



## New Inventions.

### Improvement in Paddle Wheels.

Mr. William Webster of this city has invented a new improvement in paddle wheels, which is certainly destined to perform wonders in navigation. He employs two or more paddles like vertical oar blades between the rim of the wheel instead of one solid rectangular paddle, and by a very simple and ingenious mechanical arrangement, the paddles are operated, so as their greatest amount of surface, will act upon the water while passing through it, and to present their edges to the face of the wheel when rising out of, passing through the air, and entering the water. They act most effectually where they are wanted to act, and offer little if any resistance to the medium through which they pass, where they cannot act to propel the vessel. Measures have been taken to secure a patent.

### Invention to Prevent Collisions on Railroads.

Mr. W. Frölich, engineer in the Navy Yard at Washington, has invented an apparatus which is radically self acting to prevent railroad collisions. He has executed an operative model which demonstrates that even in the event of two trains meeting at full speed it will operate without the help of engineer or fireman and prevent a dangerous collision. As he has taken measures to secure a patent, he is now ready we are informed to enter upon negotiations with Railroad Companies on reasonable terms.

### Enamelling Iron.

In a great number of cases, articles made of cast Iron require to be glazed. The substances employed for this purpose and the manner in which they are applied, are kept somewhat secret by the craft. We have had many enquiries made of us respecting this art, which we have answered freely, with the knowledge we have had of the subject. A short time ago however the following Improved process came into our possession, and we hasten to lay it before our readers. Knowing that it will be of no small value to many of them

The articles of Cast Iron must be thoroughly cleaned first, and then they are ready to receive the first coat, which is made of the following substances. 100 parts of calcined flints, ground to a fine powder, and mixed with 75 parts of fine grained borax, this mixture is then fused together, and when cooled it is ground with 22 parts of potter's clay in water until it is of such consistency that when an article to be glazed is dipped in it a coating of about one sixth of an inch is retained on it, when the articles so dipped are set apart in a clean place to allow the composition to set, as it is technically termed. When the articles are yet moist, the following composition to produce the glaze, is carefully sifted over the surface. Take 100 parts of what is called cornish stone, or red limestone ground fine, 117 parts of borax ground fine, 35 parts of soda ash, 35 parts of saltpetre, 35 parts of sifted lime, 50 parts of white glass well pounded and 13 parts of white sand. These materials are well mixed and vitrified (burned in a crucible) and when cool they are ground to a fine powder which is washed and dried and laid past in a dry place for use. About 45 parts of these materials are mixed with one part of soda ash in hot water—being well stirred together and then allowed to dry in an oven of a stove, when a fine powder is produced. This is a powder that is sifted over the surface of the moist primary coating spoken of before. After the articles are dusted over with this, by a dust bag, they are placed in the oven of a stove and kept at a temperature of 212 degrees till the composition is dry, when the articles are then placed in a kiln or muffle and submitted to a sufficient degree of heat to fuse the glaze, should the glazing not be found

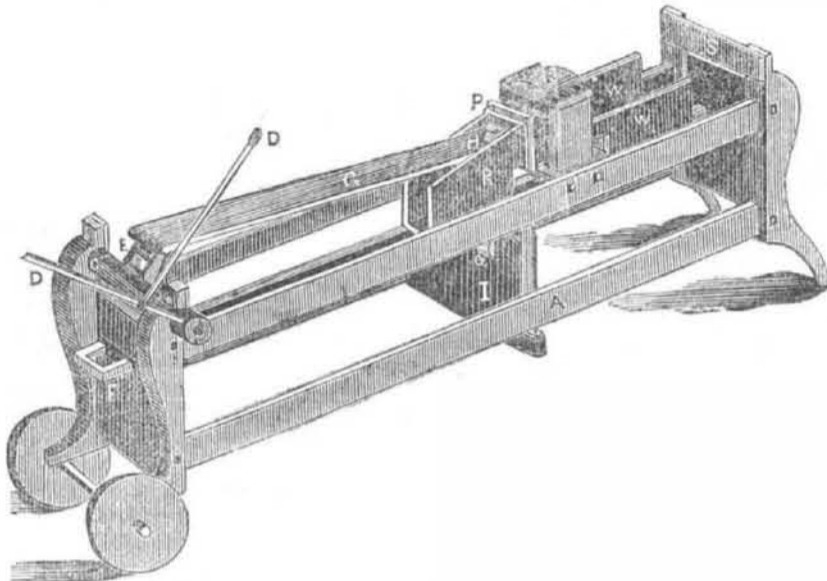
perfect all over, the articles may be moistened with a little salt and water, and the glazing powder sifted over them again and then subjected to the heat of a kiln or muffle again.

