubling, twisting and other work of processing carried out thereon is included in the table dealing with the amount received for work done for the trade. (See p. 124).

(2) **Piece-goods, sewing silks, ribbons and smallwares of silk or artificial silk.**—The following table shows the quantities (where recorded) and values of piece-goods and other manufactures of silk or artificial silk produced in 1930 and 1924 as recorded on schedules for all trades :—

Kind of goods.	1930.				1924.	
	Quantity.		Value.	Entries.	Quantity.	Value.
	Th. sq. yds.	Th. lbs.	£'000.	No.	Th. sq. yds.	£'000.
Piece-goods wholly of silk:—						
Natural undyed tissues:—						
Undischarged...	1,177	121	256	18	5,830	1,614
	*	*	30			
Discharged ...	3,002	320	633	28		
	741	*	164			
	*	*	40			
Other tissues of natural silk, including pile fabrics ...	2,422	398	626	32		
TOTAL—Piece-goods wholly of silk ...	...	...	1,749	...	5,830	1,614
Piece-goods of silk mixed with other materials, if known as silks :—						
Pile fabrics ...	3,460	738	375	19	1,870	648
Other tissues ...	3,831	710	681	42	5,761	1,280
	328	*	45			
TOTAL—Piece-goods of silk mixed with other materials ...	7,619	...	1,101	...	7,631	1,928
Piece-goods of artificial silk :—						
Wholly of artificial silk (including pile fabrics) ...	59,332	,422	6,376	191	7,556	1,289
Of artificial silk mixed with other materials	118,912	22,200	6,529	305		
TOTAL—Piece-goods of artificial silk and of artificial silk mixed with other materials...	178,244	32,622	12,905	...	...	3,308
TOTAL VALUE — Piece-goods of silk and artificial silk (including mixtures) ...	...	...	15,755	...	...	6,850

Kind of goods.	1930.			1924.	
	Quantity.	Value.	Entries.	Quantity.	Value.
	Th. lbs.	£'000.	No.		£'000.
Other manufactures of silk, artificial silk or mixtures :—					
Ribbons :—					
Wholly of natural silk	410	2	6	}	150
Of natural silk mixed with other materials	11,610	26	8		
Of artificial silk mixed with other materials	1,651	2	7		
Smallwares :—				†	†
Of natural silk and mixtures ... ..	...	197	20	...	718
Of artificial silk and mixtures ... ..	...	243	22	†	†
Not separately distinguished ... ..	...	111	5	—	—
Sewing and embroidery silks :—					
Of natural silk and mixtures ... ..	193	258	21	}	1,141
Of artificial silk and mixtures ... ..	362	110	12		
TOTAL VALUE—Sewing and embroidery silks	...	557	...	...	1,141
Other manufactures of natural silk and mixtures (excluding lace and net) ... ..	...	126	9	—	—
Other manufactures of artificial silk and mixtures (excluding lace and net) ... ..	...	93	6	...	154
TOTAL VALUE—MANUFACTURES OF SILK, ARTIFICIAL SILK AND MIXTURES	...	17,194	...	...	9,013

\* Quantity not stated.

† Included with "Other manufactures of artificial silk."

The following table shows the quantity and value of silk and artificial silk manufactures recorded for 1930 on schedules for trades other than the Silk and Artificial Silk Trade and included in the preceding table :—

Kind of goods.	1930.			
	Quantity.		Value.	Entries.
	Th. sq. yds.	Th. lbs.	£'000.	No.
Piece-goods wholly of silk :—				
Tissues other than natural undyed tissues (including pile fabrics) ... ..	1,068	168	152	12
Piece-goods of silk mixed with other materials :—				
Pile fabrics ... ..	2,882	444	240	11
Other tissues ... ..	734	115	107	14
	11	*	4	2
Piece-goods of artificial silk :—				
Wholly of artificial silk (including pile fabrics) ... ..	36,165	5,802	2,997	153
Of artificial silk mixed with other materials ... ..	103,683	18,442	5,250	266
TOTAL—Piece-goods ... ..	144,543	...	8,750	...
Ribbons :—				
Wholly of natural silk... ..	...	...	6	1
Of artificial silk mixed with other materials... ..	...	1	1	2
Smallwares :—				
Of natural silk and mixtures ... ..	...	...	29	5
Of artificial silk and mixtures ... ..	...	...	82	10
Sewing and embroidery silks :—				
Of natural silk and mixtures ... ..	...	64	19	2
	...	*	11	2
Of artificial silk and mixtures ... ..	...	3	1	1
	...	*	12	1
Other manufactures of natural silk and mixtures ... ..	...	...	10	2
Other manufactures of artificial silk and mixtures ... ..	...	...	18	4
TOTAL VALUE—Manufactures of silk, artificial silk and mixtures, recorded on schedules for trades other than the Silk and Artificial Silk Trade ... ..	...	...	8,939	...

