

## THE PENS, PENCILS, AND ARTISTS' MATERIALS TRADES.

## Contents.

|   | Page. |
|---|-------|
| INTRODUCTORY .. .. .                          | 378   |
| Summary of results .. .. .                    | 378   |
| Qualifications affecting comparisons .. .. .  | 379   |
| Value of output and cost of materials .. .. . | 379   |
| PRODUCTION .. .. .                            | 379   |
| Principal products .. .. .                    | 379   |
| Other products .. .. .                        | 380   |
| Work done for the trade .. .. .               | 380   |
| Value of output free from duplication .. .. . | 380   |
| Cost of materials and work given out .. .. .  | 381   |
| Net output .. .. .                            | 381   |
| Exports and imports .. .. .                   | 381   |
| WAGES IN 1924 .. .. .                         | 381   |
| EMPLOYMENT .. .. .                            | 382   |
| MECHANICAL POWER .. .. .                      | 382   |
| TABLES .. .. .                                | 384   |

## Introductory.\*

The tables on pages 384 to 386 are based on returns received from firms in England and Wales whose business in 1924 consisted wholly or mainly in the manufacture of pens, pencils and artists' materials. The number of such separate returns was 67. Twelve firms to which schedules were sent did not furnish returns, but these firms for the most part had very small establishments. 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 £15,000. No production was recorded in Scotland or Northern Ireland.

*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 pages vii to xv.

| Particulars.  | Unit. | 1924. | 1912. | 1907.          |
|---|-------|-------|-------|----------------|
| Value of goods made and work done (Gross output) .. .. .          | £'000 | 2,135 | 918   | 734            |
| Cost of materials used .. .. .                                    | "     | 823   | 306   | 234            |
| Paid for work given out to other firms .. .. .                    | "     | 15    | 9     | 10             |
| Net output .. .. .  | "     | 1,297 | 603   | 490            |
| Average number of persons employed (excluding outworkers) .. .. . | No.   | 7,286 | 7,485 | 6,368          |
| Net output per person employed (excluding outworkers) .. .. .     | £     | 178   | 81    | 77             |
| Mechanical power available :—                                     |       |       |       |                |
| Prime movers .. .. .  | H.P.  | 1,269 | 1,820 | 1,450          |
| Electric motors driven by purchased electricity .. .. .           | "     | 2,978 | 1,000 | (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 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 number of persons employed in the establishments thus excluded was 37, or 0·5 per cent. of the total number employed by the remaining firms, as shown in the above table.

*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 page xiii, they overstate the value of the output of, and the cost of the materials used by, the Pens, Pencils, and Artists' Materials Trades considered as a whole. The matter is discussed on page 380, where it is estimated that the value, free from duplication, of the output of these trades in 1924 lay between £1,885,000 and £2,135,000, and the cost of the materials purchased from sources outside the trade and worked up into its products lay between £573,000 and £823,000.

## Production.

Detailed information relating to the output of the Pens, Pencils, and Artists' Materials Trades in 1924 will be found in Table II on page 384.

*Principal products.*—The following statement affords, for the censal years 1924, 1912 and 1907, a comparison of the output of the

principal products of the Pens, Pencils, and Artists' Materials Trades as returned on schedules for all trades:—

| Kind of goods.  | 1924.                            |              | 1912.      | 1907.      |
|---|----------------------------------|--------------|------------|------------|
|   | Returned on schedules for        |              | Total.     | Total.     |
|   | The Pens, Pencils, etc., Trades. | All trades.  |            |            |
| Gold pens .. .. .   | £'000. 155                       | £'000. 155   | £'000. 45  | £'000. 13  |
| Pen-nibs of other metals, pen-holders, tips, etc. . . . .                 | 553                              | 570          | 463        | 415        |
| Reservoir and stylographic pens (including parts and repairs) .. .        | 333                              | 437          | 125        | 104        |
| Pencils, pencil leads, crayons and pastels .. .                           | 512                              | 516          | 107        | 54         |
| Artists' brushes .. . . .   | 49                               | 64           | 183        | 155        |
| Other artists' materials (except brushes and pencils, crayons, etc.) .. . | 302                              | 302          |            |            |
| Artists' cabinet-work (easels, palettes, wooden paint-boxes, etc.) .. .   | 26                               | 30           | 17         | 14         |
| Small steel wares (springs, etc.) .. .                                    | 61                               | 61           | 55         | 29         |
| <b>TOTAL VALUE—PRINCIPAL PRODUCTS</b>                                     | <b>1,991</b>                     | <b>2,135</b> | <b>995</b> | <b>784</b> |

The total quantity of artists' brushes made in 1924 was 405,000 dozens, viz.: 336,000 dozens returned on schedules for the Pens, Pencils, and Artists' Materials Trades, and 69,000 dozens returned on schedules for the Brush-making Trade.\*

*Other products.*—In addition to the pens, pencils and artists' materials enumerated in the preceding table, there were returned other goods aggregating £144,000 in 1924, £6,000 in 1912, and £5,000 in 1907. These goods, being of kinds mainly produced in other trades, are dealt with in the reports on those trades.

