## NON-METALLIFEROUS (OTHER THAN SLATE) QUARRIES.

## Contents.



## Introductory.*

The tables on pages 70 to 74 are based on returns received from firms in Great Britain and Northern Ireland whose business in 1924 consisted wholly or mainly in working non-metalliferous quarries (other than slate quarries).

The number of such separate returns was 2,248 . About 150 firms to which schedules were sent did not furnish returns, but these firms for the most part had very small establishments and included a number 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 500 persons in all and that their total net output probably did not exceed $£ 100,000$.

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

| Particulars. | Unit. | 1924. | 1907. |
| :---: | :---: | :---: | :---: |
| Value of products and work done (Gross output) | $\chi^{\prime} 000$ | 12,847 | 5,547 |
| Cost of materials used .. .. .. .. |  | 2,820 | 1,008 |
| Net output. . |  | 10,027 | 4,539 |
| Average number of persons employed | No. | 51,011 | 57,861 |
| Net output per person employed | £ | 197 | 78 |
| Mechanical power available:Prime movers | H.P. | 85,912 | 59,895 |
| Electric motors driven by purchased electricity | " | 15,724 | (not recorded) |

[^0]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 Census of 1907 covered Great Britain and the whole of Ireland, but that of 1924 applied only to Great Britain and Northern Ireland. According to the Census of Production taken by the Government of the Irish Free State in respect of the year 1926, the total value of the stone, etc., obtained from non-metalliferous quarries (other than slate quarries) in that year was returned as $£ 390,000$. Further, at the 1907 Census, the gross output of such quarries for the whole of Ireland was $£ 139,000$ and the number of persons employed was 2,214 .

## Production.

Detailed information relating to the output in 1924 of Nonmetalliferous (other than Slate) Quarries is summarised in Table II on pages 70 to 72 .

Stone, etc., quarried for sale.-The following statement shows, for 1924 and 1907, the quantity and value of the principal classes of stone, etc., returned as quarried for sale, the aggregate figures for each year being inclusive of similar products returned on schedules for other trades. The chalk, clay, limestone, sandstone, etc., quarried and used by manufacturers of cement, bricks and fireclay goods, are not included in this table : particulars of such output will be found in the reports on the Cement Trade (page 225) and the Brick and Fireclay Trades (page 197).

| Stone, etc., quarried. | 1924. |  | 1907. |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Quantity. | Selling | Quantity. | Selling |
|  | Th. tons. | $\AA^{\prime} 000$. | Th. tons. | $¢^{\prime} 000$. |
| Granite, basalt, quartzite, whinstone, etc. . | 6,545 | 3,317 | 5,253 | 1,246 |
| Sandstone and ganister .. .. | 2,098 | 1,569 | 4,555 | 1,513 |
| Limestone and dolomite | 8,732 | 2,922 | 8,346 | 1,134 |
| Chalk .. .. | 347 | 58 | 4,359 | 157 |
| Flints (including crushed and broken flints) | 213 | 62 | 182 | 24 |
| Stone, not separately distinguished | 30 | 13 |  | 56 |
| Sand .. .. .. | 3,504 | 676 | 1,946 | 165 |
| Gravel | 1,948 | 400 | 518 | 47 |
| Sand and gravel, not separately distinguished | 345 | 103 ${ }^{\text {a }}$ | 419 | 36 548 |
| Ball clay, china clay and china stone | 1,012* | 1,677* ${ }_{12}$ | 736 25 | 548 13 |
| Mica clay . . . . . . | 16 | 12 518 | 25 2801 | 13 615 |
| Fireclay . . | 1,445 | 518 | 2,801 1,342 | 615 201 |
| Clay of other sorts .. | 895 | 101 1881 | 1,342 | 201 94 |
| Lime (including hydraulic lime) | 1,544 | 1,881 |  | 944 |
| Total value .. .. | . | 13,309 | . | 6,699 |

* Including 6,000 tons of china clay, china stone and mica clay, valued at $£ 8,000$,
* Including 6,000 tons of
not separately distinguished

On the suggestion of the Federated Quarry Owners of Great Britain, particulars of the output for sale in 1924 were asked for in greater detail than could be required compulsorily. The response was almost complete and the following table gives the particulars obtained, together with the total output for sale returned on schedules for all trades. The small amounts for which the details were not returned are included under the headings " not separately distinguished." The output shown is believed to be substantially free from duplication.