This is a good composition for coating the inside of iron pipes, which can be done by holding the pipes on an inclination with their lower ends in a tube, and pouring the first mixture down from the top, taking care to keep the pipes turning round so as to spread the mixture equally over all the interior surface. When this is slightly dry on the surface the glazing powder may be dusted freely

in at the top turning round the pipe—and letting the powder spread equally all over the surface down to the bottom, when the pipes may be put into a long kiln made for the purpose and the glazing powder fused. These materials make a splendid glaze and have been considered the best substance as combined for a good iron enamel.

The cornish stone may be left out of the composition without any detriment to its quality. For enamelling the outside of cast iron articles the above process will be found to be the best yet discovered.

## IMPROVED BRICK PRESSING MACHINE.



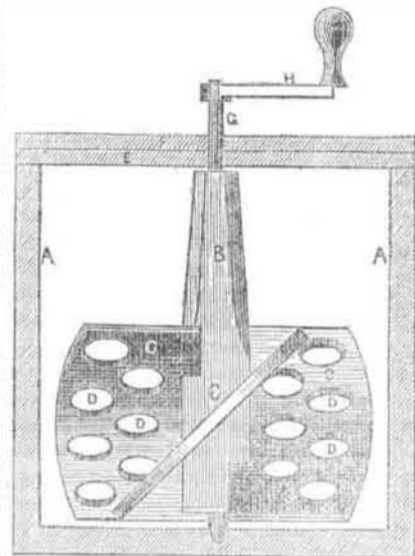
This is a machine for pressing brick to give it that smooth and beautiful form, required for the fronts of buildings. It is very simple and easily managed and does credit to the inventor, Mr. Nathaniel Adams of Canterbury, Orange Co. N. Y., who has distinguished himself already for more than one invention.

A, is the frame. There are wheels at the one end, and the two legs at the other end will answer for handles to wheel it from place to place, it being a very convenient and portable machine. B, is the box in which the brick is pressed. This box is formed of stationary sides and top, but the back is moveable, a solid square block secured to a sliding frame. This sliding frame runs from end to end of the machine supported on and working in slots on S, and also at F. It is also supported on the bearing plate I, attached to the frame near the middle, sliding on the top of two friction rollers a, (one only seen) R, is a shoulder on each side of the follower G.—These shoulders are bolted to the sliding frame below and are elevated to support the piston P, which is a square block, to be pushed by G, and press the brick into the box. H, is a tongue joint by which the follower is connected to the piston. W W, are two square arches, as they may be called. They are two side plates with slits in their underside and to these is secured on the inner side the back of the box B, of the same shape as the square piston P. These are connected to the sliding frame below, so that when the sliding frame is moved the follower G, the piston P, and R and W W, are moved at the same time. The follower G, is connected with C, the fulcrum, by a tongue with a spindle through it on the fulcrum which is embraced by two jaws on the underside of the follower as seen at E, which thus forms a very flexible joint of the toggle kind. There is an excavation on the roller to receive the butt end of the follower at that point where the tongue E, is moved so as to be on a line with the bottom of the follower. At that point no power is exercised by the tongue to move the follower in pressing the brick, but as the butt is caught into the recess on the fulcrum, the lever D is employed to act upon the whole length of the follower and thus exert the greatest lever power, when it is most wanted—to give the finishing touch to the brick. The brick is placed upon a projecting platform on the bottom of the box and the back of the box is the front of it when the pressing commences but recedes before the piston a certain distance, till backed by S, while the piston P, can move or travel farther with the compression of the brick. W W, therefore do not travel so far as N and

P. The slits mentioned guide the arches to move only a certain length, viz. the exact width of the box B. They therefore rest and slide on the bars below of the sliding frame. This is the way in which the pack of the box B, and the piston P, are guided and moved to press the brick and graduate the distance (not uniform) between the two for the compression of the brick. Measures have been taken to secure a patent.

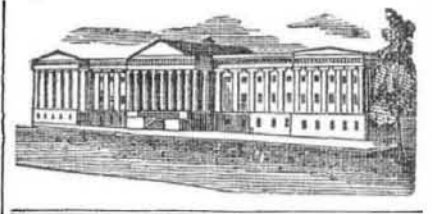
### Irvin's Percolated Propeller Churn.

