## THE TOOL AND IMPLEMENT TRADES.



## Introductory.*

The tables on pages 167 to 170 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 tools and implements. The number of such separate returns was 674. About 90 firms to which schedules were sent did not furnish returns, but these firms for the most part had very small establishments and included some which had ceased operations by the end of the censal year. On the basis of the information available it is estimated that they did not employ more than 350 persons in all and that their total net output probably did not exceed $£ 60,000$.

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.

[^0]| Particulars. | Unit. | 1924. | 1912. | 1907. |
| :---: | :---: | :---: | :---: | :---: |
| Value of goods made and work done <br> (Gross output) | $£^{\prime} 000$ | 8,855 | 4,600 | 3,703 |
| Cost of materials used .. .. | L | 3,633 | 1,995 | 1,539 |
| Paid for work given out to other firms | ", | 98 | 44 | 74 |
| Net output |  | 5,124 | 2,561 | 2,090 |
| Average number of persons employed | No. | 26,602 | 26,441 | 23,711 |
| Net output per person employed . . | £ | 193 | 97 | 88 |
| Mechanical power available :Prime movers | H.P. | 21,519 | 21,498 | 19,206 |
| Electric motors driven by purchased electricity | ,, | 37,430 | 8,395 | $\begin{aligned} & \text { (not } \\ & \text { recorded) } \end{aligned}$ |

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) Ploughs and harrows and similar agricultural implements, not mechanically driven, were included in the heading of agricultural implements and tools in 1912 and 1907, and the figures given in the above table for those years accordingly cover these products ; in the Census of 1924, ploughs, harrows, etc., were classified as agricultural machinery and the output was, therefore, chiefly returned on schedules for the Engineering Trades (page 232).
(3) 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 exclusion of Southern Ireland in 1924 does not seriously affect the comparability of the figures since, according to the Census of Production taken by the Government of the Irish Free State in respect of the year 1926, the value of the output of agricultural and other implements and fittings in that year recorded in the Report on the Engineering and Implement Trades was only $£ 49,000$. The corresponding figure for the whole of Ireland in 1907 was $£ 18,000$.
(4) 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 1,603 or $6 \cdot 1$ per cent. of the number employed by the remaining firms, as shown in the above table. Moreover, correspondence on
defective returns for 1912 had not been completed when the war compelled suspension of this work. In these circumstances detailed information for 1912 is not given in the remainder of this report. The resulting defects in the aggregate figures given above are probably not important.

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 making returns, and, for the reasons explained in paragraphs (i) and (ii) on pages xii and xiii, they may over-state the value of the output of, and the cost of the materials used by, the Tool and Implement Trades considered as a whole. The matter is discussed on page 163, where it is estimated that the value, free from duplication, of the output of the Tool and Implement Trades in 1924 lay between $£ 8,030,000$ and $£ 8,780,000$, and that the cost of the materials purchased from sources outside these trades and worked up into their products lay between $£ 2,880,000$ and $£ 3,630,000$.

Classes of firms engaged in the trade.-It is the practice for some firms in the tool trade not only to manufacture tools and implements on their own premises but also to give out to small firms or tenement occupiers materials to be worked up. Such principal firms were instructed to include, as part of their output, the value of the goods made for them outside with the value of the goods made in their own establishments ; the subordinate firms returned the amounts paid to them for such work as received for work done for the trade. Merchant firms that supplied materials to tenement occupiers or other outside firms to be made into goods for them were also instructed to state against the proper headings the quantity and selling value of the goods made from those materials. The manufacturers or merchants giving out the work also entered the amounts paid by them for such work under the heading of Work given out. In both cases there would be duplication between the returns made by the tenement occupiers or other firms employed and those made by the employing firms. In order to estimate the probable amount of this outside work, firms that made their returns on schedules for the Tool and Implement Trades were asked to state (a) the percentage of the total selling value of their output which represented work done in their own works, and (b) the percentage done for them by workers outside their establishments. Firms with a total output of $£ 4,546,000$ (or $51 \cdot 3$ per cent. of the aggregate gross output of the Tool and Implement Trades) furnished the desired information. From their statements it appears that firms with an output valued at $£ 3,381,000$ gave out no work, and that firms with an output valued at $£ 1,165,000$ had goods to the value of $£ 107,000$ made for them outside their works. It would appear, therefore, that the giving out of work is not of great importance in the Tool and Implement Trades, but it is by
no means certain that the Census Office was in possession of a complete list of merchants who gave out work and from whom returns could be required.