*Work done for the trade.*—Particulars relating to this class of work were not returned in connexion with the Census of 1924. The total amounts recorded as having been received for work done for the trade in 1912 and 1907 were £1,000 and £2,000, respectively.

*Value of output free from duplication.*—The gross value of the output of the Pens, Pencils, and Artists' Materials Trades in 1924 was returned as £2,135,000. This sum includes a certain amount of duplication in respect of (a) gold pens sold by the makers to manufacturers of fountain pens, and (b) parts of pens included with complete pens in the same headings. The total sum involved is £1,041,000, and, while the precise amount of duplication cannot be determined, it appears probable, on the whole, that £250,000 would be a reasonable maximum estimate. The value of the output in 1924 of the Pens, Pencils, and Artists' Materials Trades, free from duplication, may, therefore, be estimated as lying between £1,885,000 and £2,135,000. The corresponding figure for 1907 was about £750,000.

\* See separate volume containing reports on the Timber Trades.

*Cost of materials and work given out.*—The cost of materials used by firms that made their returns on schedules for the Pens, Pencils, and Artists' Materials Trades was returned as £823,000 in 1924, a sum which, by the exclusion of purchases of the products of other firms in the same trade, may be reduced to an amount lying between £573,000 and £823,000; the corresponding figure for 1907 was about £200,000.

The amount paid to other firms for work given out to them was returned as £15,000 in 1924, £9,000 in 1912, and £10,000 in 1907.

*Net output.*—The net output in 1924 of the firms that made their returns on schedules for the Pens, Pencils, and Artists' Materials Trades (whose gross output was valued at £2,135,000) was £1,297,000, 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 outworkers) in the censal year 1924 was £178, as compared with £81 in 1912 and £77 in 1907.

*Exports and imports.*—The values of exports and retained imports in 1924 of pens, pencils, etc., are shown below, in so far as they are separately distinguished in the Export and Import returns:—

| Kind of goods.  | Exports.         | Net imports. |
|---|------------------|--------------|
|   | £'000.           | £'000.       |
| Pencils, pencil leads, and crayons .. . . .                         | 165              | 199          |
| Pen-nibs, other than gold .. . . .                                  | 374              | 9            |
| Fountain and stylographic pens and parts (including gold nibs) .. . | 78               | 9            |
| Artists' brushes .. . . .   | 11               | 6            |
|   | (Th. dozen) (36) | (204)        |

Comparative figures of exports and imports for 1912 and 1907 are not available.

### 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 Pens, Pencils, and Artists' Materials 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, 3,057 operatives, or 47 per cent. of the total of 6,510 operatives for the trades as a whole, and their net output totalled £666,000, or

51 per cent. of the aggregate net output of £1,297,000 for the trades as a whole. The total wage-bill of these firms, as returned to the Ministry of Labour, was £274,000, representing about 41 per cent. of their aggregate net output.

### Employment.

The detailed information relating to employment in 1924 is summarised in Table III on page 385. The following table sets out certain particulars for that year together with those relating to the two previous censal years. 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<br>(excluding outworkers). | Males.     |              | Females.     |              | Males and females. |              |
|---|------------|--------------|--------------|--------------|--------------------|--------------|
|   | Under 18.  | All ages.    | Under 18.    | All ages.    | Under 18.          | All ages.    |
| <b>1924.</b>                              |            |              |              |              |                    |              |
| Operatives .. ..                          | 413        | 1,973        | 1,402        | 4,568        | 1,815              | 6,541        |
| Administrative, etc. ..                   | 30         | 457          | 54           | 288          | 84                 | 745          |
| <b>TOTAL .. ..</b>                        | <b>443</b> | <b>2,430</b> | <b>1,456</b> | <b>4,856</b> | <b>1,899</b>       | <b>7,286</b> |
| <b>1912.</b>                              |            |              |              |              |                    |              |
| Wage earners .. ..                        | 446        | 1,865        | 1,581        | 5,163        | 2,027              | 7,028        |
| Salaried .. ..                            | 46         | 366          | 14           | 91           | 60                 | 457          |
| <b>TOTAL .. ..</b>                        | <b>492</b> | <b>2,231</b> | <b>1,595</b> | <b>5,254</b> | <b>2,087</b>       | <b>7,485</b> |
| <b>1907.</b>                              |            |              |              |              |                    |              |
| Wage earners .. ..                        | 348        | 1,654        | 897          | 4,371        | 1,245              | 6,025        |
| Salaried .. ..                            | 31         | 276          | 11           | 67           | 42                 | 343          |
| <b>TOTAL .. ..</b>                        | <b>379</b> | <b>1,930</b> | <b>908</b>   | <b>4,438</b> | <b>1,287</b>       | <b>6,368</b> |
| Average number of outworkers :—           |            |              |              |              |                    |              |
| 1924 .. ..                                | —          |              | 1            |              | 1                  |              |
| 1912 .. ..                                | 5          |              | 24           |              | 29                 |              |
| 1907 .. ..                                | 2          |              | 21           |              | 23                 |              |