| Kind of stone, etc., quarried for sale. | 1924. |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Returned on schedules for |  |  |  |
|  | Non-metalliferous Quarries. |  | All trades. |  |
|  | Quantity. | Selling value. | Quantity. | Selling value. |
| Granite, basalt, quartzite, whinstone, etc. Architectural and monumental Curbs and setts | Th. tons. | $£^{\prime} 000$. | Th. tons. | $£^{\prime} 000$. |
|  | 73 | 131 | 73* | 131* |
|  | 285 | 587 | 285* | 587* |
| Roadstone and chippings :- |  |  |  |  |
| Tarred | 611 | 544 | 611 | 544 |
| Other sorts <br> Not separately distinguished | 190 | 40 | 192 | 41 |
|  | 22 | 10 | 58 | 13 |
| Total-Granite, etc. | 6,507 | 3,313 | 6,545 | 3,317 |
| Sandstone (excluding ganister) :- |  |  |  |  |
| For building | 587 | 670 | 588 | 671 |
| Curbs and setts . $\quad .$. | 224 | 291 | 224 | 291 |
| Roadstone and chippings | 676 | 169 | 676 | 169 |
| Silica rock or silica stone for use as refractory material | 131 | 52 | 138 | 55 |
| Grindstones and millstones and parts, returned as such | 25 | 134 | 25 | 134 |
| Other sorts .. .. .. | 242 | 100 | 244 | 101 |
| Not separately distinguished | 76 | 67 | 76 | 67 |
| Total-Sandstone | 1,961 | 1,483 | 1,971 | 1,488 |
| Ganister | 68 | 39 | 127 | 81 |
| Limestone and dolomite :- |  |  |  |  |
| For lime burning and cement making .. | 1,084 | 230 | 1,085 | 230 |
| For blast furnaces .. .. | 2,924 | 583 | 2,998 | 596 |
| Dolomite for use as refractory material | 385 | 121 | 385 | 121 |
| For building .. | 324 | 312 | 327 | 317 |
| Curbs and setts | 19 | 18 | 19 | 18 |
| Roadstone and chippings :- |  |  |  |  |
| Dry .. .. .. | 2,245 | 677 | 2,296 | 689 |
| Tarred .. | 877 | 780 | 877 | 780 |
| Other sorts | 464 | 117 | 586 | 137 |
| Not separately distinguished .. | 154 | 31 | 159 | 34 |
| Total-Limestone, etc.. . | 8,476 | 2,869 | 8,732 | 2,922 |

* Not including the output recorded on schedules for the Building Materials, etc.,

Trades (pages 239 and 249 ).

| Kind of stone, etc., quarried for sale(continued). | 1924. |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Returned on schedules for |  |  |  |
|  | Non-metalliferous Quarries. |  | All trades. |  |
|  | Quantity. | Selling value. | Quantity. | Selling value. |
| Chalk <br> Flints:Unbroken Crushed or broken Stone, not further distinguished | Th. tons. 332 | $\begin{gathered} £^{\prime} 000 \\ 55 \end{gathered}$ | Th. tons. $347$ | $\begin{array}{r} £^{\prime} 000 . \\ 58 \end{array}$ |
|  |  |  |  |  |
|  | 181 8 | 48 8 | 200 13 | 52 10 |
|  | 8 |  | 30 | 13 |
| Sand :- |  |  | 687244 |  |
| Moulding and pig-bed | 686 236 | 71 |  |  |
| For refractory purposes For building | 769 | 98 | 794 | 102 |
| For other purposes | 1,520 | 299 | 1,520259 | 29952 |
| Not separately distinguished | 164 | 36 |  |  |
| Gravel <br> Total-Sand <br> Sand and gravel, not separately distinguished | $\begin{aligned} & 3,375 \\ & 1,898 \end{aligned}$ | 652390 | $\begin{aligned} & 3,504 \\ & 1,948 \end{aligned}$ | 676400 |
|  |  |  |  |  |
|  | 345 | 103 | 345 | 103 |
| Total-Sand and gravel | 5,618 | 1,145 | 5,797 | 1,179 |
| Clay :- |  |  |  |  |
| Call clay China clay | 1405 | 128 1,448 | 150 805 | 1,448 |
| China stone | 51 | 1,448 81 12 | 5116 | 8112 |
| Mica clay . . | 16 | 12 |  |  |
| China clay, china stone and mica clay, not separately distinguished | 660 | 83357 | $\begin{array}{r} 6 \\ 1,445 \\ 895 \end{array}$ | $\begin{array}{r} 8 \\ 518 \\ 101 \end{array}$ |
| Fireclay .. .. .. .. |  |  |  |  |
| Other sorts | 462 |  |  |  |
| Total-Clay | 1,546 | 1,767 | 3,368 | 2,308 |
| Lime (including hydraulic lime) | 1,425 | 1,737 | 1,544 | 1,881 |
| Total value .. .. | .. | 12,464 | . | 13,309 |

