

## New Inventions.

## Improved Stone Drill.

W. C. Wright, of Boston, Mass., has applied for a patent on a machine for drilling rocks, which consists in an arrangement by means of which two sets of grippers are made to operate alternately, the one set gripping and carrying the drill upward, while the other is sliding downward upon the drill bar, preparatory to the succeeding movement. This arrangement allows the drill to strike two blows during every revolution of the driving shaft, and saves the time lost in raising the bar when only one set of grippers is employed. It also consists in certain means of giving to each pair of the grippers a movement upon the axis of the bar, whereby the latter is turned the desired distance between its successive strokes.

## Shower Bath.

Daniel P. Baldwin, of San Francisco, Cal., has invented an improvement in the manner of constructing shower baths, which consists in employing two revolving trumpet-shaped shower baths connected together by a collar, in combination with a passage in the horizontal end of the main supply pipe; one serving, when fixed in the proper position, to throw the water upward, so that it shall descend in the form of spray, while the other may be so placed as to direct the stream of water against any portion of the body. The cock connected with the bath is so constructed that by its action either warm or cold water, or both, may be supplied to the sprinklers. He has taken measures to obtain a patent on his invention.

## Potato Planter.

Alex. Anderson, of Markham, C. W., has invented an improved potato planter. His machine has an endless apron at the bottom of a hopper, which is provided with a series of apertures, which receive the potatoes and carry them to the discharge spout, through which they fall into the furrow at equal distances apart—these apertures also conveying those potatoes which are too large for seed, to a knife at the bottom of the hopper, by which they are cut into pieces of suitable size. The inventor has applied for a patent.

## Machine for Copping Sash Stuff.

J. F. Finger, of Marion, S. C., has invented a machine for cutting the curved portions at the ends of sash stuff, technically called "copping." The novelty of the invention consists in cutting sash stuff by means of a chisel or cutter secured to a vertical arbor having a reciprocating motion. The sash stuff is properly adjusted or placed upon the upper surface of a box, by means of a guide and adjustable strap. The inventor has applied for a patent.

## Improved Harrow.

W. B. & G. M. Ramsay, of South Strabane, Pa., has taken measures to secure a patent upon an improved harrow, the nature of which consists in constructing a harrow of three separate parts or squares, and so arranging them that one of their diagonal lines will run parallel to the line of travel, and the other transversely thereto, so that greater breadth of sweep is secured than with a harrow composed and jointed, as is common in these implements. One of these harrows is on exhibition at the Crystal Palace, and has attracted considerable attention. G. M. Ramsay, the assignee, is at present residing in this city.

## Self-Acting Carrier for Lathes.

J. Zook, of Harrisburg, Pa., has invented a self-acting carrier or dog for lathes. It is arranged, he says, with levers and cams, which are operated by the motion of the lathe. By starting the lathe in one direction, the carrier is made to operate; by reversing the motion of the lathe, it (the carrier) disengages itself. It is held in position by springs, and has an appearance similar to a universal chuck.

## Improved Mode of Straining Saws.

James Fishwick, of Lexington, Ky., has invented an improved method of straining and driving reciprocating saws, which consists in