\* Quantity not stated.

**Work done for the trade.**—The following statement gives particulars of the amounts received for work done for the trade or on commission in the years 1930 and 1924, including amounts

recorded by firms in other trades, for work done on goods of silk or artificial silk :—

Kind of work done.	1930.				1924.
	Returned on schedules for				Total.
	The Silk and Artificial Silk Trade.		All trades.		
	Value.	Entries.	Value.	Entries.	Value.
£'000.	No.	£'000.	No.	£'000.	
Work done on silk or artificial silk goods :—					
Throwing and spinning ...	41	15	41	15	29
Winding and doubling ...	614	36	630	40	106
Weaving ... ..	33	9	145	74	62
Warping, beaming, sizing, etc.	21	4	77	10	57
TOTAL ...	709	...	893	...	254

These amounts are exclusive of the sums received by firms that made returns on schedules for the Textile Finishing Trade (see page 189) for bleaching, dyeing and similar work on silk and artificial silk goods; the sums referred to were £3,016,000 in 1930 and £1,670,000 in 1924. Adding these amounts to the total figures shown in the above table, the total amount recorded as received for work done on silk and artificial silk goods was £3,909,000 in 1930 and £1,924,000 in 1924; while the total payments made for work given out by firms that made returns on schedules for the Silk and Artificial Silk Trade amounted to £593,000 in 1930 and £634,000 in 1924. The differences between the former figures and the latter (£3,316,000 in 1930 and £1,290,000 in 1924) represent receipts for work done for manufacturing firms outside the Silk and Artificial Silk Trade and for merchant firms that made no returns to the Census.

As the "Amount paid for work given out" was stated in one aggregate, it is not possible to distinguish the particular classes of work done by commission firms on behalf of manufacturers from that done for merchants; for example, the returns contain no information to show if the sum of £145,000 returned as received for *weaving*, and the considerable quantity of piece-goods which this sum represents, was received from manufacturing firms (in which case the quantity and the selling value of the goods are already included in the total of "goods made for sale") or from merchants (in which case both the quantity and the value of the goods have escaped record).

**Prices.**—The Finance Act, 1925, imposed Customs duties on imports of natural and artificial silk and Excise duties on home-made artificial silk at the following rates :—

Customs duties :	Rate per lb.
Silk cocoons and waste ... ..	1s. to 3s.
Raw silk ... ..	3s. to 4s. 4d.
Silk yarn ... ..	1s. 5d. to 6s. 8d.
Artificial silk singles yarn and straw ... ..	2s.
Artificial silk waste ... ..	1s.
Doubled or twisted thread of artificial silk advanced beyond the stage of singles yarn ...	3s.
<b>Excise duties :</b>	
Artificial silk singles yarn and straw ... ..	1s.
Artificial silk waste ... ..	6d.

The average selling values of certain classes of silk and artificial silk goods in 1930 and 1924, as calculated from the Census returns, are shown in the following table :—

Kind of goods.	Average value.		1930 as a percentage of 1924.
	1930.	1924.	
Artificial silk yarn and straw ... ..	s. per lb. 4·47	s. per lb. 6·57	Per cent. 68·0
Artificial silk doubled or twisted thread advanced beyond the stage of singles yarn ... ..	4·67	8·41	55·5
Piece-goods, wholly of silk (including pile fabrics) ... ..	s. per sq. yd. 4·57	s. per sq. yd. 5·55	82·3
Piece-goods of silk mixed with other materials :—			
Pile fabrics ... ..	2·07	6·82	30·4
Other ... ..	3·49	4·44	78·6

Only in the case of *artificial silk yarn and straw* is it possible to make an allowance for the duty, and if allowance is made in that case for the Excise duty at the rate of 1s. per lb. in 1930, a decrease of 47 per cent. is shown in the average value compared with 1924. In all other cases there is uncertainty as to the allowances necessary for Customs duties.

