

### New Inventions.

#### Improved Dredging Steamboat.

Mr. James Callaghan of New Bedford, Mass. whose name lately appeared in our list of patents "for an improvement in Dredging Machines," has secured in his invention a very important point in dredging and removing obstructions to navigation in rivers. He employs a vertical sliding frame in front in combination with a movable angular side frame or levers, so as to enable the scoops to dredge at any angle or in a straight line, or very easily at any depth, and what is very important, with a rotary motion of the buckets, he exerts a lever power in excavating equal to the lever power by the lever scoop on the old reciprocating plan. The whole is so arranged that any number of buckets from one to twenty can be managed with ease at the same time in two separate divisions, and acting independently of each other, discharging their contents once in a minute.

Mr. Callaghan intends to construct his boat otherwise in the most approved manner combining the qualities of a steam and dredge boat in the same hull, and the steam power employed in excavating purposes may be readily applied to the propulsion of the boat, thereby avoiding the usual expense of towage. He has also made one capital improvement on the mud tender—a model of which we have seen, and for which a patent will soon be granted.

#### Improved Horse Power.

Mr. H. W. Bertholf, of Sugar Loaf, in this state, has made a valuable improvement on a stationary Horse Power machine, which is so simple and easily constructed, that almost every farmer can put it up himself. It is constructed with a main horizontal revolving shaft which is driven by levers to which the horses are attached moving in a circle and communicating the power by a chain from a large notched pulley above, to drive a thrasher, or any other machine, so essential now to a well managed farm. This Horse Power, has no cog wheels—no traction wheels or pulleys—it is all made of wood but the journals, and it is therefore capable of being repaired by any of our farmers, all of whom are more or less handy with the axe, saw, chisel and plane.

#### New Propeller.

Messrs. Wilder & Gooding, of Detroit, Michigan, have made an improvement in propelling by paddles, which are guided by slides to enter the water at an angle of about 45 degrees and rise in a vertical position. The paddles are operated by cranks on the end of the driving shaft and only three are used on each side. We have seen paddles driven by cranks to enter the water in nearly the same way before, but none that combined the principle of a vertical oar, which these do. It is an improvement on John Fitch's invention, and it possesses qualities, in which his was really defective. We hope this invention will be fairly tried.

#### Improvement in Machinery for Making Ropes.

Mr. Henry A. Clum, of Walworth, in this state, has just made application for a patent for improvements on machinery for making ropes, by which the rope walk is not only dispensed with in a very effectual manner, but the combination of the machine for short twisting and finishing is rendered so simple, that it must eventually supersede every other heretofore proposed for that purpose.

#### New Cotton Gin Saw Flier.

Mr. Israel F. Brown, of Columbus, Geo. has invented a new apparatus possessing much ingenuity, for filing Gin Saws. It is so constructed and arranged as to give alternately a rotary motion to the saw and a horizontal motion to the file and operating with the utmost exactness. One of these machines can accomplish the work of six men and does the work better than by hand.

#### Improvement on Thayer's Truss Bridge.

Mr. George W. Thayer of Springfield, Mass. has made a valuable improvement on his Truss Bridge, an engraving and description of which was published in No. 24, vol. 2 Scientific American. The improvement consists in combining a double arch brace with the frame of the bridge, by tension rods, so as to direct all centre pressure to the abutments.—The arch brace is therefore hung in the abutments about six feet below the bottom of the

bridge, and the truss is kept firmly in its place by the counter brace running through the upper and lower chords, locked and firmly bolted. The horizontal rods that run through the suspended parts are secured by nuts and screws and so are the arch brace tension rods, therefore by screwing up these at the same time, all the joints are kept firm and snug and the truss thus kept most effectually from sagging or settling in any part.

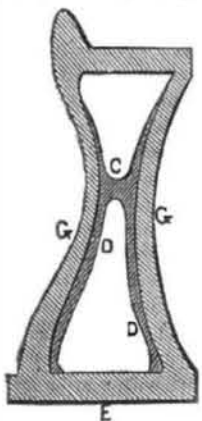
#### IMPROVED ARM CAR WHEELS.—Figure 1.



The improvement made on this wheel, is the invention of Albert T. Converse and Wm. T. Cooley, of Norwich, Conn. The form of the wheel is beautiful and exhibits much taste, making it a desirable wheel for passenger cars especially, both on account of its ornamental character and owing to another quality which it possesses over the plate wheels in use, viz. it has not that disagreeable humming peculiar to those wheels spoken of.

Fig. 1 is a side elevation, and fig. 2 a section of the wheel divided at the line X. The improvement consists in making the wheel with a solid hub having two sets of arms placed in such a position that their insides are nearly parallel with and form part of the sides of the wheel. The position of the arms are at right angles with those usually employed, and they thereby obviate the important objection made heretofore against arm wheels, as their surface is more uniformly chilled on the tread of the wheel, which could not be obtained with the arms made transversely to the

FIG. 2.



inside of the rim, because the portion of the tread opposite the end of the arms was to a certain extent annealed by the greater thickness of metal at those parts—a moulder will understand this. The strength of the wheel is increased by uniting the arms on opposite sides to one another by ties C, as seen in the section fig. 2. A, is the flange or rim. H H, are the arms, of which there are 8 on each side—(double arms) connected by the tie C. E, is the hub, which is made without the divisions necessary in casting other armed wheels. G G, shows a longitudinal section through the arms, and D D, are braces cast in the inside of the arms for greater strength.—

The curves of the wheel will be perfectly understood by fig. 2. It is a capital form for strength—we know of no arm wheel to compare with it, and it is the result in all its parts of a great number of stern experiments, which resulted in the choice of such a wheel as being superior to every other form tried. This wheel is secured by a patent and is made at Mr. Converse's Phoenix Foundry, Norwich, Conn. of the best materials, the spaces being formed with dry sand core and every attention paid to the production of a wheel of a super-excellent quality.