## Production.

Detailed information as to the output of the Tool and Implement Trades in 1924 will be found in Table II on pages 167 and 168.
In addition to the goods dealt with in this report, tools, gauges, etc., valued, on a cost basis, at $£ 5,700$ were produced by the Royal Army Ordnance Department, etc., in 1924.*

Total make of steel.-Steel makers that made their returns on schedules for the Tool and Implement Trades were required in 1924 to state the total quantity of steel made at their works, whether subsequently used by them for further manufacturing processes or not. The information furnished was as follows:-

| Kind of steel. |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | ---: |
| Bessemer: |  |  |  |  |  | Tons. |
| Acid | . | . | $\ldots$ | . | .. | . |$) 2,540$

According to the information furnished by these firms 6,130 tons of this steel were used by them in the manufacture of finished products, the remaining 13,500 tons being sold to other firms or added to stock in the form of ingots, blooms, billets, bars, forgings and castings. As the total quantity of semi-manufactured steel products returned as sold or added to stock amounted to 18,380 tons (see page 162) it follows that at least 4,880 tons of such products were made either from imported ingot steel or from steel bought from steelmakers outside the Tool and Implements Trades. The total make of steel in the United Kingdom is dealt with in the report on the Iron and Steel Trades (see page 40).

Tools and implements.-The following statement shows, for 1924 and 1907, the value and (where recorded) the quantity of the principal products made for sale in the Tool and Implement Trades, including not only the tools and implements manufactured by firms

* Such production falls within the scope of the report on Public Utility Services which forms part of a separate volume.
that made their returns on schedules for those trades, but also the output of similar goods made by firms whose returns were furnished on schedules for other trades.

| Kinds of goods. | 1924. |  |  |  | 1907. |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Recorded by |  |  | $\begin{aligned} & \text { Total } \\ & \text { selling } \\ & \text { value. } \end{aligned}$ | $\begin{aligned} & \text { Total } \\ & \text { selling } \\ & \text { value. } \end{aligned}$ |
|  | Number and value. |  | Value only. |  |  |
| Tools and implements :- <br> Files and rasps .. <br> Engineers' tools (except gauges) | Th. doz. | $£^{\prime} 000$. | $£^{\prime} 000$. | $£^{\prime} 000$. | $£^{\prime} 000$. |
|  | 1,776 | 605 | 161 | 766 | 640 |
|  | - | - | 1,802 | 1,802 | 590 |
| Saws, saw blades, and machine knives .. | 1,493 | 611 | 493 | 1,104 | 372 |
| Axes, hatchets, adzes and matchets | 229 | 311 | - | 311 |  |
| Carpenters' and joiners' tools, not elsewhere specified | 676 | 347 | 114 | 461 | 585 |
| Spades and shovels for all purposes | 508 | 601 | 161 | 762 |  |
| Agricultural and horticultural, except spades and shovels | - | - | 1,415 | 1,415 | \} 2,267* |
| Other kinds ...... | - | - | 1,064 | 1,064 | 340 |
| Tools and implements, not separately distinguished | - | - | 135 | 135 | 470 |
| Total-Tools and implements.. | . . | 2,475 | 5,345 | 7,820 | 5,264 |
| Handles for tools and implements | . | - | 298 | 298 | $\dagger$ |
| Total value | . | 2,475 | 5,643 | 8,118 | 5,264 |

* See qualification (2) on page 158.
$\dagger$ Included with tools and implements.
Of the total value ( $£ 8,118,000$ ) shown above for $1924, £ 6,869,000$ represented goods made by firms that furnished their returns on schedules for the Tool and Implement Trades, details of whose output are shown in Table II on page 168.