As regards piece-goods, the varying content of silk in the mixed fabrics, and changes that may have occurred between 1924 and 1930 in the quality or type of the goods included under the specified descriptions, are factors which may affect the price comparisons. As regards products other than those shown in the table, the Census returns for 1924 do not permit the separation of the pure

and the mixed goods, and the possibility of varying proportions of pure and mixed goods in the two years renders it impracticable to make any accurate price comparisons.

**Volume of production in 1930 and 1924.**—The following table compares the volume of production of silk and artificial silk manufactures in 1930 and 1924. For the purpose of this statement, the output recorded for each class of goods has been re-valued on the basis of the average values shown for 1930, i.e., inclusive of Customs and Excise duties.

Kind of goods.	Total production.			1930 as percentage of 1924.
	1930.	1924.		
	As returned.	As returned.	At 1930 average values.	
	£'000.	£'000.	£'000.	Per cent.
Thrown silk ... ..	1,165	276	188	620
Spun silk yarn ... ..	801	1,096	929	86
Artificial silk yarn and straw ...	10,177	7,012	4,698	217
Artificial silk, doubled or twisted thread ... ..	236	1,104	765	31
Sewing and embroidery silks ...	557	1,141	838*	66
Piece-goods wholly of silk ...	1,749	1,614	1,328	132
Piece-goods of silk mixed with other materials ... ..	1,101	1,928	1,215	91
Piece-goods of artificial silk and mixtures ... ..	12,905	3,308	1,406	918
Ribbons and smallwares and other silk and artificial silk goods ...	882	1,022	686†	129
<b>TOTAL ... ..</b>	<b>29,573</b>	<b>18,501</b>	<b>12,053</b>	<b>245</b>

\* Based on average values of spun silk yarn and artificial silk.

† Based on average values of silk and artificial silk piece-goods.

Having regard to the duties in force in 1930 but not in 1924, a calculation on the above lines has been made on the basis of the average values of 1924. This results in a figure of 297 per cent. for the final column and indicates that the volume of production in 1930 was at least two-and-a-half times as great as in 1924.

**Production, exports and imports.**—The following table shows, in relation to production, the quantities of the principal classes of silk and artificial silk goods exported from the United Kingdom in 1930 and 1924, together with the quantities imported and retained. As regards the 1930 figures of production, the minor deficiencies

referred to on page 116 and the possible omissions discussed in the section dealing with "Work done for the trade" should be borne in mind; the figures for 1924 include the output of small firms.

Kind of goods.	Production.	Exports.	Proportion of production exported.	Retained imports.	Available	Share
					for use in the United Kingdom.	of home market held by British products.
	Th. lbs.	Th. lbs.	Per cent.	Th. lbs.	Th. lbs.	Per cent.
Thrown silk* ... ..	1930 1,364	104	7·6	649	1,909	66·0
	1924 403	21	5·2	27	†	†
Spun silk yarn* ... ..	1930 1,351	294	21·8	367	1,424	74·2
	1924 1,832	280	15·3	668	2,220	69·9
Artificial silk (singles yarn and straw) ...	1930 49,975	5,816	11·6	530	44,689	98·8
	1924 22,023	6,351‡	28·8	10,151‡	25,823	60·7
Artificial silk doubled or twisted thread, advanced beyond the stage of singles yarn§	1930 1,007¶	602	59·8¶	9	414	97·8
	Th. sq. yds.	Th. sq. yds.		Th. sq. yds.	Th. sq. yds.	
Piece-goods, wholly of silk ... ..	1930 7,665	2,971	38·8	41,050	45,744	10·3
	1924 6,048	3,003	49·7	55,890	58,935	5·2
Piece-goods of silk mixed with other materials, if known as silks ...	1930 7,619	2,321	30·5	20,828	26,126	20·3
	1924 7,802	2,305	29·5	20,440	25,937	21·2
Piece-goods wholly of artificial silk§ ...	1930 59,332	7,398	12·5	27,654	79,588	65·4
Piece-goods of artificial silk, mixed with other materials§ ... ..	1930 118,912	58,111	48·9	25,776	86,577	70·2

\* Including silk mixed with other materials.

† As some part of the imports may have been entered as raw silk, no figures are inserted here.

‡ Including thread.

§ Exports and retained imports of these goods were not recorded separately in 1924.

¶ See note (†) to table on page 120.