#### California Inventions.

The Gold mania has excited the inventive organs of our inventors in a most wonderful manner. New Gold Washers are to be seen at every corner. New safety india rubber dresses to preserve the lives of the gold finders from shipwreck, and new india rubber hammocks on which some might sleep to California even on the water, were it not for the dangers of the voyage. In short the wonders of the gold are not more wonderful than the means that have sprung into existence to get it, and to go where it is. It is not impossible for some lucky individuals to make gold by the bushel from brass.

#### The Felloe Machine.

The Felloe machine illustrated and described in a late number (22), was incorrect in reference to the residence of the inventors. The inventors are Joseph and Levi Adams, Hadley, Mass., and L. H. Moore, Leverett, Mass.

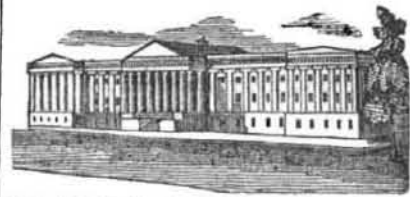
#### Detecting Gold by Weight.

Mr. Clark, of Chatham st., this city, has exhibited to us a newly invented machine for testing the presence of gold, which, in simplicity, is admirably adapted for transportation and use. The ore containing the precious metal is weighed with water, and a table gives, opposite the weight of the whole mass, the weight of the quantity of gold contained in it.

#### Improved Brad Awl.

Mr. John Gooding, jr. of Worcester, Mass., has made a very beautiful improvement on a Brad Awl, whereby it can be inserted and retained in the handle in a manner both ingenious and unique, making it a more valuable tool than it has hitherto been.

Water is only about eight times heavier than the atmosphere.



#### LIST OF PATENTS

ISSUED FROM THE UNITED STATES PATENT OFFICE,

For the week ending February 20, 1849.

To David Matthew, of Baltimore, Md., for improvement in Spark and Gas Consumers.—Patented Feb. 20, 1849.

To Wm. A. Edwards, of Clinton, Michigan, for improvement in the manufacture of Pearl-ash. Patented Feb. 20, 1849.

To Samuel Whitmarsh, of Northampton, Mass. for improvement in apparatus for warming apartments. Patented Feb. 20, 1849.

To N. E. Chaffee, of Ellington, Conn. for improvement in Drying Machines. Patented Feb. 20, 1849.

To Francis Grice, of Washington, D. C. for improved Block for supporting bilges and keels of vessels. Patented Feb. 20, 1849.

To Ransom Cook, of Plattsburgh, N. Y. for improvement in Electro Magnetic Ore Separator. Patented Feb. 20, 1849.

To B. F. Palmer, of Meredith, N. H. for improvement in Artificial Legs. Patented Feb. 20, 1849.

To S. H. Grinnell, of Charlestown, N. H. for improvement in Horse Rakes. Patented Feb. 20, 1849.

To Daniel Smith, of Scipio, N. Y., for improved attachment of loading Muzzle for Rifles. Patented Feb. 20, 1849.

To L. T. Cheever, of East Greenwich, R. I. for improvement in Fire Kindling Materials. Patented Feb. 20, 1849.

To J. D. Steel, of Pottstown, Pa., for improved method of attaching the Arch to the Truss Frame in Bridges. Patented Feb. 20, 1849.

To Valentine Roth, of Evansville, Ind. for improvement in Brick Presses. Patented Feb. 20, 1849.

To James Mullery, of Parkersburgh, Pa. for improvement in short Slide Valves by Chamfering the Corners. Patented Feb. 20, 1849.

To Washburn Rice, of Seneca Falls, N. Y. for improvement in self-acting Registers for Stoves. Patented Feb. 20, 1849.

To Wm. H. Lindsay, of New York City, for Fluid Metre. Patented Feb. 20, 1849.

To Samuel Huntington, of Middlefield, N. Y. for improvement in machinery for Turning right and left Lasts, &c. from the same pattern. Patented Feb. 20, 1849.

To James Secor, of St. Louis, Mo., for improvement in apparatus for Current Wheels.—Patented Feb. 20, 1849.

To Charles Murdock, of Baltimore, Md., for improvement in Churns. Patented Feb. 20, 1849.

To James M. Eddy, of Boston, Mass., for improvement in machinery for Turning Irregular Forms. Patented Feb. 20, 1849.

To Jephth Dyson, of Fulton, S. C., for Improvements in Carding Engines. Patented Feb. 20, 1849.

To C. W. Buchel, of New York City, for improved Cartridge Tube and Conveyor forming a Repeating Fire Arm. Patented Feb. 20, 1849.

#### Electro Magnetism.

The attention of the public is specially directed at present to the employment of electro magnetism as a motive power. We have received a good communication on this subject, which will appear next week.

#### A Patent Case.

The case Childs vs. Wilson, came up again on the 24th inst. before Judge Kane at Philadelphia, on motion to attach the defendant for a violation of an injunction against him to prevent him using a patent process in the manufacturing of lamp black, invented by J. Mini and assigned to the complainant. Upon his promise to refrain from further infringement of the patent, he was discharged on payment of costs. The case has been before the Court several times before.