It is not possible to measure with any reasonable degree of precision the change in the volume of the output of agricultural tools and implements between 1907 and 1924, manufacturers not being required, at the 1907 Census, to give particulars of the quantity of their output.

With regard to the other classes of tools and implements shown, comparison of aggregate values suggests a substantial increase in the output of engineers' tools and saws, etc., but a decline, or, at best, stagnation, in the output of files and rasps, edge tools, and tools of other sorts.

Other products.-In addition to the tools and implements dealt with in the preceding paragraphs, firms that made their returns on
schedules for the Tool and Implement Trades recorded, in 1924 and 1907, an output for sale of the goods shown in the following table These goods, being of kinds mainly produced by other trades, are dealt with in the reports on those trades.

| Kind of goods. | 1924. |  | 1907. |
| :---: | :---: | :---: | :---: |
|  | Quantity | Selling value. | Selling value. |
|  | Tons. | $\AA^{\prime} 000$. | $£^{\prime} 000$. |
| Ingots, blooms, billets, etc. | 1,240 | 94 | 155 |
| Bars Rough forgings and casting | 6,180 10,960 | $\begin{aligned} & 606 \\ & 351 \end{aligned}$ | 154 |
|  |  |  |  |
| Total-Semi-manufactured steel | 18,380 | 1,051 | 309 |
| Machinery :- <br> Machine tools |  |  |  |
| Other machinery and accessories | $\cdots$ | 169 | 77 |
| Total-Machinery | . | 307 | 218 |
| Other manufactures of iron and steel. Other goods made | $\cdots$ | 401 17 | $\begin{aligned} & 85 \\ & 30 \end{aligned}$ |
| Total .. . . | . | 1,776 | 642 |

Repair work and work done for the trade. -The amount recorded as received for repairs carried out to tools and implements in 1924 was $£ 108,000$, to which should be added the sum of $£ 7,000$ recorded for similar work on schedules for other trades. In 1907 the value of repair work was included in the recorded value of the tools and implements made, and no separate information is available for that year.
The amount received for work done in 1924 by tool and implement firms that worked for the trade was $£ 103,000$, including $£ 1,000$ recorded on schedules for other trades. Of this amount $f 60,000$ represented work done on files and rasps, of which $£ 30,000$ was recorded as for file re-cutting. The amounts received by tool and implement firms for work done for the trade in 1907 was $£ 94,000$, including a sum of $£ 5,000$ recorded on schedules for other trades.

Value of output free from duplication. -The gross value of the output of the firms whose returns were made on schedules for the Tool and Implement Trades in 1924 was $£ 8,855,000$, but this total contains some duplication. The sum of $£ 150,000$ returned for handles not fixed to tools may be duplicated to some extent in the value of complete tools, but part of this output may be included in the exports of tool handles, which in 1924 were valued at $£ 48,000$. There does not appear to have been any further substantial duplication in respect of "parts". With regard to the semi-manufactured steel
returned as made for sale or stock, it would appear most probable that the 1,240 tons of steel ingots, blooms and billets, valued at $\{94,000$, were in the main added to makers' stocks, and that the 10,960 tons of rough forgings and castings made by tool-makers who had their own steel-works were sold to firms outside the Tool and Implement Trades (e.g., to engineers, shipbuilders, etc.). There remain 6,180 tons of steel bars valued at $£ 606,000$, which may represent sales by the makers to other tool manufacturers, but, in part, may have been additions to makers' stocks. Lastly, with regard to the $£ 102,000$ returned on schedules for the Tool and Implement Trades as received for work done for the trade, it would appear that the $£ 30,000$ received for re-cutting files and rasps was of the nature of payment received for repair work and did not involve duplication with other headings. The remaining $£ 72,000$ was probably duplicated in the value of finished goods. The maximum amount of duplication may thus be put at about $£ 828,000$ and the value of the output returned on Schedules for the Tool and Implement Trades, free from duplication, may be estimated as lying between $£ 8,030,000$ and $£ 8,780,000$. The corresponding figure for 1907 was estimated to lie between $£ 3,380,000$ and $£ 3,703,000$.

