

New Inventions.

A New Foreign Gun and a Home Gun.

Foreign papers state that a Mr. Vandenberg a Flemish gentleman has invented a new gun which can make six and eight charges per minute, carrying the distance of 2000 feet, the ball weighs about one ounce and a quarter, and the powder is one twelfth the weight of the ball. An ordinary gun requires three times more powder, the ball does not weigh half an ounce. The new gun is loaded from the breech. The shape of the ball is round. On the 24th ult., at Utica, N. Y. the new rifle of Mr. Milo M. Cass, formerly noticed by us, discharged 24 balls in two minutes and 30 seconds; then loading with 26 cartridges in 4 minutes, and discharged twenty-four in 2 minutes and 30 seconds,—thus loading once and firing 48 shots in 9 minutes. The shooting was very accurate, considering the rapidity, and the performance of the gun gave great satisfaction to those present. The barrel of the gun was so little heated after the first 24 discharges, that it was immediately loaded and again fired, the same number of times. Considering that this is a rifle it far beats the foreign gun.

Machinery for Manufacturing Sugar.

Messrs. Benson & Gray, of Water street, Brooklyn, have just completed a very beautiful apparatus for evaporating cane juice in the manufacture of sugar, which is about to be erected in the Island of Cuba; letters patent have been granted for the invention, the object of which is to evaporate in much less time and at a lower temperature than by any other apparatus; whereby the sugar produced is very clear and has little or no color; we propose giving a full description, with illustrations, soon.

Patent Safety Brake.

We take pleasure in calling the attention of our readers to the advertisement of Cyrus S. Haldman, in another column. This brake is the invention of Henry Seitz, and so far as we have been able to learn, it has given entire satisfaction to all who have used it. Mr. Haldman, the manufacturer, is a very worthy young mechanic, and we wish him success in this enterprise.

Machine for Cutting Screws on Bed Posts.

Mr. A. A. Hall, of Gibson, Susquehanna Co., N. Y., has made some beautiful improvements on machinery for cutting the interior screw or thread, on bed posts, which will do as much work by a small machine as twelve men can in the same time. It is self-feeding and acting, and while one screw is forming, the other bed post is working out after the screw upon it has been formed. Mr. Hall has taken measures to secure a patent.

Submarine Plow.

An invention of a plow, to be operated by machinery, to plow under water, has been exhibiting in our city. It is intended to plow a furrow, draw along, lay down and cover a telegraph wire on the bottom, out of the reach of anchors. It would do very well, if there were neither stones nor stumps to be taken into consideration.

New Calculating Machine.

M. Colmar, a French gentleman who invented a calculating machine, about twenty years ago, has improved it in such a wonderful manner, that it is said to be one of the most astonishing pieces of mechanism that has ever been invented, but to our view its complexity shows its defectability.

Substitute for Tobacco.

By late foreign papers, it is announced that a chemist at Leipzig has discovered a substitute for tobacco, which has received high commendations, and is considered to be very valuable by the smoking Austro-Germans.

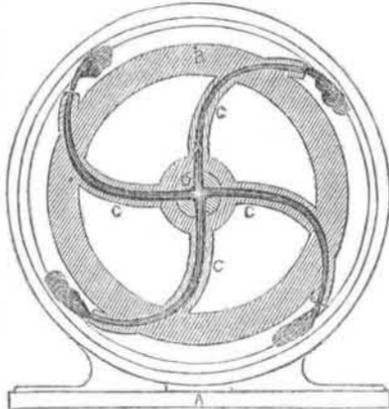
Large Gasometer.

There is a gasometer fitting up in Boston which is 95 feet in diameter, and in it is a pit or cellar 82 feet in diameter, lined on the sides and bottom with brick laid in cement. In the pit, which is partly filled with water, is an immensetub, 80 feet in diameter.

Blowing Machinery.

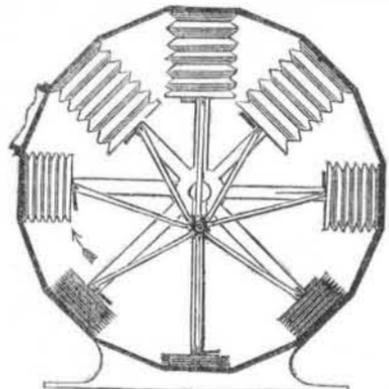
Having had a few enquiries made of us about the Blowing Engine mentioned in the communication in our last number, on "Iron Manufacture," we have received the accompanying as "Novel Blowing Machinery."

