

## NEW INVENTIONS.

## Machine for Sweeping Streets.]

Joseph Sawyer, of the city of Boston, Mass., has taken measures to secure a patent for an improved machine for sweeping streets. Three brush wheels are attached to a carriage—two being placed at the front and one at the back part. The front brush wheels are placed horizontally under the carriage, one at each side, and as they rotate, they sweep the dirt into the centre underneath the machine, and at intervals they are made to rise and step, as it were, over the heap of dirt gathered to the centre. The brush wheel on the back of the machine is vertical, and is placed on a line to the central heaps of dirt, and sweeps them up as the machine moves along up a short inclined chute into a proper receptacle. The work of sweeping the dirt into heaps, and up into the receptacle, is carried on until there is a full load in the receptacle. It would be a good thing for this city if some more effectual means for keeping the streets clean was introduced—New York streets are exceedingly dirty, and yet no city in the world pays more for keeping them clean.

## Car and Portable Railroad.

J. F. Jones, of Louisburg, N. C., has taken measures to secure a patent for an improvement in car and portable railroads, the nature of which consists in the peculiar construction of the car, the body of which is suspended or hung upon pivots, so that it is allowed to swing, and thus keep the centre of gravity of the load over the track, which may be made of a very narrow gauge. The pivots by which the body of the car is suspended rest upon a frame, which is supported by small gudgeons at the ends of the axles, said gudgeons passing through eyes, or loops attached to the frame. By this arrangement much friction is avoided. The coupling is so constructed as to allow the body to hang as low as possible, and this allows it to be easily loaded. The rails are formed of detached pieces, connected by pins, which are attached to the sleepers, and so constructed that the detached pieces can be laid either straight or curved.

## Piston Packing.

P. Merriam and A. B. Darling, of North Adams, Mass., have taken measures to secure a patent for packing piston heads, stuffing boxes, &c. India rubber or other elastic material is placed between the body of the piston head, and metallic rings. A self-adjusting piston of equal radial pressure is thus produced. By reversing the position of the india rubber, a perfectly tight stuffing box is obtained. The india rubber being used as an intermediate, by properly adjusting it an equal radial pressure will be created, and may be used for pistons, bellows, blowing cylinders, and pumps.

## New Bun Cutting Machine.

Simon Ingersoll, of New York city, has taken measures to secure a patent for improvement in machinery for cutting bungs and plugs. The revolving cutter is operated in such a manner that it is fed in slowly by a cam while cutting, but withdraws it very rapidly when it has done its work. The feed motion which moves the slab or plank out of which the bung is to be cut, operates the plank at intervals, between the motions of the cutter spindle, to the proper distance, for every plug to be cut.

## Portable Mills.

J. R. Howell, of Boston, and D. D. Lambert, of New Haven, Conn., have taken measures to secure a patent for an improvement in portable mills, which consists in the employment of an oil fountain bush, so arranged as to hold and retain a constant supply of oil around the collar of the spindle and boxes, the boxes being entirely submerged in the oil. The upper stone is hung upon the spindle in such a manner that the ordinary bail is dispensed with, and a perfect universal joint obtained. The runner stone is so attached to the spindle as to move up and down with it.

## New Corn Planter.

Job Brown, of Peoria County, Ill., has taken measures to secure a patent for a new planter, which has new and peculiar shares,

each being bevelled at the back, and having a groove in it. The hoppers are placed above the recesses, and the seed drops down into them, and then falls into the furrows made by the shares. The seed is distributed from the hoppers, by slides, in the common manner.

## A New Styptic.

A physician of Rome has recently succeeded in discovering a liquid possessing so extraordinary a power of coagulating blood, that if to a large basin containing this fluid, one drop of the styptic be added, complete solidification ensues, so that the basin may be inverted without causing any blood to be lost.

The following is its preparation:—Take eight ounces of gum benzoin, one pound of alum, and ten pints of water. Boil all together, for the space of eight hours, in an earthenware glazed vessel, frequently stirring the mass, and adding water sufficient to make up the original quantity of that lost by the ebullition, taking care, however, to add the water so gradually that boiling may not be suspended. The liquid portion of the compound is now to be strained off, and preserved in well-corked bottles.—[Albany Register.

[The alum, itself, we apprehend, is the sole styptic; it is now used for this purpose by our dentists.

