

## THE STARCH, BLUE AND POLISHES TRADES

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### Introductory.\*

The tables on pages 127 to 129 are based on returns received from firms in Great Britain and Northern Ireland whose business in 1924 consisted wholly or mainly in the manufacture of starch, farinaceous products, polishes, and cleansing materials. The number of such separate returns was 180. About 30 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 150 persons in all and that their total net output probably did not exceed £50,000.

*Summary of results.*—The following table shows the main results of the Censuses of 1924, 1912 and 1907, comparisons between the figures for the three years being subject to the qualifications mentioned in the next paragraph.

\* See also the Notes on pp. vii to xv.

Particulars.	Unit.	1924.	1912.	1907.
Value of goods made (Gross output) ..	£'000	9,914	4,981	4,463
Cost of materials used .. .. .	"	4,723	2,667	2,406
Net output .. .. .	"	5,191	2,314	2,057
Average number of persons employed	No.	12,446	12,111	11,795
Net output per person employed ..	£	417	191	174
Mechanical power available :—				
Prime movers .. .. .	H.P.	7,035	5,847	9,237
Electric motors driven by purchased electricity .. .. .	"	7,426	2,423	(not recorded).

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

(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 Censuses of 1907 and 1912 covered Great Britain and the whole of Ireland, but that of 1924 applied only to Great Britain and Northern Ireland. Separate particulars in respect of the output of these trades were not issued by the Government of the Irish Free State in connexion with their Census of Production for the year 1926, and it is therefore not possible to estimate the effect of the exclusion of Southern Ireland on the comparability of the figures for 1924 with those for earlier years. It is not, however, believed to be appreciable.

(3) The Censuses of 1907 and 1924 extended to all firms, however small, but in 1912 firms employing not more than five persons (excluding the proprietors) were merely required to state the average number of persons employed by them in the year. According to the information so furnished, the average number of persons employed in the establishments thus excluded was 290, or between 2 and 3 per cent. of the number employed by the remaining firms, as shown in the above table. Correspondence on defective returns for 1912 had not been completed when the war compelled suspension of this work, and in these circumstances detailed information for 1912 is not given in the remainder of this report. The defects in the aggregate figures given above are, however, not important.

(4) The returns of certain manufacturers of patent oats, patent barley, macaroni, etc., were included in these trades for 1907, but, for 1924, were included in the Grain Milling Trade.\*

\* See the separate volume dealing with the Food, Drink and Tobacco Trades.

### Production.

Detailed information regarding the output of the Starch, Blue and Polishes Trades in 1924 will be found in Table II on page 127.

*Principal products.*—The following table shows the value and, where recorded, the quantity of starch, other farinaceous products, polishes, and cleansing materials returned in 1924 and 1907, the aggregate figures for each year being inclusive of the output of similar products recorded on schedules for other trades.

Kind of goods.	1924.				1907.	
	Returned on schedules for				Total.	
	The Starch, Blue and Polishes Trades.		All trades.			
	Quantity.	Selling value.	Quantity.	Selling value.	Quantity.	Selling value.
Th. cwt.	£'000.	Th. cwt.	£'000.	Th. cwt.	£'000.	
Starch, all kinds ..	523	968	548	1,014	1,816	2,056
Dextrine and farina and potato flour .. ..	39	56	39	56		
Other farinaceous products (including mustard) .. .. .	591	2,086	687	2,450	..	2,523
Leather polishes ..	492	2,030	498	2,049		
Stove and other polishes	613	3,132	627	3,197		
Foundry blacking ..	..	174	..	198	..	2,523
Ink, stains and gum for the Boot and Shoe Trade .. .. .	..	202	..	235		
Other cleaning and dyeing materials (including sponges and laundry blue) .. ..	..	1,139	..	1,186	..	89
Farinaceous waste and by-products .. ..	..	57	..	59		
TOTAL VALUE ..	..	9,844	..	10,444	..	4,668

A considerable output of farinaceous products was also returned on the schedule for the Bread and Biscuit Trades,\* and further amounts are included in the output of the Preserved Foods Trades\* and the Chemicals, Dyestuffs and Drugs Trades† under the heading *Prepared foods for infants and invalids*. For these reasons it is not possible to make any direct comparison of the quantity of output of the Starch, Blue and Polishes Trades as a whole.