In addition to the output shown in the above table, quarry products to the value of $£ 11,200$ were returned in respect of quarries in course of development and of other quarries where the work carried on was intermittent. The minerals raised at such quarries were as follows :-Granite, etc., 11,400 tons ; limestone and dolomite, 17,900 tons ; sandstone and ganister, 10,200 tons ; sand, 13,200 tons; gravel, 6,100 tons ; chalk, 2,700 tons ; clay, 16,900 tons; flints, 300 tons; and lime, 100 tons. These products are not included in Table II on pages 70 to 72.

Other products.-In addition to the quarry products shown in the above tables, there were returned on schedules for Non-metalliferous
(other than Slate) Quarries the following goods which, being of kinds mainly produced in other trades, are dealt with in the reports on those trades.

| Kind of product. |  | 1924. | 1907. |
| :---: | :---: | :---: | :---: |
|  |  | Selling value. | Selling value. |
| Whiting .. .. .. |  | $£_{35}^{\prime} 000 .$ | $\ell_{4}^{\prime} 000 .$ |
|  |  | 18 |  |
| Artificial stone, blocks, slabs, etc. Hearthstones and scouring stones |  | 188 | 15 |
|  | (Th. tons) .. . | - |  |
| Fullers' earth | .. .. | - | 27 |
| Other minerals | .. .. | 9 | 12 |
| Other goods | .. . . | 3 | 12 |
| Total value | .. .. | 73 | 130 |

Amount received for work done.-Firms that made their returns on the schedule for Non-metalliferous (other than Slate) Quarries stated that they received, in 1924, $£ 310,000$ for road-making. In 1907 the total amount received was $£ 17,000$, for road-making.
Cost of materials. -The cost of materials used by firms that made their returns on the schedule for Non-metalliferous (other than Slate) Quarries was returned as $£ 2,820,000$ in 1924 , as compared with $£ 1,008,000$ in 1907.
Net output.-The net output in 1924 of the firms that made their returns on the schedule for Non-metalliferous (other than Slate) Quarries (whose gross output was valued at $£ 12,847,000$ ) was $\mathrm{f} 10,027,000$, that sum representing the total amount by which the value, as delivered, of the aggregate output exceeded the cost, as purchased, of the materials used.
The net output per head of persons employed in the censal year 1924 was $£_{1} 197$, as compared with $£ 78$ in 1907.

Exports and imports.-Of the products covered by this schedule only clays were exported to any appreciable extent, the quantities exported in 1924 being as follows:-Ball clay, 43,000 tons ; china clay and china stone, 614,000 tons ; fireclay, 21,000 tons ; and other sorts of clay, 91,000 tons. In addition, 59,000 tons of chalk and 80 tons of granite (unworked) were exported.

The more important retained imports in 1924 were as follows :Granite (unworked), 607,000 tons; granite pavement curbs and setts, 233,000 tons; silica sand (unground), 61,000 tons; other sorts of sand (unground), 194,000 tons; and flints (unground), 53,000 tons. Other retained imports were :-Fireclay, 10,000 tons; china clay and china stone, 1,000 tons ; other sorts of clay, 2,000 tons ; and chalk, 1,000 tons.

## 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 working Non-metalliferous (other than Slate) Quarries 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, 26,663 operatives, or 55 per cent. of the total of 48,459 operatives for the trade as a whole, and their net output totalled $£ 5,353,000$, or 53 per cent. of the aggregate net output of $£ 10,027,000$ for the trade as a whole. The total wage-bill of these firms, as returned to the Ministry of Labour, was $£ 3,466,000$, representing about 65 per cent. of their aggregate net output.

