

## New Inventions.

### New Dredging Boat.

We have seen drawings of an apparatus invented by Mr James Callaghan, of New Bedford, Mass., for the purpose of excavating harbors and rivers and removing obstructions to navigation, which in our opinion will be of great importance and value to the United States. It is a well known fact that although we have the finest navigable rivers in the world for inland commerce, yet there is not a single river in our country but by good dredging might be made twice as well adapted to navigation as it is. During the summer months, vessels drawing over six feet of water are often aground between this city and Albany, while at the same time there is as much water flowing to the sea as might float seventy-four gun ships were the water directed into a deep and proper channel. This can be done by mechanical invention and we are satisfied that the invention of Mr Callaghan will be the means of improving many of our rivers and harbors, at less than one half the expense which is now incurred for that purpose by our present imperfect excavating vessels. His apparatus can be fitted up in any old steamboat, and his improvement in scooping is very different from any other plan and far superior.

### An Improvement in Spectacles.

An exchange says that a man named Shaw, near Cleveland, Ohio, has invented a new style of spectacles. He has been successful in combining three sets of lenses in such a manner that they can be readily adopted to seven distinct distances.

### Turning.

Mr. Elbridge Webber, of Gardiner, Maine, has lately made some very important improvements in machines for turning Boxes. The chuck is graduated on a scale to turn out a great variety of sizes and so regulated that the changes can be made in the most rapid manner.

### Machine for Cutting Washers.

Mr. Newell H. Bates, a very ingenious mechanic, of Dexter, Maine, has invented a very beautiful improvement in machinery for cutting Washers, which is in active operation and works well. Every revolution of the machine cuts out by a die a Washer, as fast as it can be fed with iron. Mr. Bates can also cut three or four at a single instant by a little alteration of his machine. This is a valuable invention and measures are taken to secure a patent.

### Important Chemical Preparation for rendering Leather Waterproof.

Mr. John Hutchison, of Newbern, N. C., has discovered a valuable composition, for which he has taken measures to secure a patent, for making leather perfectly impermeable to water. By applying it to boots or shoes or any kind of leather, it makes them completely waterproof. This substance is superior to a great number of compositions that have been got up for making leather waterproof, inasmuch as the leather is greatly improved by being saturated with it.

### Marine Mill.

The Marine Mill, which we stated a short time ago to have been invented in St. Louis, Missouri, we have been informed since, is the invention of a very ingenious mechanic of that city, named F. Frelich, who is himself a miller. It is constructed on the principle of the Mariner's Compass, the stones constantly maintaining their level position, no matter what may be the movement of the boat. The inventor thinks that it may be successfully used while the boat is going from port to port, in grinding the wheat which may be taken on board the vessel—so that by the time she ar-

rives at her destination, the whole may be turned into flour.

In this case, a vessel taking in a cargo of wheat at Chicago has it all turned into flour by the time she gets to Buffalo. We are somewhat sceptical respecting the economy of the invention, although not about the practicability of it.

### New Cannon.

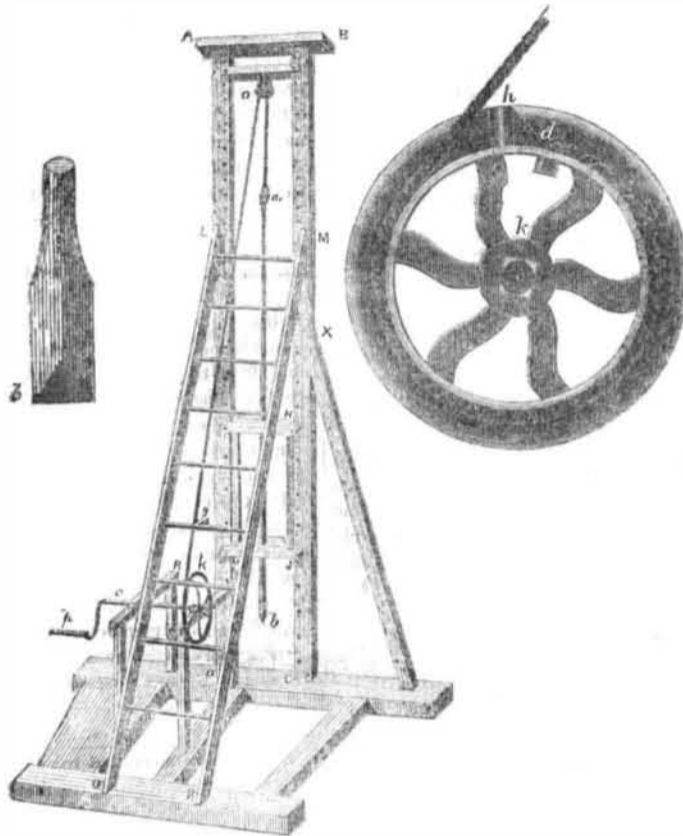
A Swedish officer has invented a new kind of cannon, several pieces of which have been sent to Woolwich for trial. These guns are grooved like a rifle, and are not loaded at the mouth, but at the breech, where there are two plugs, one at the side and the other at the head of the breech. The charge is put in at the side of the breech, and when the two plugs are pushed into their places, the gun is ready to be fired. The alleged advantages of these guns are that they are free from the danger of explosion, that the gunners are con-