*Other products.*—In addition to the above products the firms that made their returns on schedules for the Starch, Blue and Polishes Trades in 1924 included in their output goods, to the value of

\* See the separate volume dealing with the Food, Drink and Tobacco Trades.

† See page 27.

£70,000, that were chiefly produced in other trades, and are dealt with in the reports on those trades. The corresponding figure for 1907 was £121,000.

*Cost of materials.*—The cost of materials used by firms that made their returns on schedules for the Starch, Blue and Polishes Trades was returned as £4,723,000 in 1924; the corresponding figure for 1907 was £2,406,000.

*Net output.*—The net output in 1924 of the firms that made their returns on schedules for the Starch, Blue and Polishes Trades (whose gross output was valued at £9,914,000) was £5,191,000, 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. The corresponding figure for 1907 was £2,057,000.

The net output per head of persons employed in the censal year 1924 was £417, as compared with £174 in 1907.

*Exports and imports.*—In order to avoid the risk of disclosing particulars relating to individual firms, the classification of the output returned to the Census of Production is given in less detail than that shown in the Import and Export List. The following table gives the available particulars of exports and retained imports in relation to production in 1924:—

Kind of goods.	Production.		
	Exports.	Net imports.	
	Th. cwt.	Th. cwt.	Th. cwt.
Starch .. .. .	548	29*	2,006*
Dextrine, farina and potato flour .. .. .	39	10	798
Leather polishes .. .. .	498	82	5
Stove and other polishes .. .. .	627	108	5

\* Rice starch and maize starch, not edible.

The home market in polishes is commanded by British manufacturers, but imports dominate in respect of starch and dextrine, etc. In 1907 exports of starch, dextrine, etc., were 73,000 cwts. and net imports 1,565,000 cwts., but it is not clear whether edible maize starch was included or excluded. Exports of blacking and polishes were 266,000 cwts. and retained imports 59,000 cwts. in that year.

#### 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 connexion 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 Starch, Blue and Polishes Trades that 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, 5,375 operatives, or 54 per cent. of the total of 9,993 operatives for the trades as a whole, and their net output totalled £3,018,000, or 58 per cent. of the aggregate net output of £5,191,000 for the trades as a whole. The total wage-bill of these firms, as returned to the Ministry of Labour, was £579,000, representing about 19 per cent. of their aggregate net output.

#### Employment.

The detailed information relating to employment in 1924 is summarised in Table III on page 128. 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.	Males.		Females.		Males and females.	
	Under 18.	All ages.	Under 18.	All ages.	Under 18.	All ages.
<b>1924.</b>						
Operatives .. .. .	307	4,478	1,240	5,585	1,547	10,063
Administrative, etc. .. .. .	50	1,704	88	679	138	2,383
<b>TOTAL .. .. .</b>	<b>357</b>	<b>6,182</b>	<b>1,328</b>	<b>6,264</b>	<b>1,685</b>	<b>12,446</b>
<b>1907.</b>						
Wage earners .. .. .	920	5,159	1,820	5,031	2,740	10,190
Salaried .. .. .	112	1,417	25	188	137	1,605
<b>TOTAL .. .. .</b>	<b>1,032</b>	<b>6,576</b>	<b>1,845</b>	<b>5,219</b>	<b>2,877</b>	<b>11,795</b>

The numbers of operatives recorded month by month in 1924 ranged from 85 above the average, in April, to 108 below the average, in December (see Table IIIB, page 128).

#### Mechanical Power.

The detailed information relating to mechanical power in 1924 is summarised in Table IV on page 129. The following table sets out the particulars for 1924 and 1907 relating to the capacity and kinds of *prime movers* and the capacity of *electric generators* installed.