## SWITZER'S SCREWDRIVER.—Figure 1.

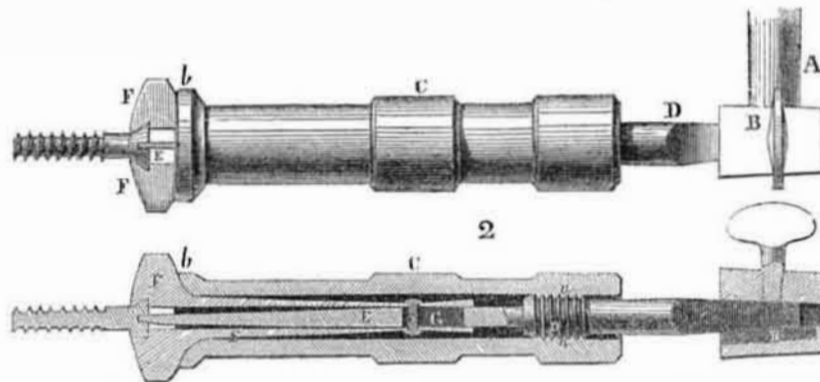


Figure 1 is an outside view, and figure 2 is a longitudinal section of the Jaw Screw Driver, invented by Jacob W. Switzer, of Basil, Fairfield Co., Ohio, who has taken measures to secure a patent therefor. This screw driver is operated like the stock-brace, only it has spring jaws for holding the head of the screw-nail, while the driver is inserted into the groove or notch in the head of the nail. The handle of the stock is broken off.

A is part of the handle, and B is the stock; they are made in the usual manner; D is the shank of the driver, E. F F are spring jaws for embracing the head of the screw-nail. C is a barrel or tube surrounding the shank of the driver, and legs of the spring jaws, F F. The spring jaws are fastened to the shank of the driver by a pin, G, which passes through a slot, G, in said shank; this slot allows the driver to be thrust further out beyond the face of the jaws, or to be drawn within them. This operation is performed by having a right-handed thread cut on the shank, D, and a left-handed thread, a, cut on the inside of the barrel, C, as shown in fig. 2.

To drive in a screw-nail, the jaws are made to embrace the head of the nail, and are compressed on to them by turning the barrel, C, to the right, the driver then being, as represented, inserted into the crease of the nail

head. By turning the stock, the barrel, C, and driver, revolving to the right, the screw is driven in rapidly and with great ease; no hole is required to be made with a gimlet, previous to driving in the screw.

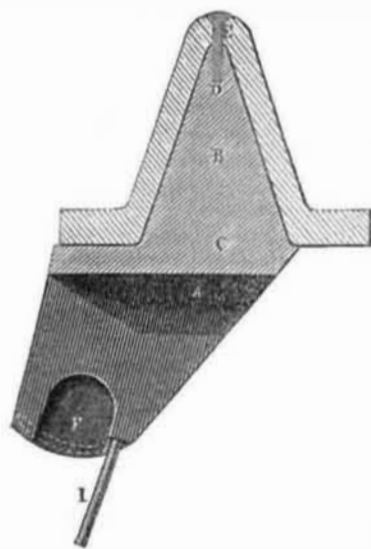
To release the jaws from the head of the screw, all that is necessary to be done is simply to grasp the barrel, C, firmly with the left hand and keep turning in the same direction. The slot, G, allows the driver to be forced beyond the jaws, when the barrel is grasped, and this relieves them.

To draw a screw from a counter-sink, the driver, E, is worked to project beyond the jaws (which is done by holding on to the barrel with the left hand and turning with the right), and then it is inserted into the crease of the head of the screw, and the stock is turned to the left, the barrel turning round with the driver. After the head is drawn out a short distance, the barrel, C, is held firm with the left hand, and the jaws are then left free, and allowed to grasp the head of the nail; when this is done, the barrel, C, is turned round with the left hand, to bring it down firm on the jaws, after which the driver, jaws, and barrel are turned to the left, and the screw is drawn out rapidly.

More information may be obtained by letter addressed to the inventor.

## Hanley's Castors for the Legs of Pianofortes, Tables, &amp;c.

FIG. 1

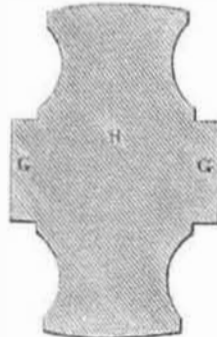


The annexed figures represent an improvement in Castors, invented by J. Hanley, No. 10 North William street, New York City.