cealed while loading, and that the shot are thrown with greater accuracy of aim.

### Light from Electricity.

Mr. Staitte, of whom we gave an account some time ago, as having decomposed water and produced light by it, through the agency of electricity, has been lecturing before the Philosophical Society of Sunderland, (Eng.) and has perfectly astonished the inhabitants of that place. The light which was of astonishing brilliance and beauty, was placed under an air-tight glass vase. When the gas was turned down it sufficiently lighted the spacious building, and bore the closest resemblance to the great orb of day of any light, it is said, ever exhibited. The electric light was next exhibited in a vessel of water, with equal success. Mr. S stated that it was the cheapest as well as the best for all practical purposes; and the marvellous invention was hailed with rapturous plaudits.

## WIGHTMAN AND VAUGHAN'S ROCK DRILLER.



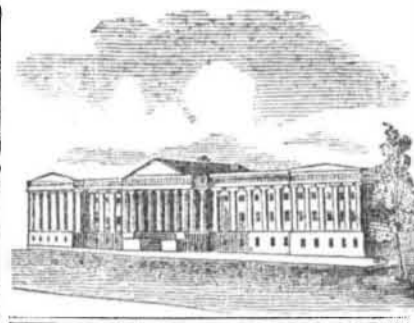
The above engraving is a representation of an apparatus for drilling holes in ledges of rocks for blasting. It is the invention of Parndon T. Wightman and Horace Vaughan, of East Greenwich, Kent county, Rhode Island. The simplicity of this machine is very apparent and its efficiency has been proved by entire practical success, the only true test of an invention's value. It is applicable to drills of all sizes, and for drilling blocks of stone when a perfect round hole is required it is just the machine that is excellent for the purpose. By experience a hole of three-fourths of an inch in diameter has been drilled by it ten feet deep, in twelve hours, a remarkably round hole being always made with very little taper to the bottom. The simplicity and cheapness of this machine must commend it to favor.

EXPLANATION.—A B C D, is a strong upright frame filled with holes, closer above L, M, than below. There is a strong cross piece above to support the drill and block, and can be moved for convenience in the drop of drilling by moving it up or down, on the frame fastening it by pins in the holes. On this is fixed the pulley O, over which passes the rope G H J, is another frame made to be moved up or down on the frame and fixed at any point desired. This frame is covered with a plank door, across. It has a hole in the middle for the drill to pass through and the leaf of the door, it being divided in the middle, can be opened to take out the drill when needed. This frame is made solid so as to guide the drill correctly at every stroke, and it can be shifted up and down to do this with the utmost correctness. a, b, represents the iron drill, and d, the figure on the left represents the lower end of the drill. The drill may be of one or two parts, having a socket and screw. The drill is attached to a strap and the rope passing over O, and

down over the periphery of the wheel, a fac simile of which is the figure on the right. This wheel is operated by a crank handle, p, e, and is fixed on a frame R K S, as seen in the middle figure. O, N, is a ladder for gearing and ungearing the jumper or drill with the rope at A. g, is a small piece of wood to guide the rope and keep it from swinging.