Power equipment.	1924.			1907.
	Ordinarily in use.	In reserve or idle.	Total.	Total.
	H.P.	H.P.	H.P.	H.P.
<b>PRIME MOVERS :—</b>				
Reciprocating steam engines ..	5,048	667	5,715	7,148
Gas engines .. .. .	1,083	79	1,162	
Petrol and light oil engines ..	158	—	158	
Heavy oil engines .. .. .	—	—	—	
Water power .. .. .	—	—	—	70
Other (not steam turbines) ..	—	—	—	352
<b>TOTAL .. .. .</b>	<b>6,289</b>	<b>746</b>	<b>7,035</b>	<b>9,237</b>
<b>ELECTRIC GENERATORS :—</b>	<b>Kw.</b>	<b>Kw.</b>	<b>Kw.</b>	<b>Kw.</b>
Driven by—				
Reciprocating steam engines	2,469	366	2,835	798
Gas engines .. .. .	162	—	162	172*
<b>TOTAL .. .. .</b>	<b>2,631</b>	<b>366</b>	<b>2,997</b>	<b>970</b>

\* Returned as driven by "Other prime movers."

The capacity of *electric motors* recorded in 1924 was as shown below :—

Electric motors.	1924.		Total.
	Ordinarily in use.	In reserve or idle.	
	H.P.	H.P.	H.P.
Driven by—			
Electricity generated in own works .. .. .	4,225	1,040	5,265
Purchased electricity .. .. .	6,502	924	7,426

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 1,598,000.

## TABLES.

## I.—Summary of results.

Particulars.	Unit.	England and Wales and Northern Ireland.*	Scotland.	United Kingdom.
Value of goods made (Gross output)	£'000.	9,012	902	9,914
Cost of materials used .. .. .	"	4,202	521	4,723
Net output .. .. .	"	4,810	381	5,191
Average number of persons employed	No.	11,417	1,029	12,446
Net output per person employed ..	£	421	370	417
Mechanical power available :—				
Prime movers .. .. .	H.P.	5,735	1,300	7,035
Electric motors driven by purchased electricity .. .. .	"	6,145	1,281	7,426

\* In order to avoid the possible disclosure of information relating to individual firms, the figures for Northern Ireland have been combined with those for England and Wales.

## II.—Production.

Output sold or added to stock.	Unit.	England and Wales and Northern Ireland.†	Scotland.	United Kingdom.
		Quantity and selling value.		
Starch, all kinds .. .. .	Th. cwts.	*	*	523
	£'000	*	*	968
Dextrine and farina and potato flour .. .. .	Th. cwts.	*	*	39
	£'000	*	*	56
Other farinaceous products (including mustard) .. .. .	Th. cwts.	*	*	591
	£'000	*	*	2,086
Leather polishes .. .. .	Th. cwts.	488	4	492
	£'000	2,007	23	2,030
Stove and other polishes .. .. .	Th. cwts.	610	3	613
	£'000	3,115	17	3,132
Foundry blacking .. .. .	£'000	126	48	174
Ink, stains and gums for the Boot and Shoe Trade .. .. .	£'000	202	—	202
Other cleaning and dyeing materials (including sponges and laundry blue).	£'000	*	*	1,139
Farinaceous waste and by-products	£'000	*	*	57
Other goods made .. .. .	£'000	*	*	70
<b>TOTAL VALUE OF GOODS MADE (GROSS OUTPUT) .. .. .</b>	<b>£'000</b>	<b>9,012</b>	<b>902</b>	<b>9,914</b>

† See footnote to Table I.

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

## III.—Employment.

## A.—NUMBERS EMPLOYED IN WEEK ENDED 18TH OCTOBER, 1924.

Kind of staff.	Males.		Females.		Males and females.	
	Under 18.	All ages.	Under 18.	All ages.	Under 18.	All ages.
<i>England and Wales and Northern Ireland* :—</i>						
Operatives .. ..	296	4,052	1,092	5,073	1,388	9,125
Administrative, etc.†	46	1,582	79	640	125	2,222
TOTAL .. ..	342	5,634	1,171	5,713	1,513	11,347
<i>Scotland :—</i>						
Operatives .. ..	12	445	128	423	140	868
Administrative, etc.†	4	122	9	39	13	161
TOTAL .. ..	16	567	137	462	153	1,029
<i>United Kingdom :—</i>						
Operatives .. ..	308	4,497	1,220	5,496	1,528	9,993
Administrative, etc.†	50	1,704	88	679	138	2,383
TOTAL .. ..	358	6,201	1,308	6,175	1,666	12,376

\* See footnote to Table I.