**Other products.**—In addition to the output shown in the tables of principal products on pages 120-122, the following goods were produced in 1930 and 1924 by firms that made their returns on schedules for the Silk and Artificial Silk Trade.\* These goods are dealt with in the reports on those trades in which the principal output was recorded.

Kind of goods.	1930.	1924.
	Value.	Value.
	£'000.	£'000.
Articles of clothing :—		
Women's costumes, dresses, blouses and the like, of woven fabrics ... ..	12	658
Stockings and hose ... ..	148	454
Fancy hosiery ... ..	90	†
Neckties, cravats, etc. ... ..	187	840
Other articles of clothing (including hosiery underwear) ... ..	410	610†
Other work done (i.e., dyeing, printing and finishing) ...	188	49
Manufactures of cotton ... ..	407	} 456
Manufactures of wool ... ..	28	
Other goods made ... ..	110	271
<b>TOTAL—Other products</b> ... ..	<b>1,580</b>	<b>3,338</b>

‡ Included with "Other articles of clothing."

† Including £122,000 in respect of unclassified articles of clothing.

**Waste products sold.**—The following sales of manufacturers' waste were recorded by firms that made returns on schedules for the Silk and Artificial Silk Trade in 1930 and 1924 :—

Products.	1930.		1924.	
	Quantity.	Value.	Quantity.	Value.
	Th. lbs.	£'000.	Th. lbs.	£'000.
Silk waste, noils, etc. ... ..	482	37	791	48
Artificial silk waste ... ..	1,380*	89*	465	23
<b>TOTAL VALUE</b> ... ..	...	126	...	71

\* Including staple fibre.

In addition, firms making returns for 1930 on schedules for other trades recorded sales of artificial silk waste (including staple fibre) valued at £65,000 (811,000 lbs.).

\* See footnote to page 115.

### Employment and Wages.

**Employment.**—The following table shows the average numbers of persons employed in 1930 and 1924\* :—

Persons employed.	Males.		Females.		Total.	
	Under 18.	All ages.	Under 18.	All ages.	Under 18.	All ages.
1930.						
Operatives (average for the year)	1,383	23,257	7,177	31,565	8,560	54,822
Administrative, technical and clerical staff (as at 18th October) ... ..	248	3,565	213	1,489	461	5,054
<b>TOTAL</b> ... ..	<b>1,631</b>	<b>26,822</b>	<b>7,390</b>	<b>33,054</b>	<b>9,021</b>	<b>59,876</b>
1924.						
Operatives (average for the year)	1,293	12,277	7,351	25,038	8,644	37,315
Administrative, technical and clerical staff (as at 18th October) ... ..	118	1,917	80	700	198	2,617
<b>TOTAL</b> ... ..	<b>1,411</b>	<b>14,194</b>	<b>7,431</b>	<b>25,738</b>	<b>8,842</b>	<b>39,932</b>
Average number of outworkers:—						
1930 ... ..		37		90		127
1924 ... ..		43		353		396

**Wages.**—The available information as to the amount of wages paid in 1930 and 1924 is given on pages 18 and 19.

### Power.

The following table shows the capacity of prime movers, electric generators and electric motors ordinarily in use and in reserve or idle in 1930 and 1924 :—

Power equipment.	1930.			1924.		
	Ordinarily in use.	In reserve or idle.	Total.	Ordinarily in use.	In reserve or idle.	Total.
<b>PRIME MOVERS.</b>						
Reciprocating steam engines ... ..	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
... ..	9,683	2,932	12,615	13,777	3,411	17,188
Steam turbines ... ..	29,817	15,835	45,652	13,390	3,740	17,130
Internal combustion engines :—						
Gas ... ..	1,068	145	1,213	1,560	272	1,832
Petrol, kerosene, or other light oils ... ..	115	51	166	31	36	67
Heavy oils ... ..	1,413	23	1,436	204	50	254
Water engines ... ..	487	—	487	524	4	528
Other prime movers ... ..	25	—	25	—	—	—
<b>TOTAL</b> ... ..	<b>42,608</b>	<b>18,986</b>	<b>61,594</b>	<b>29,486</b>	<b>7,513</b>	<b>36,999</b>

\* See footnote to page 115.