The numbers of operatives recorded month by month in 1924 ranged from 136 below the average, in February, to 166 above the average, in December (see Table IIIB, page 385). The proportion of females to the total for both sexes was somewhat lower in 1924 than in 1907 or 1912.

### Mechanical Power.

The detailed information relating to mechanical power in 1924 is summarised in Table IV on page 386. The following table sets out the particulars for the three censal years relating to the capacity and kinds of *prime movers* and the capacity of *electric generators* installed.

| Power equipment.                | 1924.              |                     |              | 1912.        | 1907.        |
|---------------------------------|--------------------|---------------------|--------------|--------------|--------------|
|                                 | Ordinarily in use. | In reserve or idle. | Total.       | Total.       | Total.       |
|                                 | H.P.               | H.P.                | H.P.         | H.P.         | H.P.         |
| <b>PRIME MOVERS :—</b>          |                    |                     |              |              |              |
| Reciprocating steam engines ..  | 372                | 2                   | 374          | 987          | 936          |
| Gas engines .. ..               | 603                | 250                 | 853          | 795          | 469          |
| Petrol and light oil engines .. | 24                 | —                   | 24           | 6            |              |
| Heavy oil engines .. ..         | —                  | —                   | —            | —            | 45           |
| Water power .. ..               | 18                 | —                   | 18           | 32           |              |
| <b>TOTAL .. ..</b>              | <b>1,017</b>       | <b>252</b>          | <b>1,269</b> | <b>1,820</b> | <b>1,450</b> |
| <b>ELECTRIC GENERATORS :—</b>   | Kw.                | Kw.                 | Kw.          | Kw.          | Kw.          |
| Driven by—                      |                    |                     |              |              |              |
| Reciprocating steam engines     | 36                 | —                   | 36           | 84           | 108          |
| Gas engines .. ..               | 216                | 60                  | 276          | 157.         | 2            |
| Petrol and light oil engines .. | 2                  | —                   | 2            |              |              |
| Heavy oil engines .. ..         | —                  | —                   | —            |              |              |
| Water power .. ..               | —                  | —                   | —            |              |              |
| <b>TOTAL .. ..</b>              | <b>254</b>         | <b>60</b>           | <b>314</b>   | <b>241</b>   | <b>110</b>   |

The capacity of *electric motors* recorded in 1924 and in 1912 was as shown below :—

| Electric motors.                      | 1924.              |                     |        | 1912.  |
|---------------------------------------|--------------------|---------------------|--------|--------|
|                                       | Ordinarily in use. | In reserve or idle. | Total. | Total. |
| Driven by—                            | H.P.               | H.P.                | H.P.   | H.P.   |
| Electricity generated in own works .. | 247                | 20                  | 267    | 85     |
| Purchased electricity .. ..           | 2,744              | 234                 | 2,978  | 1,000  |

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 54,000.

## TABLES.

## I.—Summary of results.

Note.—No production was recorded in Scotland or Northern Ireland.

| Particulars.  | Unit. | England and Wales. |
|---|-------|--------------------|
| Value of goods made (Gross output) .. .. .                        | £'000 | 2,135              |
| Cost of materials used .. .. .                                    | "     | 823                |
| Paid for work given out to other firms .. .. .                    | "     | 15                 |
| Net output .. .. .  | "     | 1,297              |
| Average number of persons employed (excluding outworkers) .. .. . | No.   | 7,286              |
| Net output per person employed (excluding outworkers)             | £     | 178                |
| Mechanical power available :—                                     |       |                    |
| Prime movers .. .. .  | H.P.  | 1,269              |
| Electric motors driven by purchased electricity .. .. .           | "     | 2,978              |