OPERATION.—By reference to K, the figure on the right, which represents a wheel (different sizes of which are used,) having a rim about two inches wide made of iron. At the distance of one-third of the rim from the outer edge there is a flange round the whole rim with its upper edge turned over towards the outer edge of the wheel. The use of this flange is to keep the rope from slipping off the rim when wound up. h, is a projecting piece of wood fixed on the rim. a, is where the rope is attached, and the manner. It will be at once perceived then, that as the rope is wound upon the wheel, when it comes to h it is thrown off the rim, and as by the former action the Drill was lifted up, so by the projection h it is made to drop and thus simply and effectually is the mode of this machine's operation. The form of the Drill being square it is kept from catching in any ledges of rocks, which is the cause of much trouble in boring by common drills. The revolution of the wheel and the twisting of the rope thereby causes the Drill constantly to turn round by the twisting and untwisting, while the thimble d, which is fitted to turn easy under the rim of the wheel, keeps the rope from being twisted too hard.

Measures have been taken to secure a patent for the combination of the Drill with the Wheel, in the manner described. In noticing this invention last week we made a mistake in stating that East Greenwich was in Mass.



### LIST OF PATENTS

ISSUED FROM THE UNITED STATES PATENT OFFICE,

For the week ending Jan 6, 1848.

To Andrew Crosse, of Broomfield, England, for improvement in purifying liquids by Galvanism. Patented January 6, 1848 in the United States. Date of Foreign Patent March 2, 1847.

To John Thurston, of Bath, Indiana, for improvement in Winnowing Machines. Patented Jan. 6, 1848.

### INVENTOR'S CLAIMS.

#### Building Vessels.

By John H. Bellows, of Cincinnati, Ohio. Improvement in the construction of vessels, Patented 4th September 1847. Claim.—What I claim as new and desire to secure by Letters Patent is the application of rods of iron passing through the longitudinal planking, and screwing them together, thereby dispensing with the wooden frame as are required in the present mode of constructing vessels.

#### Manufacture of Soap.

By John Shugert, of Elizabeth, Penn., Improvement in the manufacture of Soap. Patented September 4th 1847. Claim.—What I claim as my invention and for which I ask Letters Patent is the before described composition producing a Soapaceous compound for cleaning clothes, and different other articles.

#### Lime Kilns.

By Jacob H. Bower, of Walnut, Penn. Improvement in constructing of Lime Kilns. Patented 4th September, 1847. Claim.—Having thus fully described my invention, I do not claim the peculiar manner of laying the stones in order to form conducting passages or channels for the diffusion of the heat, as I am well aware such disposition or arrangement has been made in the setting of brick kilns, but what I do claim as my invention, and desire to secure by Letters Patent is combining such arrangements or disposition of the limestone with a temporary casing or kiln in the manner above specified, by means of which I obviate the difficulty and expense incurred in the erection of a permanent kiln.

#### India Rubber Manufacture.

By James Thomas of New York. Improvement in preparing India Rubber. Patented 4th September 1847. Claim.—What I claim as my invention and desire to secure by Letters Patent is the use of the acids of sulphur of a lower degree of oxygenation than the sulphuric acid in combination with suitable bases, but prefer a hyposulphite which can be used alone, or in combination with the other salts of the acids of sulphur as above mentioned, or with the sulphurets. I claim the use of artificial sulphuret of lead, used either alone with the India Rubber, or mixed with a salt of a lower degree of oxygenation than a sulphate, but prefer using a mixture of about equal parts of a hyposulphite and artificial sulphuret of lead as before stated.

#### Carding Machines.

By H. G. Ellsworth, of Enfield, Conn. Improvement in Feed-rollers for carding machines, &c. Patented 4th September, 1847. Claim.—But what I do claim as my invention and desire to secure by Letters Patent, is the combination of the fluting with the screw, thread or grooves on the surfaces of feed-rollers, thereby forming teeth which straighten the fibres and more effectually prevents lapping.

A gold mine has just been discovered in the Government of Irkoutsk, in which this metal is found in a state of complete alloy with silver, a mineralogical fact which is extremely rare.