Figure 1 represents a section of the frame of the castor, with a section of the cap upon it. Fig. 2 is a section of the wheel or roller, showing it and the journals cast in one piece. The same letters refer to like parts. The frame, A, of the castor and its axis, B, is made in one piece. The axis, B, is of a conical

shape and has a broad base, C; the apex terminates with a pin, D, which is of wrought-iron and inserted in the mould of the casting, and is thus moulded along with the axis. The end of this pin passes through the centre of the cap at E, and is rivetted on the outside so as to hold the frame and the cap together, but allows the frame to revolve in the cap. The frame, A, is made with two channels, F (one only shown) cast in it, to answer for bearings

FIG. 2



of G G, to the wheel or roller, H, to work. The wheel or roller is secured in its place by the pins, I I, of wrought-iron, which are moulded in the casting; these pins are bent over the journals of the wheel, as shown by the dotted lines, and it is thus secured in its place. The wheel or roller, H, is cast with journals in one piece. The common castors have a conical upper axis, but a straight one is shown here, secured in the cap by a transverse pin; the

axes or journals of the common castor roller are a separate spindle, not cast along with the wheel. The evident improvements of this castor for furniture will be plain to every cabinet or furniture maker.

Measures have been taken to secure a patent. More information may be obtained by letter addressed to Mr. Hanley.

## Printing Types.

We have a deep respect for the memory of John Guttenberg, the inventor of movable types. It was not the printing press which gave the grand impetus to modern civilization and developed the age of discovery. No, it was the movable type of the clear-headed German of Mentz. The press employed for a long time to take impressions, after the invention of movable type, (printing blocks were known and used before that), was a screw-press, but no sooner was the improvement made in the type, than a reformation in every department of knowledge commenced. All hail then, we say, to the memory of Guttenberg.

If old German John was now to arise from his grave and see the improvements which have been made in the manufacture of type since his day, he would be as greatly surprised, if not more so, than at the improvement which he himself discovered, as being superior to that of the old pen-made books. Of this we are fully convinced by examining a specimen book of printing type manufactured by H. H. Green, type founder, our next door neighbor, (128 Fulton street, New York). This work contains the most beautiful samples of different kinds of type that we have ever seen, the manufacturer of such type may well feel proud of what he has to offer to the public as specimens for all kinds of printing—plain and ornamental.

## City Railroads.

The railroads which have been constructed in New York City, have not, as yet relieved the principal street—Broadway. It is almost impossible for pedestrians to cross Broadway below the Park during any time of the day between 7 A. M. and 8 P. M. Females are in danger of losing their lives while crossing; they have to run for life or death. It has been calculated that 500 omnibuses pass a single point in Broadway every hour, or more than 8 every minute. It is easy to see from this that it is almost impossible for persons to cross from one side of the street to the other. To relieve the street, it is proposed to build a railroad with a triple track, each 4 feet wide, and to employ 120 cars, so as to dispatch one every minute each way, or 60 an hour; and it is said that these cars will carry more passengers than all the omnibuses. It is proposed to lay down a grooved rail that will not interfere with carts and carriages. A single horse has drawn thirty tons at the rate of 6 3/4 miles per hour on the Ohio and Baltimore railroad, and it is contended that the great amount of load which a horse can draw on railroad, in comparison with what it can do over our paved streets, should at once supersede every reasonable person to give his vote to the railroad for passengers, in preference to the omnibus.

On the other hand, the owners of property assert that a railroad will increase the character of the street for business, and destroy it as a public thoroughfare for promenade and pleasure. Science, progress, and reason, appear to be on the side of those who advocate the railroad, but the only arguments which can safely be applied, are those of facts. If a railroad is more dangerous, does not look well to the eye (this is for the taste of the promenaders), and is more inconvenient for private carriages, so as to prevent them passing through Broadway for business or pleasure; in short, if the advantages of the railroad are less than the present omnibus system, it would be folly to build one; here lies the gist of the whole question. Every person can see that some reform is required to remove the obstruction to the free crossing of the street; what shall that reform be? is the question; the only rational one proposed is the railroad.

By the latest news from Europe we learn that the American ship Mobile was wrecked on the coast of Ireland, and all but three of those on board perished.