## Employment.

The detailed information relating to employment in 1924 is summarised in Table III on page 73. The following table sets out certain particulars for that year together with those relating to the 1907 Census. In the Census of 1924 separate particulars of male and female operatives were not required for each month of the year in this trade and, for the purposes of comparison, the number of female operatives employed in the week ended 18th. October has been taken as the average for the year. The resulting figure for male operatives has 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. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & \text { Under } \\ & 16 . \end{aligned}$ | $\begin{gathered} \text { All } \\ \text { ages. } \end{gathered}$ | $\begin{aligned} & \text { Under } \\ & 16 . \end{aligned}$ | All ages. | $\begin{aligned} & \text { Under } \\ & 16 . \end{aligned}$ | $\underset{\text { ages. }}{\text { All }}$ |
| 1924.*Operatives <br> Administrative, etc | $\begin{array}{r} 1,144 \\ 78 \end{array}$ | $\begin{array}{r} 47,537 \\ 3,115 \end{array}$ | 3 14 | $\begin{array}{r} 48 \\ 311 \end{array}$ | $\begin{array}{r} 1,147 \\ 92 \end{array}$ | $\begin{array}{r} 47,585 \\ 3,426 \end{array}$ |
| Total | 1,222 | 50,652 | 17 | 359 | 1,239 | 51,011 |
| $\begin{aligned} & 190 \% \\ & \text { Wage earners } \\ & \text { Salaried .. } \end{aligned}$ | $\begin{array}{r} 1,445 \\ 77 \end{array}$ | $\begin{array}{r} 55,785 \\ 1,996 \end{array}$ | -1 | 29 51 | $\begin{array}{r} 1,445 \\ 78 \end{array}$ | $\begin{array}{r} 55,814 \\ 2,047 \end{array}$ |
| Total . . | 1,522 | 57,781 | 1 | 80 | 1,523 | 57,861 |

[^1]The numbers of operatives recorded month by month in 1924 ranged from 2,232 below the average, in January, to 1,388 above the average, in June (see Table IIIB, page 73).

## Mechanical Power.

The detailed information relating to mechanical power in 1924 is summarised in Table IV on page 74. 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 reserve or idle. | Total. | Total. |
|  | H.P. | H.P. | H.P. | H.P. |
| Reciprocating steam engines | 36,266 | 4,025 | 40,291 | 51,635 |
| Steam turbines .. .. | 2,712 |  | 2,712 |  |
| Gas engines | 25,439 | 1,933 | 27,372 |  |
| Petrol and light oil engines | 5,609 | 156 | 5,765 | \} 6,861 |
| Heavy oil engines | 8,282 | 250 | 8,532 |  |
| Water power | 1,060 | 180 | 1,240 | 1,348 51 |
| Total | 79,368 | 6,544 | 85,912 | 59,895 |
| Electric generators :- | Kw. | Kw. | Kw. | Kw. |
| Driven by- Reciprocating steam engines.. | 1,909 | 426 | 2,335 | 478 |
| Steam turbines .. | 2,000 |  | 2,000 |  |
| Gas engines | 4,634 | 575 | 5,209 |  |
| Petrol and light oil engines | 31 | - | 31 |  |
| Heavy oil engines | 947 | - | 947 | 205 |
| Water power .. | 58 | - | 58 |  |
| Other prime movers | - | - | - |  |
| Total .. .. .. | 9,579 | 1,001 | 10,580 | 683 |

* Exclusive of prime movers of a total capacity of $610 \mathrm{~h} . \mathrm{p}$. ( $386 \mathrm{~h} . \mathrm{p}$. ordinarily in use and $224 \mathrm{~h} . \mathrm{p}$. in reserve or idle) and electric generators of a total capacity of respect of quarries in course of development, etc., in 1924 (see page 66).

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

| Electric motors. | 1924. |  |  |
| :---: | :---: | :---: | :---: |
|  | Ordinarily in use. | In reserve or idle. | Total. |
|  | H.P. | H.P. | H.P. |
| Electricity generated in own works* | 11,206 | 700 | 11,906 |
| Purchased electricity .. . | 14,946 | 778 | 15,724 |

* Exclusive of electric motors of $264 \mathrm{~h} . \mathrm{p}$. ( $100 \mathrm{~h} . \mathrm{p}$. ordinarily in use and $164 \mathrm{~h} . \mathrm{p}$ in reserve or idle) returned in respect of quarries in course of development, etc.
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 685,000 .


## TABLES.

I.-Summary of results.