† Administrative, technical and clerical staff.

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

*England and Wales and Northern Ireland.\* (Annual average : Males, 4,037 ; Females, 5,158 ; Total, 9,195.)*

Week ended.	Males.	Females.	Total.	Week ended.	Males.	Females.	Total.
Jan. 12th ..	4,007	5,194	9,201	July 19th ..	4,019	5,179	9,198
Feb. 16th ..	4,041	5,218	9,259	Aug. 16th ..	4,026	5,106	9,132
March 15th ..	4,004	5,258	9,262	Sept. 13th ..	4,036	5,140	9,176
April 12th ..	4,039	5,229	9,268	Oct. 18th ..	4,052	5,073	9,125
May 17th ..	4,035	5,175	9,210	Nov. 15th ..	4,069	5,064	9,133
June 21st ..	4,040	5,216	9,256	Dec. 13th ..	4,072	5,048	9,120

*Scotland. (Annual average : Males, 441 ; Females, 427 ; Total, 868.)*

Jan. 12th ..	432	434	866	July 19th ..	442	437	879
Feb. 16th ..	434	430	864	Aug. 16th ..	432	410	842
March 15th ..	446	432	878	Sept. 13th ..	459	433	892
April 12th ..	447	433	880	Oct. 18th ..	445	423	868
May 17th ..	439	439	878	Nov. 15th ..	444	415	859
June 21st ..	439	437	876	Dec. 13th ..	437	398	835

*United Kingdom. (Annual average : Males, 4,478 ; Females, 5,585 ; Total, 10,063.)*

Jan. 12th ..	4,439	5,628	10,067	July 19th ..	4,461	5,616	10,077
Feb. 16th ..	4,475	5,648	10,123	Aug. 16th ..	4,458	5,516	9,974
March 15th ..	4,450	5,690	10,140	Sept. 13th ..	4,495	5,573	10,068
April 12th ..	4,486	5,662	10,148	Oct. 18th ..	4,497	5,496	9,993
May 17th ..	4,474	5,614	10,088	Nov. 15th ..	4,513	5,479	9,992
June 21st ..	4,479	5,653	10,132	Dec. 13th ..	4,509	5,446	9,955

\* See footnote to Table I.

## IV.—Mechanical Power.

## PARTICULARS OF PRIME MOVERS, ELECTRIC GENERATORS AND ELECTRIC MOTORS.

Power equipment.	England and Wales and Northern Ireland.*		Scotland.		United Kingdom.	
	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.
<b>PRIME MOVERS :—</b>						
Reciprocating steam engines .. ..	4,053	427	995	240	5,048	667
Gas engines .. ..	1,044	53	39	26	1,083	79
Petrol and light oil engines .. ..	158	—	—	—	158	—
TOTAL .. ..	5,255	480	1,034	266	6,289	746
TOTAL OF PRIME MOVERS INSTALLED	5,735		1,300		7,035	
	Kw.	Kw.	Kw.	Kw.	Kw.	Kw.
<b>ELECTRIC GENERATORS :—</b>						
Driven by—						
Reciprocating steam engines .. ..	2,212	200	257	166	2,469	366
Gas engines .. ..	146	—	16	—	162	—
TOTAL .. ..	2,358	200	273	166	2,631	366
TOTAL OF ELECTRIC GENERATORS INSTALLED ..	2,558		439		2,997	
	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
<b>ELECTRIC MOTORS :—</b>						
Driven by—						
Electricity generated in own works ..	3,700	1,025	525	15	4,225	1,040
Purchased electricity .. ..	5,491	654	1,011	270	6,502	924

\* See footnote to Table I.