Cost of materials and work given out.-The cost of materials used by firms that made their returns on schedules for the Tool and Implement Trades was returned as $£ 3,633,000$ in 1924, a sum which, by the exclusion of purchases from other firms in the trade, is reduced to a sum lying between $£ 2,880,000$ and $£ 3,630,000$. The corresponding estimate for 1907 was between $£ 1,216,000$ and $£ 1,539,000$.

The amount paid to other firms for work given out to them was returned as $£ 98,000$ in 1924 and $£ 74,000$ in 1907.

Net output.-The net output in 1924 of the firms that made their returns on schedules for the Tool and Implement Trades (whose gross output was valued at $£ 8,855,000$ ) was $£ 5,124,000$, 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 person employed in the censal year 1924 was £193, as compared with $£ 88$ in 1907.

Exports and imports.- The following table shows the total production of the main classes of tools and implements in 1924 in relation to the exports and imports of similarly described goods. The figures relating to the quantity of production are partly estimated, as firms representing about 26 per cent. of the total value of the classes of goods for which quantities were required, were unable to state the quantities produced.

| Kind of goods. | Pro- duction. | Exports. | $\begin{array}{\|c} \text { Proportion } \\ \text { of } \\ \text { British } \\ \text { made } \\ \text { goods. } \\ \text { exported. } \end{array}$ | $\begin{aligned} & \text { Net } \\ & \text { imports. } \end{aligned}$ | $\begin{gathered} \text { Available } \\ \text { for } \\ \text { conump- } \\ \text { tion } \\ \text { in the } \\ \text { U.K. } \end{gathered}$ | Share of home market British made goods. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ols and implem | Th. doz. | Th. doz. | Per cent. | Th. doz. | Th. doz. | Per cent |
| Files and rasps .. | 2,248 | $739 \cdot 5$ | 33 | $281 \cdot 7$ | 1,790 2 | 84 |
| Saws and saw-blades. | 2,263 | $770 \cdot 2$ | 34 | 1,543 $\cdot 3$ | 3,036 - 1 | 49 |
| Axes, hatchets, adzes and matchets | 229 | $190 \cdot 9$ | 83 | $20 \cdot 3$ | 58.4 | 65 |
| Spades and shovels for all purposes | 644 | $263 \cdot 8$ | 41 | $1 \cdot 3$ | $381 \cdot 5$ | $99 \cdot 7$ |
| Carpenters' and joiners' tools, not elsewhere specified | 898 | $313 \cdot 6$ | 35 | $285 \cdot 4$ | $869 \cdot 8$ | 67 |
|  | $£^{\prime} 000$. | $£^{\prime} 000$. |  | $£^{\prime} 000$. | $£^{\prime} 000$. |  |
| cultural, not elsewhere specified .. | 1,415 | 1,013 | 72 | 44 | 446 | 90 |
| Engineers' tools (except gauges) | 1,802 | 580 | 32 | 502 | 1,724 | 71 |
| Other sorts, including tools not separately distinguished | 1,377 | 560 | 41 | 95 | 912 | 90 |