| Particulars. | Unit. | England and Wales. | Scotland. | Great Britain. | Northern Ireland. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Value of products and work done <br> (Gross output) | $\chi^{\prime} 000$ | 11,527 | 1,193 | 12,720 | 127 |
| Cost of materials used .. .. | S | 2,517 | -282 | 2,799 | 21 |
| Net output .. . |  | 9,010 | 911 | 9,921 | 106 |
| Average number of persons employed | No. | 45,266 | 4,967 | 50,233 | 778 |
| Net output per person employed. . | E | 199 | 183 | 198 | 137 |
| Prime movers ... | H.P. | 74,903 | 9,732 | 84,635 | 1,277 |
| chased electricity | , | 12,109 | 3,615 | 15,724 | - |
| II.-Production. |  |  |  |  |  |
| Output sold or added to stock and work done. | Unit. | England and Wales | Scotland. | Great Britain. | Northern Ireland. |
| Granite, basalt, quartzite, whinstone, etc. :- |  |  |  |  |  |
| Architectural and monumental | Th. tons <br> $f^{\prime} 000$ | $\begin{aligned} & 32 \\ & 74 \end{aligned}$ | 40 50 | $\begin{array}{r}72 \\ 124 \\ \hline\end{array}$ | 1 |
| Curbs and setts | Th. tons | 166 | 112 | 278 | 7 |
| Roadstone and chippings :- 201 - |  |  |  |  | 17 |
| Dry .. .. .. | Th. tons f'000 | $\begin{aligned} & 4,227 \\ & 1680 \end{aligned}$ | 950 285 | $\begin{aligned} & 5,177 \\ & 195 \end{aligned}$ | 149 36 |
| Tarred | Th. tons | 403 $\dagger$ | 208 | -611 $\dagger$ |  |
|  | f'000 $^{\prime}$ | $358 \dagger$ | 186 | $544 \dagger$ |  |
| Other sorts | Th. tons f'000 | $143 \dagger$ $30+$ | 47 10 | $\begin{array}{r}190 \dagger \\ 40+ \\ \\ \hline\end{array}$ |  |
|  | Th. tons | 4 | 18 | 22 | - |
|  | $£^{\prime} 000$ | 2 | 8 | 10 |  |
| Total-Granite, etc. | Th. tons £'000 | $\begin{aligned} & 5,132 \dagger \\ & 2,573 \dagger \end{aligned}$ | $\begin{array}{r} 1,375 \\ 740 \end{array}$ | $\begin{aligned} & 6,507 \dagger \\ & 3,313 \dagger \end{aligned}$ |  |
| Sandstone (excluding ganister) :- |  |  |  |  |  |
|  | Th. tons $£^{\prime} 000$ | $452 \dagger$ $525 \dagger$ | $\begin{aligned} & 135 \\ & 145 \end{aligned}$ | $\begin{aligned} & 587 \dagger \\ & 670 \dagger \end{aligned}$ | $\dagger$ |
| Curbs and setts | Th. tons f'000 | * | $\begin{aligned} & * \\ & * \end{aligned}$ | 224 291 | - |
| Roadstone and chippings | Th, tons | $645 \dagger$ | 31 | $676 \dagger$ | $\dagger$ |
| Silica rock or silica stone for use | f'000 | ${ }_{*}^{162 \dagger}$ | 7 | $169 \dagger$ | $\dagger$ |
| as refractory material | $£^{\prime} 000$ | * | * | 161 52 | - |
| Grindstones and millstones and $\mathcal{\{}$ parts, returned as such | Th. tons f'000 | 25 134 |  | 25 134 | - |
|  | Th. tons | 221 | 21 | 242 | - |
| Other sorts | ¢'000 | 94 | 6 | 100 |  |
| Not separately distinguished | Th. tons £'000 | $\begin{aligned} & 65 \\ & 54 \end{aligned}$ | $\begin{aligned} & 11 \\ & 13 \end{aligned}$ | $\begin{aligned} & 76 \\ & 67 \end{aligned}$ | - |
| Total-Sandstone.. | Th. tons £'000 | * | * | $\begin{aligned} & 1,961 \dagger \\ & 1,483 \dagger \end{aligned}$ |  |

Production-continued.