FIG. 1.



This is a rotary engine upon the principle of Whitelaw & Stirratt's Water Wheel, to give a direct rotary motion to a fan blast. This cut is an end view and represents a steam wheel with four hollow emission arms, C, and a fly-wheel, B, cast in one piece. The steam enters through its central shaft, D, which is hollow, being conveyed to the shaft by a pipe, bolted up and stuffed at the flange of the steam wheel's shaft neck, which runs on suitable bearings, and allows the steam pipe to project into the neck-steam tight. The object of this steam wheel is to get up the speed on the fan blower, without intermediate gearing, but the loss of power by such an engine is so obvious that no wonder it was mentioned in the article referred to, that it was to be dismissed. Speed and power are two very different things, but great although the speed of a rotary emission engine may be, it moves with too small a velocity to get the power of the steam. A jet of high pressure steam has a great velocity, and the steam should issue from the hollow arm, without any appreciable force to give its impulsive power to the wheel. This would require the jet openings to pass through a space of 160,000 feet per minute—a thing impracticable.

FIG. 2.



In the common rotary fan blast, it is asserted that there is always a partial vacuum formed behind the blades, and into it the condensed air in front rushes over the ends, and by the sides of the blades, to fill up the said vacuum. This is alleged to be a great eater-up of power. This invention was got up as a substitute for the rotary fan, and yet it is a rotary. This arrangement consists of a series of cylindrical bellows placed round the interior of a hollow polygonal case, which forms the receiver for the air. Eight stationary arms radiate from a central boss, and are fastened at their outer extremities to the interior of the case. The outer extremities of these arms carry guides for the moving portions of the bellows, which are worked by a set of connecting rods attached at their inner ends to a metal disc fitting on the pin of a crank, upon the driving-shaft passing through the centre of the case. In this way the revolution of the crank is continually acting upon the pairs of bellows so as to preserve an almost perfect uniformity of blasts. Each pair of bellows is fitted with a valve at its outer extremity, opening inwards for the influx of air, and a corresponding valve at the inner end discharges this air into the interior of the case, which thus acts as a large receiver, the air being discharged at an opening in the periphery. The lowest pair of

bellows is represented as completely collapsed: the next on the revolving side is still blowing inwards, but has nearly completed its stroke. Each pair is contributing air to the case, as far as the top one, which is fully distended, and about to commence discharging; the remaining ones are receiving air, in readiness for acting as the crank approaches each individual one.

Foreign Invention.

Abstract of some English Patents enrolled November 10, 1849:

Messrs. W. Brewer, of Clapham, County of Surrey, John Smith of Southville, and S. Lambeth, for improvement in the manufacture of paper. The inventors claim a new mode of producing water marks by metal plate dies.

Wm. Kilner of Sheffield, in Yorkshire, for improvements in the manufacture of railway wheels. He employs a hollow fire for wheel tyres and rims. The fire is contained in an iron box. The fire is caused to impinge upon the inner surface of the tyre. It is for wrought iron wheels only.

M. Louis, P. N. D. Piron, for improvement in tubes, for pavements, docks, and breakwaters. For a dock, or breakwater, he used sheet iron cylinders placed in vertically, and in rows transversely, and one row to back up the spaces between the cylinders in the first row. They are built around with concrete, which in due time becomes very hard, while the sheet iron corrodes away and leaves a surface to the action of the water, pierced with many apertures to deaden the force of the waves.

Robert Munn of Rochdale, in Lancaster Co., for improvements in Power Looms. The improvement consists in a mode of removing all the mots and "leaf" from the fabric in the loom. The fabric passes between emery rollers which are so adjusted to act upon the fabric and clean it. This improvement makes unbleached factory cloth look beautiful.

Wm. Henry Burke of Tottenham, for making water proof fabrics. He mixes India rubber or gutta percha, with powdered crude antimony mixed with the carbonate of potash, 25 parts of antimony, to 20 parts of the potash. They are dissolved in 300 parts of water and boiled about one hour, when it is run off into a vessel, and weak muriatic acid is added, till an orange red precipitate is deposited, which is the sulphuret of antimony, and is combined with the india rubber to form the waterproof fabric. This is allowed to be far better than Goodyear's process, which is the combination of free sulphur with the india rubber, which always has a very offensive smell, and effloresces. This subject is worthy of attention on this side of the water.