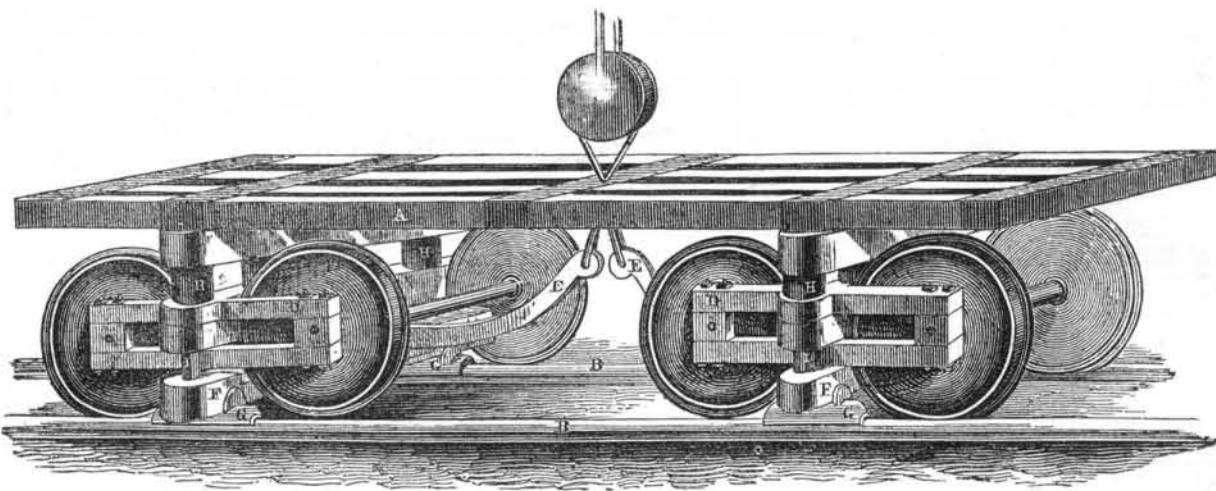
attaching the upper and lower ends of the saw to jointed arms, which are secured by pivots to arms projecting from parallel rock shafts. The saw is strained by forcing apart the ends of the arms attached to the parallel rock shaft by means of a screw rod connected to levers at the ends of the parallel rock shafts. The inventor has applied for a patent.

## Dust Concentrator for Rail Cars.

Daniel S. Darling, of Brooklyn, N. Y., has invented an improvement in deflectors or concentrators for purifying the air for rail cars, on which he has applied for a patent. The invention consists in arranging a series of deflectors along the sides of the locomotive and the entire train, in such a manner that a series of funnel-

shaped chambers will be formed, which will run into each other and form a continuous channel for the dust and air, while the funnel-shaped mouth at the front of the locomotive, by creating a strong draught of air through this passage, draws into it the dust from the wheels, and prevents it from rising. The deflectors are reversible.

## STRAIT'S RAILROAD ANCHOR.



The engraving annexed is an illustration of a Safety Truck, invented by H. Strait, of Covington, Ky., and termed by him a "Railroad Anchor." Its objects are numerous,—it is claimed by the inventor that it will serve as a Brake in place of the ordinary Wheel-Brake; as a support when a wheel or axle is broken; as a Track-Keeper when obstructions are on the track or in case of collisions: as a protector of wheels and axles, by relieving them of their weight in all emergencies, and as a preventive of collisions by serving as a more effectual brake.

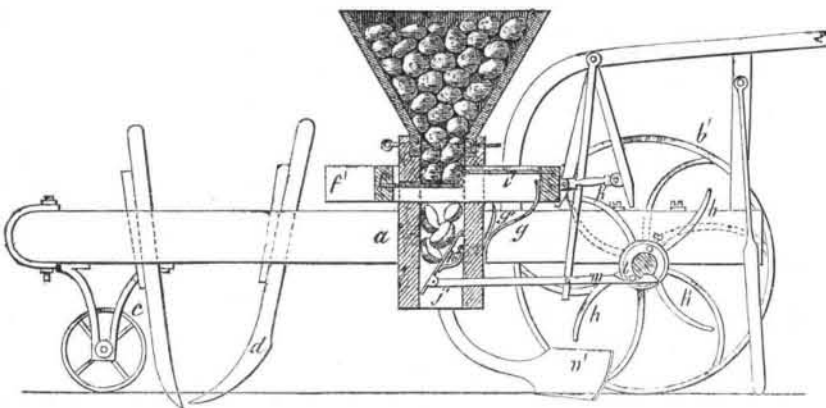
A is the platform of the car, secured to the cross ties by a turn bolt in their center; H H are the india rubber springs between the upper

and middle cross ties; D D are the axle ties, connecting together the boxes in which the axles run. G G are the friction rubbers or brakes, which are pressed against the rails by the lower cross ties, F F, which, in turn, are thrust downward by means of the levers, E E. These levers are three-pronged at their lower ends, the two outside prongs being attached to the lower and the middle one to the middle cross tie, which being suspended a little back of the others, serves as a fulcrum for the downward thrust, and by elevating the inner wheels the brakes, G G, are pressed firmly against the rails, B B. I I are bolts passing through the ends of the cross ties and the centers of the india rubber springs.