About 36 per cent. by number of the output of tools and implements recorded by quantity and in the case of those recorded by value, as shown above, about 47 per cent. were exported. The share of the home market held by British-made goods was 65 per cent. for tools and implements of which particulars of quantity are available, and about 80 per cent. for goods recorded by value only. It should be noted that the average value per dozen of imported tools of the descriptions shown by quantity above are substantially lower than the corresponding average values of home-produced and exported tools. The exports of tool handles (of wood) in 1924 amounted to 144,000 dozen, valued at $£ 48,000$ f.o.b., and retained imports to $1,201,000$ dozen, valued at $£ 278,000$ c.i.f.
Imports of tools and implements in 1907 were shown only in one class and by value only ; in that year retained imports were valued at $£ 319,000$ c.i.f. British exports were also shown by value only in 1907, as follows:-Agricultural implements, $£ 487,000$ f.o.b. ; Other sorts, $£ 1,756,000$ f.o.b. The changes in the classification of agricultural implements must be borne in mind in comparing the figures of imports and exports for 1907 with those for 1924.

## 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 Tool and Implement (including Manufactured Abrasives*) Trades 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, 13,346 operatives, or 58 per cent. of the total of 23,199 operatives for the trades as a whole, and their net output totalled $£ 3,091,000$, or 54 per cent. of the aggregate net output of $£ 5,742,000$ for the trades as a whole. The total wage-bill of these firms, as returned to the Ministry of Labour, was $£ 1,510,000$, representing about 49 per cent. of their aggregate net output.

## Employment.

The detailed information relating to employment in 1924 is summarised in Table III on page 169. 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. |
| $\text { Operatives }{ }^{1924 .}$ | 3,544 | 20,046 | 862 | 3,029 | 4,406 | 23,075 |
| Administrative, etc. | 175 | 2,644 | 116 | 883 | 291 | 3,527 |
| Total | 3,719 | 22,690 | 978 | 3,912 | 4,697 | 26,602 |
| $190 \%$ Wage earners | 3,298 | 18,557 | 566 | 1,966 | 3,864 | 20,523 |
| Salaried .. | 205 | 2,756 | 70 | 432 | 275 | 3,188 |
| Total | 3,503 | 21,313 | 636 | 2,398 | 4,139 | 23,711 |

The numbers of operatives recorded month by month in 1924 ranged from 367 above the average, in December, to 610 below the average, in January (see Table IIIB, page 169).

## Mechanical Power.

The detailed information relating to mechanical power in 1924 is summarised in Table IV on page 170. 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.

[^1]| Power equipment. | 1924. |  |  | 1907. |
| :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & \text { Ordinarily } \\ & \text { in use. } \end{aligned}$ | In reserve or idle. | Total. | Total. |
| Prime movers :- <br> Reciprocating steam engines Steam turbines . . <br> Gas engines $\qquad$ <br> Petrol and light oil engines <br> Heavy oil engines <br> Water power | H.P. | H.P. | H.P. | H.P. |
|  | 6,300 | 1,900 | 8,200 | 11,082 |
|  | 575 | 160 | 735 |  |
|  | 10,476 | 1,223 | 11,699 |  |
|  | 83 | 12 | -95 | 7,336 |
|  | 268 | 11 | 268 |  |
|  | 511 | 11 | 522 | 782 |
| Total | 18,213 | 3,306 | 21,519 | 19,206 |
| Electric generators :Driven by- |  |  |  |  |
|  |  |  |  |  |
| Reciprocating steam engines | 961 | 450 | 1,411 | 378 |
| Steam turbines | 320 | 80 | 400 |  |
| Gas engines ... .. | 231 | 92 | 323 |  |
| Petrol and light oil engines | 50 | - | 50 | 156 |
| Water power .. . | 37 | - | 37 |  |
| Total .. . | 1,599 | 622 | 2,221 | 534 |

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

| Electric Motors. | 1924. |  |  |
| :---: | :---: | :---: | :---: |
|  | Ordinarily | In reserve or idle | Total. |
|  | H.P. | H.P. | H.P. |
| Driven by- Electricity generated in own works | 2,545 | 655 | 3,200 |
| Purchased electricity | 32,345 | 5,085 | 37,430 |

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 $2,205,000$.

