



## New Inventions.

### New System of Steam Engines.

At a meeting of the Academy of Science, Paris, held on the ninth of last month (Oct.) a new system of steam engines was submitted by M. Boutigny who asserted, from numerous experiments, the existence (before unknown says the Paris papers,) of a fourth physical state of bodies, different from the solid, liquid and gaseous, and to which he attaches the epithet spheroidal. He attempts to explain, by means of the spheroidal state which water assumes in over-heated boilers, "those fulminating explosions of which the occult unknown causes frustrates all the precautions taken to prevent those formidable phenomena." He conceived that water, in the spheroidal state, could be employed at once as a precious auxiliary on board steam-vessels, and that, by its agency in this way, the power of machines might be doubled momentarily, and this without any change in the present forms of the engines. He thinks he has invented a new and precious *moteur*, and he averts all danger of explosion. A skillful engineer has constructed for him, on the principle of his discovery, an engine of one horse-power, of which the size of the boiler is not larger than may be easily put in the pocket; two other engines, one of two horse-power, and the other of four, are being built in Paris; a third, of four hundred horse-power, is about to be constructed in England. The quantity of coal used in a given time for a given purpose will be less than in the old engines; the new will occupy less space in vessels—leaving more for passengers and merchandise; and they may be adapted perfectly to vehicles running on ordinary roads. Boutigny adds, that the experiments with the engines so far, are entirely satisfactory and conclusive."

The above extract exhibits the distance in which the French engineers are behind the American and English. This new discovery of M. Boutigny, is old and well known to our engineers and was first discovered by Perkins, an account of which will be found in his experiments with steam.

### Fountain Marking Brush.

We have been shown a very pretty invention in the article of Marking Brushes, and take pleasure in recommending them to our friends. The ink is poured into the interior of the handle which is of a hollow japan substance, and the brush supplied by the pressure of a spring at the top. It is a very useful invention and we learn that the inventor is making large sales of the invention. S. B. Whitney is sole agent, corner Broadway and Pine st., up stairs.

### Improved Wagon Box.

Mr. Start, of Smyrna, Del., has constructed a wagon with its box resting upon rollers, to be operated by a lever, so that the box may, by a lever and roller like a capstan, be thrown out, or brought upon the cart with the load therein. This will be valuable for heavy loads but for no other purpose.

### Deafness.

James Yearsley, an English surgeon, has discovered, according to the Medical Examiner, a curious and efficient mode of relief for deafness resulting from scarlet fever, &c., in cases where the drum of the ear has been broken. It is simply to moisten a small pellet of raw cotton and gently push it down the passage of the ear till it reaches the drum at the bottom; adjusting it till it produces the best hearing. This adjusting is necessary, else it may make the deafness at first only greater. Moisture is indispensable. The cotton should be changed every morning. Many cases are cited in proof of the utility of this discovery.

## MORSE AND MANSFIELD'S IMPROVEMENT IN CARS FOR TURNING CURVES.

In No. 8 of this vol. we presented an engraving of this invention, and in an appended note on another page of the same number we referred to the angles of the wheels being wrongly represented in the engraving. As it is an important invention, in case that a wrong impression regarding its mode of operation should be imbibed, we present this week another engraving showing the trucks as attached to the frame of a car, and the position of the axles, wheels and truck when turning curves. It will here be observed in the outset, that the car acts as a guiding lever to make the axles and wheels conform to the curvature of the road.

FIG. 1.

