3219 tons of lead and 20,011 ounces of silver. The amount of fire­clay dug in 1884 was 463,294 tons, valued at £56,237. Stone quarry­ing, especially of granite, sandstone, flagstone, slate, and limestone, is extensively carried on, but the returns of the several amounts raised annually are incomplete. The number of persons engaged in quarries in 1881 was 13,742, and the value of the materials raised in 1884 was estimated at £1,030,650. The principal granite works occur in Aberdeenshire and Kirkcudbrightshire, while freestone quarries are common throughout the greater part of the Lowland district, although whinstone also is frequently used for building purposes. Large quantities of paving stones are exported from Caithness and Forfarshire, and there are very extensive slate-quarries at Ballachulish and other places in Argyllshire.

*Manufactures.—*Although a company of woollen weavers was incorporated by the town council of Edinburgh in 1475, the cloth worn by the wealthier classes down to the beginning of the 17th century was of English or French manufacture, the lower classes wearing “ coarse cloth made at home,” in the fashion still prevailing in the remoter districts of the Highlands. In 1601 seven Flemings were brought to Edinburgh by commissioners from the burghs to instruct the people in the manufacture of serges and broadcloth, and eight years later a company of Flemings was established in the Canongate (Edinburgh) for the manufacture of cloth under the special protection of the king ; but, notwithstanding also the establishment in 1681 of an English company for the manufacture of woollen fabrics near Haddington, the industry for more than fifty years after this made very tardy progress in the country. In fact its importance dates from the introduction and improvement of machinery in the 19th century. The most important branch of the trade, that of tweeds, first began to attract attention shortly after 1830 ; though still having its principal seat in the district from which it takes its name, including Galashiels, Hawick, In­nerleithen, and Selkirk, it extends to a large number of towns throughout Scotland, especially to Aberdeen, Elgin, Inverness, Stirling, Bannockburn, and Paisley. The chief seat of the hosiery trade is Hawick. Carpet manufacture has had its principal seat in Kilmarnock since 1817, but is also carried on in Aberdeen, Ayr, Bannockburn, Glasgow, Paisley, and other towns. Tartans are largely manufactured in Tillicoultry, Bannockburn, and Kilmarnock, and shawls and plaids are largely manufactured in several towns. In 1850 there were in Scotland 188 woollen and worsted factories, with 233,533 spindles and 247 power-looms, employing 10,210 persons. Twenty-eight years later (1878) the total number of factories was 246, in which there were 559,021 spinning spindles, 62,013 doubling spindles, and 6284 power-looms, the number of persons employed being 22,667, of whom 10,083 were males and 12,584 females.

The manufacture of cloth from flax is of very ancient date in Scotland, and towards the close of the 16th century Scottish linen cloths were largely exported to foreign countries, besides having an extensive sale in England. Regulations in regard to the manufacture were passed in 1641 and 1661. In a petition presented to the privy council in 1684, complaining of the severe treatment of Scotsmen selling linen in England, it was stated that 12,000 persons were engaged in the manufacture. Through the intercession of the secretary of state with the king these restrictions were removed. To further encourage the trade it was enacted in 1686 that the bodies of all persons, with the exception of poor tenants and cotters, should be buried in plain linen only, spun and made within the kingdom. The Act was repeated in 1693 and 1695, and in the former year another Act was passed prohibiting the export of lint and permitting its import free of duty. At the time of the Union the annual amount of linen cloth manufactured in Scotland is supposed to have been about 1,500,000 yards. The Union gave a considerable impetus to the manufacture, as did also the establishment of the Board of Manufactures in 1727, which applied an annual sum of £2650 to its encouragement, and in 1729 established a colony of French Protestants in Edinburgh, on the site of the present Picardy Place, to teach the spinning and weaving of cambric. From 1st November 1727 to 1st November 1728 the amount of linen cloth stamped in Scotland was 2,183,978 yards, valued at £103,312, but by the year ending 1st November 1771 it had increased to 13,672,548 yards, valued at £632,389, during the year ending 1st November 1798 to 21,297,059, valued at £850,405, and by the year ending 1st November 1822, when the regulations as to the inspection and stamping of linen ceased, to 36,268,530 yards, valued at £1,396,296. The counties in which the manufacture is now most largely carried on are Forfar, Perth, Fife, Kinross, and Clackmannan, but Aberdeen, Renfrew, Lanark, Edinburgh, and Ayr are also in a considerable degree associated with it. Dundee is the principal seat of the coarser fabrics, Dunfermline of the table and other finer linens, while Paisley is widely known for its sewing threads. The allied industry of jute is the staple industry of Dundee. The number of persons employed in the flax-factories of Scotland in 1837 was 15,462. The following table (XVI.) gives particulars of these factories for the years 1856, 1867, and 1878 :—

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Years. | Factories. | Spindles. | Power-  Looms. | Persons  employed. |
| Spinning. ∣ Doubling. |
| 1856 | 168 | 278,304  487,579  265,263 18,495 | 4,011  19,917  16,756 | 31,722  77,195  36,476 |
| 1867 | 197 |
| 1878 | 155 |
|  |

Principally owing to foreign competition, the linen manufacture has within recent years been in a very languid condition.