Power equipment.	1930.			1924.		
	Ordinarily in use.	In reserve or idle.	Total.	Ordinarily in use.	In reserve or idle.	Total.
<b>ELECTRIC GENERATORS.</b>	Kw.	Kw.	Kw.	Kw.	Kw.	Kw.
Driven by						
Reciprocating steam engines ... ..	2,534	2,327	4,861	2,644	972	3,616
Steam turbines ... ..	20,601	10,350	30,951	10,000	2,800	12,800
Internal combustion engines :—						
Gas ... ..	355	10	365	285	60	345
Petrol, kerosene, or other light oils ... ..	32	48	80	—	12	12
Heavy oils ... ..	681	—	681	40	—	40
Water engines ... ..	309	—	309	190	—	190
<b>TOTAL ... ..</b>	<b>24,512</b>	<b>12,735</b>	<b>37,247</b>	<b>13,159</b>	<b>3,844</b>	<b>17,003</b>
<b>ELECTRIC MOTORS.</b>	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
Driven by						
Electricity generated in same works ... ..	25,751	5,942	31,693	13,694	827	14,521
Electricity generated in other works under same ownership ... ..	471	60	531	—	—	—
Purchased electricity ... ..	54,791	10,757	65,548	14,361	3,807	18,168
<b>TOTAL ... ..</b>	<b>81,013</b>	<b>16,759</b>	<b>97,772</b>	<b>28,055</b>	<b>4,634</b>	<b>32,689</b>

### Consumption of fuel.

The following table shows the quantities of coal, coke and electricity recorded as used in 1930:—

Kind of fuel used.	For power (driving engines).	For other purposes (so far as recorded).	For power and other purposes, not separately distinguished.
	Tons.	Tons.	Tons.
Coal ... ..	106,580	292,874*	2,204
Coke ... ..	—	3,191*	—
			B.T.U. (Kw.-hrs.) '000.
Electricity used for all purposes :—			
Generated in same works ... ..			66,559
Generated in other works under same ownership ... ..			504
Purchased ... ..			135,304
<b>TOTAL—Electricity ... ..</b>			<b>202,367</b>

\* These figures were recorded by firms representing 96.1 per cent. of the net output of the whole trade.

## TABLES.

### I. Summary of results.

Particulars.	Unit.	England and Wales.	Scotland.	Great Britain.
Value of goods made and work done (Gross output) ... ..	£'000.	22,598	414	23,012
Cost of materials used ... ..	"	11,358	262	11,620
Paid for work given out to other firms... ..	"	583	10	593
Estimated Excise duty ... ..	"	1,600	—	1,600
Net output (excluding estimated Excise duty) ... ..	"	9,057	142	9,199
Average number of persons employed (excluding outworkers) ... ..	No.	58,905	971	59,876
Net output per person employed (excluding outworkers) ... ..	£	154*	147	154*
Mechanical power available :—				
Prime movers ... ..	H.P.	60,459	1,135	61,594
Electric motors driven by purchased electricity ... ..	"	64,221	1,327	65,548

\* Exclusive of Excise duty.

### II. Production.

A.—TOTAL MAKE OF SILK AND ARTIFICIAL SILK IN 1930, AS RETURNED ON SCHEDULES FOR THE SILK AND ARTIFICIAL SILK TRADE.

Silk and artificial silk.	Great Britain.*
	Th. lbs.
Thrown silk :—	
Wholly of silk, undischarged ... ..	1,059
Of silk mixed with other materials, undischarged ... ..	305
Spun silk yarn :—	
Wholly of silk ... ..	1,344
Of silk mixed with other materials ... ..	7
Artificial silk :—	
Singles yarn and straw ... ..	49,972
Waste (including staple fibre) ... ..	1,839

\* Owing to the possible disclosure of information relating to individual firms, separate particulars for England and Wales and for Scotland cannot be given.