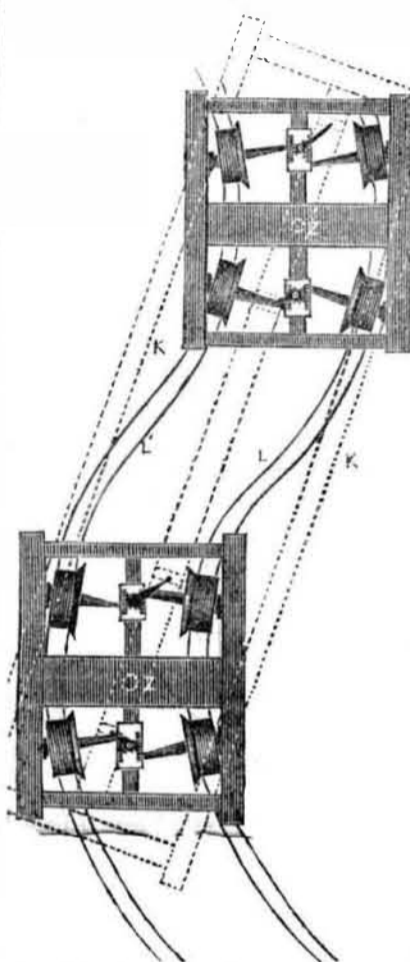
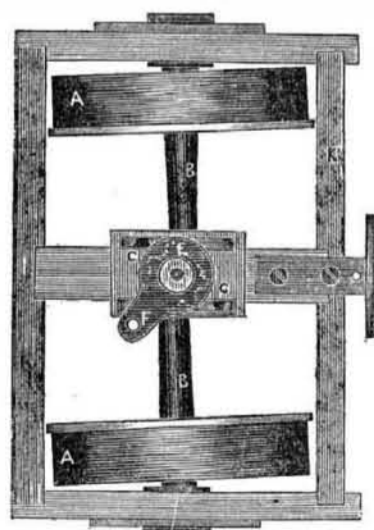


Fig. 1 is a top view and represents the position of the wheels, axles and body of the car passing over a double curvature. L L, are the rails and K K, the body of the car.—Fig. 2 is an enlarged view of two wheels and axles and the axle boxes with part of the car frame. A A, are the wheels. B B, are the axles. Z Z, are the central pivots of the car body. Each wheel has a single axle for itself, and it has this advantage over other cars, that if one axle breaks or one wheel, there is

FIG. 2.



no danger of the car breaking down—the car will run steady upon three wheels to a truck. The inner ends of the axles are hung in suspension oscillating boxes, having cogs on the upper parts. Fig. 3 represents an oscillating box. D, is an inside shoulder, and C, are the cogs on the upper part. These boxes are attached by pivots to the central longitudinal beam of the car, and are retained in square plates firmly secured to the central

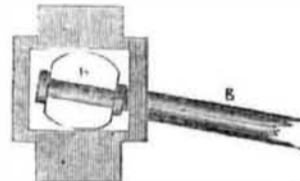
beam. E, is a plate, on the under side of which are teeth to mesh into C, the open part of the axle bearing like pinion and rack coupling, and F is a crank with a bolt or wrist on the end of it, to fit into a slot in the bottom of the car body K K. To allow the wheels to change with the angle of the axle as seen in fig.

FIG. 3.



1, the outside journals of the axles are fixed in their boxes in such a manner that both the shoulders and journals move in their boxes and work very nicely, as represented in fig. 4. B is the axle. H, the axle block, which from the dimensions of the box, allows the axle at

FIG. 4.



the outer end to move in unison with the other end of the axle in its oscillating bearings. The two crank plates on each truck which have wrists projecting into recesses of the bottom of the bar, are of unequal lengths as seen in figure 1, so that the front and hind wheels will describe different angles, the whole conforming to the curvature of the road. A mathematical problem is involved in the combined motion of the car body and wheels, which cannot be rendered plain in this description, but its operation in fig. 1, is correctly represented.

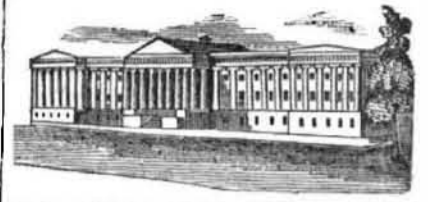
The ingenious inventors are Mr. Jedediah Morse and William Mansfield, both practical men, the former of Sharon, and the latter of Canton, Norfolk Co., Massachusetts.

### The Camera Lucida.

The engraving and description of this excellent instrument which we published a short time since, brought us in such a flood of orders that though we had prepared ourselves with a large number beforehand, our supply was quickly exhausted and many were unable to obtain them. We immediately made arrangements for another large quantity and would inform those whose orders have been waiting that their Camera's were all forwarded last week. We have now a few on hand for disposal and would advise all who desire them to send at once while they can be had. By the aid of this instrument any one can draw out a landscape, a portrait or any desired object, without any previous instruction or practice. Those who have not seen or do not remember the interesting description and engraving of this instrument which we published, are referred to No. 4 of this volume, in which it appeared. We have them put up in neat boxes and can forward them with perfect safety to any part of the United States.—Price \$6.