TABLES.
I. Summary of results.

| Particulars. | Unit. | England and Wales. | Scotland. | Great Britain. | Northern Ireland. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Value of goods made and work done (Gross output) | $£^{\prime} 000$ | 8,472 3,479 | 375 | 8,847 | 8 |
| Cost of materials for work given out to other firms | ", | 3,479 98 |  | 8,630 98 | 3 $-\quad$ |
| Net output.. .. .. | ," | 4,895 | 224 | 5,119 | 5 |
| Average number of persons employed | No. | 25,557 | 1,013 | 26,570 | 32 |
| Net output per person employed.. | $\ldots$ | 192 | 221 | 193 | 143 |
| Mechanical power available :Prime movers | H.P. | 19,832 | 1,610 | 21,442 | 77 |
| Electric motors driven by purchased electricity | " | 37,178 | 248 | 37,426 | 4 |

## II.-Production.

A.-Total make of steel in 1924 in the Tool and Implement Trades.
Note.-No production of steel was recorded in this trade in Scotland or Northern Ireland.

|  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |

## 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. |
| England and Wales and Northern Iveland: Operatives Administrative, etc.* | $\begin{array}{r} 3,447 \\ 165 \end{array}$ | $\begin{array}{r} 19,343 \\ 2,530 \end{array}$ | $\begin{aligned} & 839 \\ & 113 \end{aligned}$ | $\begin{array}{r} 2,978 \\ 856 \end{array}$ | 4,286 278 | $\begin{array}{r} 22,321 \\ 3,386 \end{array}$ |
| Total . . | 3,612 | 21,873 | 952 | 3,834 | 4,564 | 25,707 |
| Scotland :Operatives Administrative, etc.* | $\begin{array}{r} 135 \\ 10 \end{array}$ | $\begin{aligned} & 818 \\ & 114 \end{aligned}$ | 26 3 | $\begin{aligned} & 60 \\ & 27 \end{aligned}$ | $\begin{array}{r} 161 \\ 13 \end{array}$ | $\begin{aligned} & 878 \\ & 141 \end{aligned}$ |
| Total.. | 145 | 932 | 29 | 87 | 174 | 1,019 |
| United Kingdom:Operatives Administrative, etc.* | $\begin{array}{r} 3,582 \\ 175 \end{array}$ | $\begin{array}{r} 20,161 \\ 2,644 \end{array}$ | $\begin{aligned} & 865 \\ & 116 \end{aligned}$ | $\begin{array}{r} 3,038 \\ 883 \end{array}$ | $\begin{array}{r} 4,447 \\ 291 \end{array}$ | $\begin{array}{r} 23,199 \\ 3,527 \end{array}$ |
|  | 3,757 | 22,805 | 981 | 3,921 | 4,738 | 26,726 |

* Administrative, technical and clerical staff.
$\dagger$ 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.
B.-Operatives employed in one week in each month of 1924.

England and Wales and Northern Irelard.* (Anrual average: Males, 19,233; Females, 2,970 ; Total, 22,203).

| Week ended. |  | Males. | Females. | Total. | Week ended. | Males. | Females. | Total. |  |
| :--- | :--- | :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Jan. 12th | .. | 18,695 | 2,908 |  | 21,603 | July 19th | . | 19,429 | 2,937 |
| Feb. 16th | . | 18,906 | 2,918 | 21,824 | Aug. 16th | . | 19,306 | 2,899 | 22,205 |
| March 15th | . | 18,916 | 2,978 | 21,894 | Sept. 13th | . | 19,179 | 2,909 | 22,088 |
| April 12th | .. | 19,180 | 2,994 | 22,174 | Oct. 18th | . | 19,343 | 2,978 | 22,321 |
| May 17th | .. | 19,442 | 3,040 | 22,482 | Nov. 15th | . | 19,467 | 3,036 | 22,503 |
| June 21st | .. | 19,424 | 2,990 | 22,414 | Dec. 13th | . | 19,512 | 3,051 | 22,563 |