## B.—OUTPUT SOLD OR ADDED TO STOCK AND WORK DONE.

Kind of goods made and work done.	Great Britain.*	
	Quantity.	Value.
Thrown silk :—	Th. lbs.	£'000.
Wholly of silk (discharged and undischarged) ...	794	1,003
Of silk mixed with other materials (undischarged)	304	158
TOTAL—Thrown silk ...	1,098	1,161
Spun silk yarn (including noil yarn) :—		
Wholly of silk ...	1,101	796
Of silk mixed with other materials ...	7	5
TOTAL—Spun silk yarn ...	1,108	801
Artificial silk yarn and straw§ ...	45,459	10,162
Doubled or twisted thread advanced beyond the stage of singles yarn (of artificial silk and of artificial silk mixed with other materials)† ...	940	218
Sewing and embroidery silks :—		
Of natural silk mixed or not with other materials	129	239
	†	127
Of artificial silk mixed or not with other materials	359	109
	†	39
	Th. sq. yds.	
Piece-goods of natural silk :—		
Natural undyed tissues, other than pile fabrics :—		
Undischarged ...	1,177	121
	†	30
	3,002	320
Discharged ...	741	164
	†	40
Other tissues of natural silk (including pile fabrics) ...	1,354	230
TOTAL VALUE—Piece-goods of natural silk ...		1,597
Piece-goods of silk mixed with other materials, if known as silks :—		
Pile fabrics ...	578	294
	3,097	595
Other tissues ...	317	41
TOTAL VALUE—Piece-goods of silk mixed with other materials ...		750
Piece-goods of artificial silk :—		
Wholly of artificial silk (including pile fabrics) ...	23,157	4,620
Of artificial silk mixed with other materials ...	15,229	3,758
TOTAL VALUE—Piece-goods of artificial silk and mixtures ...		4,658
TOTAL VALUE—Piece-goods of silk and artificial silk (including mixtures) ...		7,005

Kind of goods made and work done.	Great Britain.*	
	Quantity.	Value.
Other manufactures of silk, artificial silk or mixtures :—	Th. lbs.	£'000.
Ribbons :—		
Wholly of natural silk ...	0.4	2
	†	14
Of natural silk mixed with other materials, if known as silks ...	11.6	26
	†	18
Of artificial silk mixed with other materials	1.7	1
	†	44
Smallwares :—		
Of natural silk and mixtures ...		168
Of artificial silk and mixtures ...		161
Of natural and artificial silk, not separately distinguished ...		111
Waste :—		
Of natural silk ...	482	37
Of artificial silk (including staple fibre) ...	1,380	89
Articles of clothing :—		
Women's costumes, dresses, blouses and the like of woven fabrics ...		12
	Th. doz. prs.	
Stockings and hose ...	155	148
Fancy hosiery ...		90
Neckties, cravats, etc. ...		187
Other articles of clothing (including hosiery underwear) ...		410
TOTAL VALUE—Articles of clothing ...		847
Other manufactures of natural silk mixed with other materials or not (excluding lace and net) ...		116
Other manufactures of artificial silk mixed with other materials or not (excluding lace and net) ...		75
TOTAL VALUE—Silk, artificial silk and manufactures thereof (excluding lace and net) ...		21,570
Manufactures of cotton ...		407
Manufactures of wool ...		28
Other goods made ...		110
TOTAL VALUE OF GOODS MADE ...		22,115
Work done on commission or for the trade :—		Amount received.
Throwing and spinning ...		£'000.
		41
Winding and doubling ...		614
Weaving ...		33
Warping, beaming and sizing ...		21
Other work done ...		188
TOTAL AMOUNT RECEIVED FOR WORK DONE ...		897
TOTAL VALUE OF GOODS MADE AND WORK DONE (GROSS OUTPUT) ...		23,012

\* See footnote to Table IIA.

† Quantity not stated.

‡ See note (†) to table on page 120.

§ Including yarn spun from staple fibre and waste.

## III. Employment.

A.—NUMBERS EMPLOYED IN WEEK ENDED 18TH OCTOBER, 1930  
(EXCLUDING OUTWORKERS).

Persons employed (excluding outworkers).	Males.		Females.		Males and females.	
	Under 18.	All ages.	Under 18.	All ages.	Under 18.	All ages.
<i>England and Wales</i> :—						
Operatives ... ..	1,338	22,526	6,811	30,266	8,149	52,792
Administrative, etc.*	248	3,524	211	1,472	459	4,996
TOTAL ... ..	1,586	26,050	7,022	31,738	8,608	57,788
<i>Scotland</i> :—						
Operatives ... ..	16	242	215	635	231	877
Administrative, etc.*	—	41	2	17	2	58
TOTAL ... ..	16	283	217	652	233	935
<i>Great Britain</i> :—						
Operatives ... ..	1,354	22,768	7,026	30,901	8,380	53,669
Administrative, etc.*	248	3,565	213	1,489	461	5,054
TOTAL ... ..	1,602	26,333	7,239	32,390	8,841	58,723

\* Administrative, technical and clerical staff.

B.—OPERATIVES (EXCLUDING OUTWORKERS) EMPLOYED IN ONE WEEK  
IN EACH MONTH OF 1930.