| Output sold or added to stock and work done. | Unit. | $\begin{gathered} \text { England } \\ \text { and } \\ \text { Wales. } \end{gathered}$ | Scotland. | Great Britain. | Northern Ireland. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Ganister .. .. .. \{ | Th. tons £'000 | Quantity and selling value. |  |  |  |
| Limestone and dolomite :- <br> For lime burning and cement making <br> For blast furnaces <br> Dolomite for use as refractory material <br> For building <br> Curbs and setts .. <br> Roadstone and chippings :- <br> Dry <br> Tarred.. <br> Other sorts <br> Not separately distinguished | Th. tons <br> $£^{\prime} 000$ <br> Th. tons <br> £'000 <br> Th. tons <br> £'000 <br> Th. tons <br> £'000 <br> Th. tons <br> £'000 <br> Th. tons <br> $£^{\prime} 000$ <br> Th. tons <br> £'000 <br> Th. tons <br> ',000 <br> Th. tons <br> £'000 | $*$ $*$ $2,835 \dagger$ $552 \uparrow$ 385 121 321 311 19 18 2,219 667 877 780 457 112 153 30 |  | $1,084 \dagger$ $230 \dagger$ $2,924 \dagger$ 5834 385 121 324 312 19 18 2,233 675 877 780 464 117 153 30 | $\begin{gathered} \dagger \\ \dagger \\ \dagger \\ \vdots \\ - \\ \vdots \\ \ddagger \\ - \\ \hline \end{gathered}$ |
| Total-Limestone and dolomite | Th. tons $£^{\prime} 000$ | * | * | $\begin{aligned} & 8,476+ \\ & 2,869 \dagger \end{aligned}$ | $\dagger$ |
| Chalk <br> Flints:- <br> Unbroken. . <br> Crushed or broken | Th. tons £'000 <br> Th. tons £'000 Th. tons £'000 | $\begin{array}{r} 332 \\ 55 \\ 181 \\ 48 \\ 8 \\ 8 \end{array}$ | - | $\begin{array}{r} 332 \\ 55 \\ 181 \\ 48 \\ 8 \\ 8 \end{array}$ | - |
| Sand :- <br> Moulding and pig-bed <br> For refractory purposes.. <br> For building <br> For other purposes <br> Not separately distinguished | Th. tons <br> む'000 <br> Th. tons <br> £'000 <br> Th. tons <br> £'000 <br> Th. tons <br> £'000 <br> Th. tons <br> £'000 | $\begin{array}{r} 614 \dagger \\ 128 \dagger \\ 221 \\ 66 \\ 686 \\ 88 \\ 1,379 \\ 268 \\ 69 \\ 11 \end{array}$ | $\begin{array}{r} 72 \\ 20 \\ 15 \\ 5 \\ 83 \\ 10 \\ 140 \\ 31 \\ 88 \\ 25 \end{array}$ | $\begin{array}{r} 686+ \\ 148+ \\ 236 \\ 71 \\ 769 \\ 98 \\ 1,519 \\ 299 \\ 157 \\ 36 \end{array}$ | $\begin{gathered} \dagger \\ \dagger \\ \vdots \\ \ddagger \\ \S \\ \S_{1} \\ \\ \S^{7} \end{gathered}$ |
| Total-Sand <br> Gravel <br> Sand and gravel, not separately distinguished | Th. tons £'000 <br> Th. tons <br> £'000 <br> Th. tons <br> £'000 | $\begin{array}{r} 2,977 \dagger \\ 561 \dagger \\ 1,893 \\ 389 \\ 333 \\ 99 \end{array}$ | 398 91 5 1 12 4 | $\begin{array}{r} 3,375 \dagger \\ 652 \dagger \\ 1,898 \\ 390 \\ 345 \\ 103 \end{array}$ | $\dagger$ <br> $\dagger$ <br> $\ddagger$ <br> ¢ |
| Total-Sand and gravel | Th. tons $\not £^{\prime} 000$ | $\begin{aligned} & 5,203+ \\ & 1,049 \dagger \end{aligned}$ | 415 96 | $\begin{aligned} & 5,618 \dagger \\ & 1,145 \dagger \end{aligned}$ | $\dagger$ |

* $\dagger \ddagger \S$ See Notes on page 72.

Production-continued.