$$
\text { Scotland. (Annual average : Males, } 813 \text {; Females, } 59 \text {; Total, } 872 .)
$$

| Jan. 12th |  | 805 | 57 | 862 | July 19th |  | 812 | 61 | 873 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Feb. 16th |  | 809 | 57 | 866 | Aug. 16th |  | 802 | 60 | 862 |
| March 15th |  | 814 | 59 | 873 | Sept. 13th |  | 796 | 60 | 856 |
| April 12th |  | 819 | 58 | 877 | Oct. 18th |  | 818 | 60 | 878 |
| May 17th |  | 818 | 60 | 878 | Nov. 15th |  | 822 | 60 | 882 |
| June 21st |  | 822 | 59 | 881 | Dec. 13th |  | 820 | 59 | 879 |
| United Kingdom. (Annual avevage : Males, 20,046; Females, 3,029; Total, 23,075.) |  |  |  |  |  |  |  |  |  |
| Jan. 12th |  | 19,500 | 2,965 | 22,465 | July 19th |  | 20,241 | 2,998 | 23,239 |
| Feb. 16th |  | 19,715 | 2,975 | 22,690 | Aug. 16th |  | 20,108 | 2,959 | 23,067 |
| March 15th |  | 19,730 | 3,037 | 22,767 | Sept. 13th |  | 19,975 | 2,969 | 22,944 |
| April 12th |  | 19,999 | 3,052 | 23,051 | Oct. 18th |  | 20,161 | 3,038 | 23,199 |
| May 17th |  | 20,260 | 3,100 | 23,360 | Nov. 15th |  | 20,289 | 3,096 | 23,385 |
| June 21st | . | 20,246 | 3,049 | 23,295 | Dec. 13th | . | 20,332 | 3,110 | 23,442 |

* See footnote ( $\dagger$ ) to Table IIIA.


## 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. |
| Prime movers :- | H.P. | H.P. | H.P. | H.P. | H.P. | H.P. |
| Reciprocating steam engines | 5,388 | 1,700 | 912 | 200 | 6,300 | 1,900 |
| Steam turbines | 575 | 160 | - |  | 575 | 160 |
| Gas engines | 10,234 | 1,098 | 242 | 125 | 10,476 | 1,223 |
| Petrol and light oil engines | 83 | 12 | - | - | - 83 | 12 |
| Heavy oil engines | 190 | - | 78 | - | 268 |  |
| Water power.. | 458 | 11 | 53 | - | 511 | 11 |
| Total | 16,928 | 2,981 | 1,285 | 325 | 18,213 | 3,306 |
| Total of prime movers installed | 19,909 |  | 1,610 |  | 21,519 |  |
|  |  |  |  |  |  |  |
| Reciprocating steam engines | 321 | 300 | 640 | 150 | 961 | 450 |
| Steam turbines | 320 | 80 | - | - | 320 | 80 |
| Gas engines | 231 | 27 | - | 65 | 231 | 92 |
| Heavy oil engines | 50 | - | - | - | 50 | - |
| Water power | 37 | - | - | - | 37 | - |
| Total. . | 959 | 407 | 640 | 215 | 1,599 | 622 |
| Total of electric GENERATORS . . | 1,366 |  | 855 |  | 2,221 |  |
|  | H.P. | H.P. | H.P. | H.P. | H.P. | H.P. |
| Electric motors :Driven by- |  |  |  |  |  |  |
| Electricity generated in own works | 1,609 | 607 | 936 | 48 | 2,545 | 655 |
| Purchased electricity | 32,118 | 5,064 | 227 | 21 | 32,345 | 5,085 |

[^2]
[^0]:    * See also the Notes on pages vii to xv.

[^1]:    * See separate volume containing report on the Building Materials group.

[^2]:    * See footnote ( $\dagger$ ) to Table IIIA.