## II.—Production.

| Goods sold or added to stock.   | England and Wales. |  |
|---|--------------------|--|
|   | Selling value.     |  |
|   | £'000.             |  |
| Gold pens .. .. .   | 155                |  |
| Pen-nibs of other metals, and holders, tips, etc., for use therewith              | 553                |  |
| Reservoir and stylographic pens and parts (including repair work)                 | 333                |  |
| Pencils, pencil leads, crayons, and pastels .. .. .                               | 512                |  |
| Artists' materials (other than pencils, crayons and pastels) :—                   |                    |  |
| Brushes .. .. .   | 49                 |  |
| Other .. .. .   | (336)              |  |
| Artists' cabinet work (including easels, palettes and wooden paint boxes) .. .. . | 302                |  |
| Small steel wares (springs, etc.) .. .. .   | 26                 |  |
| Other products .. .. .  | 61                 |  |
|   | 144                |  |
| <b>TOTAL VALUE OF GOODS MADE (GROSS OUTPUT) .. .. .</b>                           | <b>2,135</b>       |  |

## 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 .. .. .                             | 417        | 1,992        | 1,387        | 4,518        | 1,804              | 6,510        |
| Administrative, technical and clerical .. .. . | 30         | 457          | 54           | 288          | 84                 | 745          |
| <b>TOTAL .. .. .</b>                           | <b>447</b> | <b>2,449</b> | <b>1,441</b> | <b>4,806</b> | <b>1,888</b>       | <b>7,255</b> |

B.—OPERATIVES EMPLOYED IN ONE WEEK IN EACH MONTH OF 1924  
(EXCLUDING OUTWORKERS).

*England and Wales. (Annual average : Males, 1,973 ; Females, 4,568 ; Total, 6,541.)*

| Week ended.   | Males. | Females. | Total. | Week ended.   | Males. | Females. | Total. |
|---------------|--------|----------|--------|---------------|--------|----------|--------|
| Jan. 12th ..  | 1,936  | 4,691    | 6,627  | July 19th ..  | 1,981  | 4,635    | 6,616  |
| Feb. 16th ..  | 1,930  | 4,475    | 6,405  | Aug. 16th ..  | 1,953  | 4,520    | 6,473  |
| March 15th .. | 1,944  | 4,496    | 6,440  | Sept. 13th .. | 1,990  | 4,509    | 6,499  |
| April 12th .. | 1,941  | 4,479    | 6,420  | Oct. 18th ..  | 1,992  | 4,518    | 6,510  |
| May 17th ..   | 1,968  | 4,589    | 6,557  | Nov. 15th ..  | 2,032  | 4,605    | 6,637  |
| June 21st ..  | 1,967  | 4,632    | 6,599  | Dec. 13th ..  | 2,045  | 4,662    | 6,707  |

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

| Country.                    | January. |          |        | July.  |          |        |
|-----------------------------|----------|----------|--------|--------|----------|--------|
|                             | Males.   | Females. | Total. | Males. | Females. | Total. |
| <i>England and Wales ..</i> | —        | 1        | 1      | —      | 1        | 1      |

## IV.—Mechanical Power.

PARTICULARS OF PRIME MOVERS, ELECTRIC GENERATORS AND  
ELECTRIC MOTORS.

| Power equipment.                               | England and Wales.    |                        |
|--|-----------------------|------------------------|
|  | Ordinarily<br>in use. | In reserve<br>or idle. |
|  | H.P.                  | H.P.                   |
| PRIME MOVERS :—                                |                       |                        |
| Reciprocating steam engines .. .. .            | 372                   | 2                      |
| Gas engines .. .. .                            | 603                   | 250                    |
| Petrol and light oil engines .. .. .           | 24                    | —                      |
| Water power .. .. .                            | 18                    | —                      |
| TOTAL .. .. .                                  | 1,017                 | 252                    |
| TOTAL OF PRIME MOVERS INSTALLED .. .. .        | 1,269                 |                        |
| ELECTRIC GENERATORS :—                         | Kw.                   | Kw.                    |
| Driven by—                                     |                       |                        |
| Reciprocating steam engines .. .. .            | 36                    | —                      |
| Gas engines .. .. .                            | 216                   | 60                     |
| Petrol and light oil engines .. .. .           | 2                     | —                      |
| TOTAL .. .. .                                  | 254                   | 60                     |
| TOTAL OF ELECTRIC GENERATORS INSTALLED .. .. . | 314                   |                        |
| ELECTRIC MOTORS :—                             | H.P.                  | H.P.                   |
| Driven by—                                     |                       |                        |
| Electricity generated in own works .. .. .     | 247                   | 20                     |
| Purchased electricity .. .. .                  | 2,744                 | 234                    |