The levers work in corresponding bevels formed in the middle and lower cross ties, and may be operated either above or below the axles. The friction rubbers or anchors are attached firmly to the lower cross ties, which act with them. To retain the lever always in its place, the turn-bolt passes through an eye in the middle prong. The friction rubbers are double-flanged, to prevent the train from being thrown off the track, as when the train is in motion they glide along the rail at but a small distance from it. C is the pulley, by means of which the levers that depress the brakes upon the rails, are actuated.

For any further information address the inventor as above.

## HUTCHINSON'S POTATO PLANTER.



This engraving is a longitudinal vertical section of a machine for cutting, dropping, and covering seed potatoes, patented by Samuel Hutchinson, of Rockport, Ind.

a is a frame supported on three wheels, two being behind and one, c, in front; d is a share for making the furrow to receive the potatoes; e is a box or hopper, the upper part of which is filled with potatoes, this is traversed by sliding floors, f, f', which, being held to their rear-most position by springs, retain the potatoes until such time as the wipers, h, h', on the axle of the hinder wheels, by pressing the floors forward, cause the knives, i, i' (one only is seen) to slice the lowermost stratum of potatoes, which being accomplished, the sliced portions drop through the spout, j, j', and the floors return to their original position. The sliced portions are received by a trap door, k, which being suddenly drawn downward by a pin, l, acting on a notched rod, m, attached to the door, drops a charge of potatoes into the furrow. Two blades, n, n' (one only is seen) scrape the earth back over the potatoes, and effectually cover them.

There are two sliding floors or platforms and corresponding wipers and cutting blades.—One set of the wipers is adjustable on the wheel shaft, so that they can be arranged to act in concert or alternately, thus planting the pota-

atoes in distinct hills, or in a continuous row; in the latter case the trap-door is held permanently back by a catch, so as to present no interposition to the constant dropping of the potatoes. A ratchet and pawl, preventing a backward movement of the driving wheel, remove any liability to disarrangement of the action, so that by starting at the right spot, the hills are properly distanced across the entire field.

The inventor claims that by means of this machine, a man and horse can plant five acres a day.

For any further information address the inventor as above.

## Improvement in Steam Boilers.

Henry S. Williams, of Malta, Ohio, has invented certain improvements in steam boilers, for the purpose of more perfectly controlling the pressure of the steam, and he has applied for a patent. The invention consists in admitting water in small jets into the boiler by means of a plunger and slotted arm, or their equivalents, when operated by the pressure of the escape steam of the safety valve, and in closing the cock through which the water is admitted as soon as the safety valve closes, by means of a spring. The pump is also started at the same time, if not already in operation, by admitting the steam from the safety valve into a pipe leading to the steam-chest of

the pump, through a branch pipe of that carrying the plunger, which is provided with a valve, to prevent the steam from the chamber from passing into the boiler, when the pump is running.

## Great Fire—Harper's Establishment in Ruins.

On Saturday the 10th inst., the large establishment of Harper & Brothers, this city, consisting of nine buildings burned down, together with seven other buildings in the vicinity. The total loss has been estimated at \$1,600,000. By this fire no less than 2,000 persons have been thrown out of employment. The Harper's loss is \$1,400,000, on which there was only \$220,000 covered by insurance. The most of their stereotype plates, however, were saved, they being packed in vaults under the street. It was reported at first that a number of persons had perished in the flames, but this happily turned out to be untrue. The fire, however, was communicated from room to room, and from story to story, with such amazing rapidity, that many of the male and nearly all the female operatives had to be rescued by ladders. It is stated to be the largest fire which has occurred since the memorable conflagration in 1845. While the public sympathize with the losers by this calamity, we hope they will not forget the condition of those 2,000 male and female laborers who have so suddenly been fung out of employment, and thus deprived temporarily of any means of support. Let us do something for them.

## Locomotive Shops.

In addition to the locomotive engineering establishments in the Western States already noticed in our columns, there is one in Nashville, Tenn., called the "Nashville Manufacturing Co.," which was established about a year ago, and has turned out some seven or eight engines, which are all doing good service on the Nashville and Chattanooga Railroad. This establishment employs about 200 persons on locomotives, stationary engines, and other work. Seven new locomotives are in the course of construction, and the company has the reputation of doing excellent work.