### Facts to be Remembered.

The best way to sell Patent rights or bring an invention into notice, is to have an engraving and description of the same published in the *Scientific American*, as this paper circulates through every state in the union, among those classes most interested in inventions. The expense is quite trifling. Those who hold Patent rights which they have laid aside as valueless because unable to dispose of them would probably find purchasers by publishing engravings of the inventions in our paper, as mentioned. To many inventors the sale of a few rights during these hard times would be a blessing. All letters in reference to engravings should be directed to the publishers of the *Scientific American*, post paid.



## LIST OF PATENTS

ISSUED FROM THE UNITED STATES PATENT OFFICE.

For the week ending Nov. 14, 1848.

To Ellis & B. S. Buckley, of Roxbury, Mass., for improvement in Screw Jacks.—Patented Nov. 14, 1848.

To William Oldroyd, of Mount Vernon, Ohio, for improvement in Odometers. Patented Nov. 14, 1848.

To William A. Comstock, of Providence, R. I., improvements in the manufacture of Buckwheat Size. Patented Nov. 14, 1848.

To William Beal, jr. of Lowell, Mass., for improvement in Mills for breaking and grinding. Patented Nov. 14, 1848.

To Francis X. Wurm, of Vienna, Austria, for improvement in Furnaces for Steam Boilers. Patented Nov. 14, 1848.

To C. B. Turner, of Buffalo, N. Y., for improvement in operating Brakes for Railroad Cars. Patented Nov. 14, 1848.

To Thomas D. Paine, of Smithfield, R. I., for improvement in Rotary Valve Wind Musical Instruments. Patented Nov. 14, 1848.

To Almond D. Fisk, of New York City, for improvement in Coffins. Patented Nov. 14, 1848.

To John Schley, of Columbus, Ga., for improvement in Roller Cotton Gins. Patented Nov. 14, 1848.

To Iram Brewster, of Stamford, N. Y. for improvement in Hill Side Ploughs. Patented Nov. 14, 1848.

To Welcome Whitaker, of Troy, N. Y. for improvement in Machines for Plaiting Shirts. Patented Nov. 14, 1848.

To James D. Page, of New York City, for improvement in Book Safes. Patented Nov. 14, 1848.

To Francis S. Pease, of Buffalo, N. Y. for improvement in Harvesting Machines. Patented Nov. 14, 1848.

To A. & H. Johnson, of New York City, for improvement in Filter Stop Cocks. Patented Nov. 14, 1848.

## INVENTOR'S CLAIMS.

### Artificial Flowers.

To Caroline C. Nichols, of Providence, R. I., for improvement in the manufacture of artificial flowers. Patented Oct. 17, 1848. What I claim as my invention is the afore described improved manner of manufacturing an artificial flower or the corolla thereof, viz: the making the same of helix of floss silk, combined together and with circular bases or pieces, of cloth or pasteboard, substantially as above described.

### Window Curtains.

George H. Marden, Charlestown, Mass., for improvement in window curtain suspension. Patented Oct. 17, 1848. What I claim as my invention and desire to secure by letters patent, is the metallic oscillating blocks A B, A B, in the accompanying drawings, not confining myself to any particular shape of the said blocks, but for the purpose as set forth in the specification.

### Moulding Glass.

New England Glass Co., Ass'c. of Jos. Magoun, Cambridge, Mass., for improvement in moulding glass. Patented Oct. 24th, 1848. What he claims is one or more lateral, movable or retractive parts or pistons as combined with the remainder of the matrix, or stationary part of the mould and made to operate therewith as specified.

### Ship's Light.

Enoch Hidden, New York City, for improved ship's light. Patented Oct. 24th, 1848. What he claims is securing caoutchouc by baking and compression in the creased groove of the casing to form an elastic seat for the glass frame to be shut down and compressed upon to make a water tight joint.