| Output sold or added to stock and work done. | Unit. | $\begin{gathered} \text { England } \\ \text { and } \\ \text { Wales. } \end{gathered}$ | Scotland. | Great Britain. | Northern Ireland |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Clay :- Quantity and selling value. |  | Quantity and selling value. |  |  |  |
| Ball clay .. .. .. | $\left\{\begin{array}{l} \text { Th. tons } \\ E^{\prime} 000 \end{array}\right.$ | $\begin{aligned} & 144 \\ & 128 \end{aligned}$ | $\xi^{2}$ | 146128 | - |
|  |  |  |  |  |  |
| China clay | Th. tons <br> f'000 | $\begin{array}{r} 805 \\ 1.448 \end{array}$ | - | 805 1,448 |  |
| China stone | Th. tons | 1,448 | - | 1,448 51 | - |
| China stone | £'000 | 81 | - | 81 | - |
| Mica clay | Th. tons | $\begin{aligned} & 16 \\ & 12 \end{aligned}$ | - | $\begin{aligned} & 16 \\ & 12 \end{aligned}$ | - |
| China clay, china stone and mica |  |  | - | $12$ |  |
| clay not separately distinguished.. | Th. tons £'000 | $\begin{aligned} & 6 \\ & 8 \end{aligned}$ | - | $\begin{aligned} & 6 \\ & 8 \end{aligned}$ | - |
| Fireclay .. . | Th. tons | 45 | 15 | 60 | - |
| Fireclay | £'000 | 25 | 8 | 33 | - |
| Other sorts | Th. tons | 459 | 3 | 462 | - |
|  | 000 | 56 | 1 | 57 | - |
| Total-Clay | Th. tons £'000 | $\begin{aligned} & 1,526 \\ & 1,758 \end{aligned}$ | 20 9 | $\begin{aligned} & 1,546 \\ & 1,767 \end{aligned}$ | 二 |
| Lime (including hydraulic lime) \{ | Th. tons £'000 <br> Th. tons <br> £'000 <br> Th. tons £'000 £'000 | $\begin{aligned} & 1,332 \\ & 1,622 \end{aligned}$ | $\begin{aligned} & 84 \\ & 98 \end{aligned}$ | $\begin{aligned} & 1,416 \\ & 1,720 \end{aligned}$ |  |
| Whiting |  | $\begin{gathered} 1,622 \\ 32 \dagger \end{gathered}$ | - | $\begin{aligned} & 32 \dagger \\ & 35 \dagger \end{aligned}$ | $\dagger$ |
| Hearthstones and scouring stones |  | $\begin{gathered} 35 \dagger \\ 9 \end{gathered}$ | - | $\begin{gathered} 30 \dagger \\ 9 \end{gathered}$ | - |
| Artificial stone, blocks, slabs, etc. |  | 18 | - | $\begin{array}{r} 8 \\ 18 \end{array}$ | - |
| Other minerals |  | 13 | - | 183 | 8 |
| Other goods. . |  |  |  |  |  |
| Total value-Quarry PRODUCTS.. | $\AA^{\prime} 000$ |  | $1,173$ |  |  |
| Amount received for road-making |  | $277$ | $20$ | $297$ | 13 |
| Total value of products and work done (Gross output) .. $\qquad$ | $£^{\prime} 000$ | 11,527 | 1,193 | 12,720 | 127 |

* In order to avoid the possible disclosure of information relating to individual firms, figures are given only for Great Britain as a whole.
$\dagger$ In order to avoid the possible disclosure of information relating to individual firms, the small output of Northern Ireland has been included with that for England and Wales and for Great Britain.
$\stackrel{+}{ }+$ Less than $f 500$.

NON-METALLIFEROUS (OTHER THAN SLATE) QUARRIES.

## III.-Employment.

A.-Numbers employed in week ended 18th October, 1924.

| Kind of staff. | Males. |  | Females. |  | Males and females. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & \text { Under } \\ & 16 . \end{aligned}$ | All ages. | $\begin{aligned} & \text { Under } \\ & 16 . \end{aligned}$ | $\begin{aligned} & \text { All } \\ & \text { ages. } \end{aligned}$ | Under | All ages. |
| England and Wales :Operatives Administrative, etc.* | 1,043 72 | 42,996 2,768 | 3 10 | 38 253 | 1,046 82 | $\begin{array}{r} 43,034 \\ 3,021 \end{array}$ |
| Total | 1,115 | 45,764 | 13 | 291 | 1,128 | 46,055 |
| Scotland :Operatives Administrative, etc.* | 97 6 | $\begin{array}{r} 4,719 \\ 269 \end{array}$ | 3 | 6 52 | 97 9 | 4,725 321 |
| Total | 103 | 4,988 | 3 | 58 | 106 | 5,046 |
| Great Britain :Operatives Administrative, etc.* | 1,140 78 | 47,715 3,037 | 3 13 | $\begin{array}{r}44 \\ 305 \\ \hline\end{array}$ | 1,143 91 | $\begin{array}{r} 47,759 \\ 3,342 \end{array}$ |
| Total | 1,218 | 50,752 | 16 | 349 | 1,234 | 51,101 |
| Northern Iveland :Operatives Administrative, etc.* | 25 | $\begin{array}{r} 696 \\ 78 \end{array}$ | 1 | 4 | 25 1 | 700 84 |
| Total | 25 | 774 | 1 | 10 | 26 | 784 |
| United Kingdom :Total .. | 1,243 | 51,526 | 17 | 359 | 1,260 | 51,885 |

B.-Operatives employed in one week in each month of 1924.

