

THE 9th of June 1881 will be memorable in the annals of Tyneside as the centenary of George Stephenson's birth. The inhabitants of nearly every town in the counties of Durham and Northumberland kept holiday. The mines were mostly closed, and no work was done at the factories or iron ship building yards of the Tyne and Wear in honor of that great benefactor of mankind.

SINCE the establishment, in June last, of the Greenfield (Mass.) Co-operative Manufacturing Company, cutlery makers, the business has largely increased, and they are now turning out more than three times as many goods as they were last summer. They are now running full time, employ about fifty hands, and manufacture nearly 500 gross per month.

The twenty-third annual report of the trade and commerce of the city of Chicago is to hand, and some of the statistics it contains are fabulous. In the year 1838 only 78 bushels of wheat were shipped from Chicago. Last year 22,796,288 bushels were shipped. The largest number of bushels shipped was in the year 1879, when the number was 3,006,739 bushels. The increase in other grain is just as great and surprising.

STRATENA, whose wonderful powers are so frequently exhibited upon the streets, is probably only the old Armenian cement. This is so strong that it will hold jewels in place, and is used for this purpose by the Armenian jewelers, who merely flatten the settings of their precious stones and then stick them in place upon the metal with this cement. It is made by dissolving isinglass in alcohol, along with gum ammoniac. When well made it is perfectly transparent.

A MANUFACTURER whose business requires the use of large amounts of emery has been trying an experiment with the ashes of anthracite coal, and he affirms that he has obtained good results from the use of ashes as a substitute for the finer grades of emery. He takes ashes and saturates them with water, the liquid being poured off after standing an hour or two, then being poured off again, and so until he obtains several grades, down to a substitute for emery flour. When dried the deposit cuts readily and leaves a satisfactory surface.

A ROLAND FOR AN OLIVER.—Considerable sensation has been created at Rouen by the rumour that large capitalists in Lancashire had determined to establish a rival concern to M. Pouyer-Quertier and his compeers in that city. A project is in fact on foot for putting down spinning, weaving, dying, and printing works with machinery on a large scale. The Pompadour prints so generally worn in France, and which have to a great extent been produced in Manchester, and have paid an *ad valorem* duty of 15 per cent., but would, under the general tariff, be taxed, if only consisting of three colors 45 per cent. Printed stuffs used for covering furniture or as curtains instead of paying 15 per cent., as at present, would be charged 37½ per cent., and other goods would have to meet enormously increased rates. The promoters of the English establishment at Rouen intend to fit it up with the newest and best machinery, diminishing the cost of production and outstripping the efforts of their Norman rivals, who, with a cumbersome routine, rely upon State protection to enable them to hold their own.

It is proposed to introduce a system of compressed air clocks into London, by which any number of clocks in the city can be wound and regulated by means of pneumatic air currents. There can be one central motor, or a motor in each of several districts if necessary. The plan is to have ten in London and its environs. Of course every clock in the same circuit will indicate exactly the same time. The introduction of the system is approved by the municipal authorities, and a bill on the subject is now pending before Parliament. In Paris, clocks so connected and controlled have given great satisfaction.

A WATCHMAKER in Newcastle, Pa., has completed a set of three gold shirt-studs, in one of which is a watch that keeps excellent time, the dial being about three-eighths of an inch in diameter. The three studs are connected by a strip of silver inside the shirt bosom, and the watch contained in the middle stud is wound up by turning the stud above, and the hands are set by turning the one below. But perhaps the most remarkable thing about the Lilliputian machine is that it works with a pendulum, like a clock, and the pendulum will act with ease and accuracy in whatever position the time-piece is placed, even if it be turned upside down.

THE frequenter of the sales at the Hotel Drouot is often struck by the rich jewels offered to the public by some retiring *demi mondaine*. It is a mistake to suppose that all these diamonds, emeralds, rubies, and bracelets belong to the fair sinner. They are often only loaned her for the occasion by some fashionable jeweler, who is content to share with his partner for the nonce the exorbitant profits that are usually made at *crotchet* sales. Some people will pay doubly dear for a bracelet or ring that is said to have clasped the arm or the finger of a celebrated Madeleine.—*Parisian*.