This is an invention of Mr G. A. Irvin, of Paris, Bourbon Co. Kentucky. The improvement is on the dashers of churns, and will at once be appreciated as being very simple and which is not the subject of any objection that has been urged against producing butter by mere atmospherical agitation.



This is an elevated section. A, is the churn. B, a collar round the revolving vertical shaft G. E, the lid, and H, the handle. C, are the dashers; they are secured to B, around the vertical shaft, and are set nearly at an angle of 45 degrees to one another, as is seen by the edge of one herein exhibited. D, are holes or perforations in the dashers. They are shaped something like the flukes of a propeller. As the dashers are full of perforations, it will be observed from the way in which they are set, that the particles of the milk or cream, are most effectually submerged and thrown upon upon the surface alternately, carrying out the old principle of churning (which so many still like best) but in a different and far superior manner. Measures have been taken to secure a patent.

Mr. Daniel Woodbury of Rochester, N. Y. has made a beautiful improvement on his "Grain Separator."



## LIST OF PATENTS

ISSUED FROM THE UNITED STATES PATENT OFFICE,

For the week ending January 23, 1849.

To H. Felton, P. D. Cummings and H. Hinchly, of Portland, Me., for improvement in cast iron Car Wheels. Patented Jan. 23, 1849.

To J. F. B. Flagg, of Philadelphia, Penn., for improvement in Rails and Wheels for turning Curves of Rail Roads. Patented Jan. 23, 1849.

To S. R. Parkhurst, of West Bloomfield, N. J. for improvement in Cylinders for carrying and supporting Cards, &c. Patented Jan. 23, 1849.

To F. A. Calvert, of Lowell, Mass. for improvement in the manufacture of Cylinders for Burring Wool, &c. Patented Jan. 23, 1849.

To Elisha Luter, of County of Robertson, Tenn., for improvement in Shingle and Stave Dressing Machines. Patented Jan. 23, 1849.

To William Grant, of Boston, Mass. for improvement in Chucks for Lathes. Patented Jan. 23, 1849.

To James Cortlan, of Washington, D. C. for improvement in Shower Baths. Patented Jan. 23, 1849.

To P. P. Read, of Bowdoin, Me., for improved Roller Ox Shoe Machine with moveable Dies. Patented Jan. 23, 1849.

To E. J. Dickey, county of Chester, Penn. for improvement in Seed Planters. Patented Jan. 23, 1849.

To J. C. Miller, of Marietta, Penn. for improvement in Seed Planters. Patented Jan. 23, 1849.

To F. A. Calvert, of Lowell, Mass., for improvement in Wool Cleaning and Lapping Machine. Patented Jan. 23, 1849.

To A. B. Taft, of New York City, for combined Double Hinge and Spring. Patented Jan. 23, 1849.

To William Schnebly and Thomas Schnebly, of New York City, for improved self-inflating and folding Life Boat. Patented Jan. 23, 1849.

To M. Fisher and William Martin, jr. of Newport, Me. for improved process for welding Cast to Wrought Iron or Steel. Patented Jan. 23, 1849.

To J. K. Parke and C. S. Watson, of New York City, for improvement in Machines for making Envelopes. Patented Jan. 23, 1849.

To John A. Whipple, of Boston, Mass. for improvement in taking Daguerreotype Pictures. Patented Jan. 23, 1849.

To Alexander Wright, of Lowell, Mass. for improvement in Guards or Strippers for Burring Machines. Patented Jan. 23, 1849.

To H. Angus, of New Haven, Conn. for improvement in Carving Machines. Patented Jan. 23, 1849.

To A. S. Pelton, of Clinton, Conn. for improved combined Hinge Fastener and Shutter Opener. Patented Jan. 23, 1849.

To C. F. Tuttle, of Williamsburg, N. Y. for improvement in Registers for Hot Air Furnaces. Patented Jan. 23, 1849.

### DESIGN.

To N. P. Feck, of Springfield, Mass., for Design for Stoves. Patented Jan. 23, 1849.

### Counterfeit Detector Balance.

Mr. C. Rodgers, of Jefferson, Wisconsin, the inventor of the Electric Cholera Protector, has invented a new and beautiful registering balance for weighing coin and detecting the spurious kind. The beam which is used to weigh is fixed upon a fine steel point and the receiver for the coins is made to measure the true size and the beam is marked on one side in grains and on the other with numbers corresponding to a manual giving the weights of gold and silver coins. There is an indicator which points to the registered weight of the coin. This detector is constructed upon the well established fact, that no counterfeit alloy is the same in size and weight as the genuine, and with the most sensitive acumen this invention detects the counterfeit.