John Busham of Chelmsford, in the County of Essex, for separating the fibre from the husks of cocoa nuts. This is to make a fibrous material for cloth of a very beautiful texture, but by no means we believe so strong as cotton.

Alexander Mankittrick of Manchester, for a new lubricating compound. It is made of 4 pounds of india rubber dissolved in turpentine, 10 lbs. of the carbonate of soda, 1 lb. of glue, 10 gallons of oil and ten of water, the substances are to be heated and mixed, first with the water, and the india rubber mixture added last, and well stirred with the others. The whole is then put up in tight jars. This is stated to make a fine lubricating substance for all kinds of machinery.

Wm. Kenworthy of Blackburne, for improvements in the stop motion of Power Looms.

Charles Isles of Birmingham, for improvements in Inkstands, and picture frames. This invention is to cover gutta percha with silk, floss, or wool, in a finely divided state, and to mould it in dies for ink bottles or picture frames. The articles, no doubt, will have a very beautiful appearance.

By late foreign scientific exchanges, we perceive, that gun cotton and the galvanic battery, are generally used throughout Scotland, for blasting and quarrying.

N. O. papers intimate that their city will claim indemnity from the State, for the \$113,796 expended in closing the Crevasse.

The Author of the Railway System.

The following is a sketch of Thos. Gray, the author of the Railway system.

Thomas Gray was born in Leeds, England, about a half a century, or more ago—and this is all we know of his early history. The Middleton Collier had a railway to carry coal to Leeds, a distance of three miles. The cars moved along at the rate of three and a half miles per hour. It was laughed at—not by Gray—but by the wise public. Gray saw in his little work something that might be augmented into greatness; and he thought upon the subject, and forthwith became a visionary! He talked and wrote upon his project of "A General Iron Railway," the people declared him insane. He petitioned Parliament; sought interviews with the lords and other great men; and thus became the laughing stock of all England. He received nothing but rebuffs wherever he went. All this took place in 1820, or thereabouts.

But he succeeded at last. The railways were laid. The world has benefited by the madness of Thomas Gray.

Well, what became of him, the reader will ask. We do not know; but we believe he still lives, in Exeter, to which place he removed. Up to 1846 he had been neglected.—While thousands have been enriched by the consummation of his brilliant scheme, he remained forgotten—forced by poverty to sell glass on commission for a living. Howitt, in the People's Journal, a few years ago, gave a somewhat lengthy sketch of his career; thus bringing him into public notice. We have seen nothing in print in relation to him lately. Elliot wrote a great truth in these words;

"How many men who lived to bless mankind, Have died unthanked."

How many of the railroad projectors, agitators, stockholders, &c., have ever heard of the subject of this brief sketch.

Great Quilt.

There was exhibited at the late Mechanics' Fair held at Chicago, Ill., by Mr. C. Taylor, of that place, a quilt composed of 9,800 pieces of silk, each of which was about an inch square, and all sewed with exceeding beauty and neatness. Its chief charm, however, was the great skill evinced in the ingenious blending of colors, so as to produce a proper effect in the representation of various figures which ornamented it in every part. A brilliant sun shone in the centre, the moon and stars beamed out from one corner, while in another appeared a storm in the heavens, with lowering clouds and flashes of lightning.

Around the border were various designs illustrative of the season and of the rapid growth of our western country. At one place appeared a barren heath, with the Indians and hunters roaming over it; next, a trading post, as the first entrance of civilization; next, a military station, with the glorious banner of our country streaming from the flag-staff; then a city, and steamboats and vessels gliding in and out of port.

Lap-welded Iron Tubes.

We would direct attention to the advertisement of Mr. Prosser, on another page; we understand that his tubes are employed in Mr. Collins' new line of steam-ships, that are now getting their machinery in at the Novelty Works. Boiler makers who desire to use the best of tubes, should use the lap-welded kind in preference to others that are of an inferior character.

The Supreme Court of Vermont has recently decided that a firm doing business in the city of New York, and who in the State of Vermont made a contract with an inn-keeper to forward him, by common carrier, spirits which he knew he intended to sell in violation of the License Laws of Vermont, cannot recover the price of such spirits in the Courts of Vermont.

Wesson Rifle Factory, at Hartford, has been sold. The patent on the Muzzle Rifle was bought by Ezra Clark, Jr., the son, we suppose of the inventor, the late Mr. Wesson having purchased the patent from Clark, the inventor.