A NUMBER of prominent New York manufacturers have, within the past few days, closed contracts for large quantities of ingot copper, the total of which will reach nearly, if not quite 20,000,000 pounds. The prices were from sixteen cents to sixteen and a-half cents per pound, and the deliveries, it is understood, run during the remainder of the year. These purchases consist almost entirely of copper produced in the lake superior region, and are believed to equal nearly the entire amount that will be produced during the last half of the year. The opening of new mines in various sections of the country has of late increased the production to an extent considerable in excess of market requirements, and to this is attributed the absence of any material enhancement of price by the exceptionally large business just consummated.

FROM Sheffield comes a more favourable report as to the position of the iron trade of the district, without, however, any corresponding improvement in prices. Nevertheless, the tendency is unmistakably in favour of enhanced values. The heavy branches of manufacture are as busy as the lighter are quiet. Much antagonism, is being shown by the working classes against the renewal of the Treaty with France on the terms proposed by the Government of that country, and petitions proclaiming this feeling are being numerously signed by the workman of the town. It would appear that the movement in favour of reciprocity is assuming larger proportions, and is beginning already to press for the consideration of Parliament.

BRITISH IRONWORKS IN RUSSIA.—Extensive steel and iron works are being put up in Russia by British capitalists. Members of Parliament and others, representing some of the wealthiest commoners, are engaged in developing and utilizing the mineral resources of Southern Russia. Near to Odessa, where there are coal and ironstone in abundance, they have erected ironworks, which they are now augmenting with steelworks. Machinery weighing 155 tons, part of a total of 304 tons, will shortly be forwarded by the makers, the proprietors of the Highfields Works, Bilston, for despatch to Odessa.

IN the course of the excavations necessary for the reconstruction of the baths at Durkheim, in the Palatinate, the workmen have come upon an enormous iron chest containing the celebrated treasure of the Abbey of Limburg, which disappeared after the siege of the abbey in 1504. The treasure is supposed to have been put in safety by the abbot, out of fear of an attack. It is composed of a large number of vases, and other objects of gold and silver, of precious stones and a host of coins of the fifteenth century. There are also a number of articles for worship, dating from the commencement of the abbey, which was constructed by Conrad the Salic, and his wife, Queen Gisela, and opened in 1030. By the law of the Palatinate, half the treasure goes to the State and half to the French company which has the working of the baths.

THE Kaoka Company, which was started in St. Thomas nearly three years ago, with a capital of \$10,000, one half was paid-up, has come to grief. At one time, the concern did a large business, made money, the profit being stated at 300 per cent and stock was kept in few hands. About \$2,500 was expended on new machinery, buildings, etc., on leased ground. The principal ingredients were bran and a low grade molasses, the compound being roasted in revolving kettles. About two tons per day could be turned out. This was entirely in excess of the consumption in Canada. Foreign markets were sought. A ton of Kaoka was sent to an agent in London, but the customs' authorities imposed a duty of two pence per pound, and the United States three cents. With the other charges added, this duty absorbed nearly all the profit, and the idea of exporting had to be abandoned. As the trade in this country had dwindled to small proportions operations had to be suspended.

KRUPP'S Works at Essen are in themselves an illustration of the immense progress that the metallurgical and mechanical industries have made in the western provinces of Prussia within the last thirty years. In 1851, 250 hands were employed at the works, who produced 560 tons of cast steel, being at the rate of 2¼ tons each hand. In 1861, the number of hands had risen to 2,136, and they turned out 5,000 tons of steel, being at the rate of 2½ tons per man per annum. In 1865, the production had risen to 50,000 tons, and the number of hands to 8,187, so that the proportional production amounted to about 6½ tons per man. By 1872, the quantity of cast steel turned out by the *Kanon-König*, or Cannon King—which is the local *nom de guerre*, but not the pet name of the great Friedrich Krupp—had risen at a bound up to 125,000 tons, and the number of producers to 12,000, so that each man turned out as much as 10½ tons per annum. In 1876, the proportional production took a further step forward. In that year, the firm kept 8,237 men, and produced 153,400 tons of steel, being at the rate of 18½ tons of steel per man per annum. Thus in the course of 25 years the production of steel per man per annum at Essen rose from 2 tons 5 cwt. to 18 tons 15 cwt., or, in other words, in 1876 each man turned out more than eight times as large a quantity of steel as in 1851. The German paper that vouches for the figures does not tell us what the production of steel at Essen has been since 1876. The aggregate production is generally thought to have increased, but the proportion per man per annum is an unknown quantity.