Week ended	Males and females.			Week ended	Males and females.		
	England and Wales.	Scotland.	Great Britain.		England and Wales.	Scotland.	Great Britain.
Jan. 18th	57,775	1,183	58,958	July 19th	54,411	863	55,274
Feb. 15th	56,693	1,201	57,894	Aug. 16th	53,798	796	54,594
Mar. 15th	55,572	930	56,502	Sept. 13th	53,229	906	54,135
April 12th	54,165	942	55,107	Oct. 18th	52,792	877	53,669
May 17th	51,791	919	52,710	Nov. 15th	52,570	834	53,404
June 21st	52,556	900	53,456	Dec. 13th	51,555	602	52,157
AVERAGE FOR THE 12 MONTHS ...					53,909	913	54,822

C.—NUMBERS OF OUTWORKERS AT TWO SPECIFIED PERIODS IN 1930.

Country.	January.			July.		
	Males.	Females.	Total.	Males.	Females.	Total.
<i>England and Wales</i> ...	24	86	110	26	87	113
<i>Scotland</i> ... ..	10	1	11	14	5	19
<i>Great Britain</i> ... ..	34	87	121	40	92	132

## IV. Power.

PARTICULARS OF PRIME MOVERS, ELECTRIC GENERATORS AND  
ELECTRIC MOTORS.

Power equipment.	England and Wales.		Scotland.		Great Britain.	
	Ordinarily in use.	In reserve or idle.	Ordinarily in use.	In reserve or idle.	Ordinarily in use.	In reserve or idle.
PRIME MOVERS.						
Reciprocating steam engines ... ..	9,198	2,622	485	310	9,683	2,932
Steam turbines ...	29,817	15,835	—	—	29,817	15,835
Internal combustion engines :—						
Gas ... ..	1,011	142	57	3	1,068	145
Petrol, kerosene or other light oils ... ..	115	51	—	—	115	51
Heavy oils ... ..	1,413	23	—	—	1,413	23
Water engines ... ..	207	—	280	—	487	—
Other... ..	25	—	—	—	25	—
TOTAL ... ..	41,786	18,673	822	313	42,608	18,986
TOTAL OF PRIME MOVERS INSTALLED ...	60,459		1,135		61,594	
ELECTRIC GENERATORS.						
Driven by	Kw.	Kw.	Kw.	Kw.	Kw.	Kw.
Reciprocating steam engines ...	2,229	2,020	305	307	2,534	2,327
Steam turbines ...	20,601	10,350	—	—	20,601	10,350
Internal combustion engines :—						
Gas ... ..	355	10	—	—	355	10
Petrol, kerosene or other light oils ...	32	48	—	—	32	48
Heavy oils ... ..	681	—	—	—	681	—
Water engines ... ..	99	—	210	—	309	—
TOTAL ... ..	23,997	12,428	515	307	24,512	12,735
TOTAL OF ELECTRIC GENERATORS INSTALLED ...	36,425		822		37,247	

Power equipment.	England and Wales.		Scotland.		Great Britain.	
	Ordinarily in use.	In reserve or idle.	Ordinarily in use.	In reserve or idle.	Ordinarily in use.	In reserve or idle.
	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
ELECTRIC MOTORS. Driven by						
Electricity generated in same works ... ..	25,173	5,920	578	22	25,751	5,942
Electricity generated in other works under same ownership ... ..	471	60	—	—	471	60
Purchased electricity ... ..	53,496	10,725	1,295	32	54,791	10,757
TOTAL ... ..	79,140	16,705	1,873	54	81,013	16,759
TOTAL OF ELECTRIC MOTORS INSTALLED ... ..	95,845		1,927		97,772	

### V. Consumption of fuel.

Kind of fuel used.	England and Wales.	Scotland.	Great Britain.
	Tons.	Tons.	Tons.
Coal used for power* ... ..	104,996	1,584	106,580
Coke used for power ... ..	—	—	—
	B.T.U. (Kw.-hrs.) '000	B.T.U. (Kw.-hrs.) '000	B.T.U. (Kw.-hrs.) '000
Electricity used for all purposes :—			
Generated in same works ... ..	66,519	40	66,559
Generated in other works under same ownership ... ..	504	—	504
Purchased ... ..	132,451	2,853	135,304
TOTAL—Electricity ... ..	199,474	2,893	202,367

\* In addition, 2,204 tons of coal (1,878 tons in England and Wales and 326 tons in Scotland) were recorded as used for power and for other purposes, not separately distinguished.