| Week ended. |  |  | ${ }_{\text {England and }}^{\text {Wales. }}$ | Scotland. | $\underset{\text { Great }}{\substack{\text { Gritain. } \\ \text { Bre }}}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | ${ }_{\substack{\text { Males and } \\ \text { females. }}}$ | ${ }_{\substack{\text { Males and } \\ \text { females. }}}^{\text {a }}$ | ${ }_{\text {Males and }}^{\substack{\text { females. }}}$ |  |
| Jan. 12th |  |  | 40,471 | 4,252 | 44,723 | 630 |
| Feb. 16th | $\cdots \quad$. | $\cdots$ | 41,338 | 4,433 | 45,771 | 616 |
| Mar. 15th | .. . |  | 41,166 | 4,512 | 45,678 | 673 |
| Apr. 12th | , |  | 41,875 | 4,660 | 46,535 | 709 |
| May 17th | .. | $\cdots$ | 41,364 | 4,827 | 46,191 | 733 |
| June 21st |  |  | 43,429 | 4,769 | 48,198 | 775 |
| July 19th | $\cdots$ |  | 43,005 | 4,843 | 47,848 | 740 |
| Aug. 16th |  |  | 42,684 | 4,792 | 47,476 | 698 |
| Sept. 13th |  |  | 42,971 | 4,740 | 47,711 | 708 |
| Oct. 18th |  |  | 43,034 | 4,725 | 47,759 | 700 |
| Nov. 15th |  |  | 42,756 | 4,606 | 47,362 | 675 |
| Dec. 13th |  |  | 42,839 | 4,593 | 47,432 | 675 |
|  | nual aver |  | 42,245 | 4,646 | 46,891 | 694 |

## IV.-Mechanical Power.

Particulars of prime movers, electric generators and ELECTRIC MOTORS.

| (a) Ordinarily in use ; <br> (b) In reserve or idle. | England and Wales. | Scotland. | Great Britain | Northern Ireland. |
| :---: | :---: | :---: | :---: | :---: |
| Prime movers:- | H.P. | H.P. | H.P. | H.P. |
| Reciprocating steam encines $\{(a)$ | 31,419 | 4,248 | 35,667 | 599 |
| Reciprocating steam engines $\{$ (b) | 3,264 | 718 | 3,982 | 43 |
| Steam turbines .. .. (a) | 2,704 | 8 | 2,712 |  |
| Gas engines .. .. $\left\{\begin{array}{l}(a) \\ (b)\end{array}\right.$ | 21,741 1,543 | 3,341 | 25,082 | 357 |
| Petrol and light oil engines $\left\{\begin{array}{l}(a) \\ (b)\end{array}\right.$ | 5,149 | 362 | 5,511 | 148 98 |
|  | 156 |  | 156 |  |
| Heavy oil engines .. $\left\{\begin{array}{l}(a) \\ (b)\end{array}\right.$ | 7,490 | 787 | 8,277 | 5 |
|  | 240 1,017 | 10 | 250 1,025 | 35 |
| Water power | 180 | 8 | 1,020 | 35 |
| Total .. .. $\left\{\begin{array}{l}(a) \\ (b)\end{array}\right.$ | 69,520 | 8,754 | 78,274 | 1,094 |
|  |  |  |  |  |
| Total of prime movers installed | 74,903 | 9,732 | 84,635 | 1,277 |
| Electric generators :Driven by- | Kw. | Kw. | Kw. | Kw. |
|  | 1,827 | 22 | 1,849 | 60 |
| gines . . . . . (b) | 412 | 14 | - 426 | - |
| Steam turbines .. (a) | 2,000 | - | 2,000 | - |
| Gas engines .. .. $\{(a)$ | 4,218 | 416 | 4,634 | - |
| Gas engines .. .. \{ (b) | 450 | 125 | 575 |  |
| Petrol and light oil engines | 29 | 2 | 31 | - |
|  | 894 | 53 | 947 | - |
| Water power . . . (a) | 58 | - | 58 |  |
| Total | 9,026 | 493 | 9,519 | 60 |
|  |  |  |  |  |
| Total of electric geneRATORS INSTALLED | 9,888 | 632 | 10,520 | 60 |
| Electric motors :- <br> Driven by- | H.P. | H.P. | H.P. | H.P. |
| Electricity generated in $\int(a)$ own works . . .. (b) | 10,339 | 817 | 11,156 | 50 |
|  | 622 | 78 | 700 | - |
| Purchased electricity .. $\left\{\begin{array}{l}(a) \\ (b)\end{array}\right.$ | 11,600 | 3,346 | 14,946 | - |
|  | 509 | 269 | 778 | - |


[^0]:    * See also the Notes on pp. vii to $x v$.

[^1]:    * Exclusive of the persons employed at the quarries in course of development * Exclusive of the persons employed at which are referred to on page 66. These quarries employed an average of 59 persons (all over 16 years) in 1924, the number of operatives being 50 and administrative staff, 9 .