The first cotton-mill in Scotland was built at Rothesay by an English Company in 1778. It was soon afterwards acquired by David Dale, who was the agent in Scotland for Arkwright, and had the invaluable aid of his counsel and advice. Dale also estab­lished cotton-factories in 1785 at New Lanark, afterwards so closely associated with the socialistic schemes of his son-in-law, Robert Owen, and thus laid the foundation of the industry in the two counties, Lanark and Renfrew, which are now its principal seats in Scotland. Nine-tenths of the cotton-factories of Scotland are now concentrated in Glasgow, Paisley, and the neighbouring towns, but the industry extends into other districts of the west of Scotland and is also represented in the counties of Aberdeen, Perth, and Stirling. The following table (XVII. ) gives particulars for 1850, 1861, 1875, and 1885

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Years. | Factories. | Spindles. | Power  Looms. | Persons  employed. |
| 1850 | 168 | 1,683,093  1,915,398  1,711,214  1,149,514 | 23,564  30,110  29,171  29,684 | 34,325  41,237  35 652 |
| 1861 | 163 |
| 1875 | 96 |
| 1885 | 147 | 37,167 |
|  |

For further particulars regarding the manufacture in Scotland, see Cotton, vol. vi. pp. 501-503.

Silk is manufactured in Paisley and Glasgow, but the industry is of minor importance, employing only about 600 persons. Floor­cloth is manufactured at Kirkcaldy, where also the first linoleum factory in Scotland was established in 1877.

Next to textile fabrics, the most important manufacture in Scotland is that of whisky, in which it has Ireland for its only competitor. Distillation was introduced into Scotland from England, but by 1771 large quantities of spirits were sent to England from Scotland. The legal manufacture of whisky was greatly checked in the 19th century by occasional excessive ad­vances in the rates of duty, but after the reduction to 2s. 4 3/4 d. per gallon in 1823 the number of licensed distillers rapidly increased, while illegal distillation became much less common. The following table (XVIII.) shows the number of gallons made in various years since 1824 :—

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Year. | Gallons. | Year. | Gallons. | Year. | Gallons. |
| 1824 | 5,108,373 | 1855 | 11,283,636 | 1878 | 17,670,460 |
| 1840 | 9,032,353 | 1865 | 13,445,752 | 1884 | 20,164,962 |

Ale was a common beverage in Scotland as early as the 12th century, there being one or more brew-houses attached to every religious house and barony. So important was the use of the bever­age even in the beginning of the 18th century that a threatened imposition of a tax on malt in 1725 led to serious riots in Glasgow and a proposal to repeal the Union. Though ale has been super­seded by whisky as the national beverage, Scotland still possesses several large breweries, and Edinburgh ales vie in repute with those of Burton-on-Trent. The number of barrels charged with duty in Scotland in 1885 was 1,237,323, the number in England being 24,519,173.

The first sugar-refinery in Scotland was erected in 1765 in Greenock, where the industry made rapid progress and has still its principal seat, although it is extensively carried on in Leith and in a lesser degree in Glasgow and Dundee. Glass-making, introduced in 1610 by Sir John Hay at Wemyss in Fife, is now of considerable importance, Edinburgh being celebrated for the finer branches of the manufacture. A paper-mill was erected in 1675 at Dairy Mills on the Water of Leith, in which French workmen were employed to give instruction, with the result, as was reported by the owners, that “grey and blue paper was produced much finer than ever was done before in the kingdom.” The most important seat of the industry is now Valleyfield near Penicuik, where it was intro­duced in 1709. Edinburgh has since the time of the Ballantynes enjoyed a widely-extended fame for the excellence and beauty of its printing. The other manufactures prevailing in different parts of Scotland, such as those of leather, soap, earthenware and hardware, carriages, and the various implements and utensils in general use, do not call for special characterization.

*Commerce and Shipping.—*That Scotland had a considerable trade with foreign countries at a very early period may be inferred from the importation of rich dresses by Malcolm III. and the enjoy­ment of Oriental luxuries by Alexander I. David I. receives the special praise of Fordun for enriching “the ports of his kingdom with foreign merchandise.” In the 13th century the Scots had