

## New Inventions.

## Improved Car Register.

G. M. Ramsey, of New York City, has invented an improvement in city rail car and omnibus registers for showing the number of passengers which have rode in them during the day. The nature of the invention consists in providing public vehicles with a hollow closed spring step, which has a vertical slide for conveying shot attached to its top in combination with an inner chamber, which is provided with an inclined shot hopper, through which the slide works, the said slide being so constructed that it receives but one shot from the hopper at a time, and conveys it into the inner chamber the moment the weight of the passenger comes upon the step, and then springs back into its place as soon as the weight of the passenger is withdrawn. Double the number of passengers will be indicated if they pass out and in at the same door. The inner shot box is locked, and the key held by the proprietor. The inventor has applied for a patent.

## Extension Carriage Top.

G. W. Bachman of Clifton Springs, N. Y. has invented and applied for a patent upon an improved carriage top, by means of which the tops of carriages can be extended farther over the front of the carriage, and thus afford more perfect protection against the weather than those in ordinary use. This is effected by means of an additional bow in front of those commonly used, with a joint near its lower ends, by means of which it can be folded back when persons are getting in, and in pleasant weather, but can be thrown forward in a storm, so as completely to inclose the top and sides of the carriage. This may be done, or the whole top folded back, without reaching the arms outside, as the joints and braces are arranged differently from those in common use. We like it better than any other folding carriage top we have seen.

## Lever Press.

Elias Davis, of Montpelier, Vt., has applied for a patent on an improved self-acting press, the novelty of which consists in so arranging a series of horizontal and vertical knuckle joint levers below the screw and bed plate, in combination with the peculiar manner of constructing and operating the press that a progressive upward pressure will be exerted upon the article being pressed by its own gravity, and the gravity of the movable portion of the press, and also in combining said levers with the screw in such a manner that when a very elastic substance is being pressed, and the main levers have exerted their full power upon it, a further pressure may be communicated to it by elevating the bed plate.

## Wiring Blind Rods.

Benjamin B. Hill, of Bridgeport, Conn., has invented an ingenious machine for wiring the rods used in making Venetian blinds. The invention consists in the combination of a forming die and punch, so arranged as to form the wire staples and force them into the blind rod, and in the employment of a cutter die arranged so as to cut the wire of which the staples are formed into blanks of the required lengths. The blanks are flattened, so as to enter the wood easily by the operation of the same tool which cuts them. We have seen this machine in operation, and can speak highly of it. It is strongly constructed, and we should not think it liable to get out of order.

## Spark Arrester.

Joseph A. Arnold, of Richmond, Va., has invented an improvement in the French & Beard spark arresters, which consists in arranging a series of curved vanes on and around the under surface of a trumpet-shaped deflector, instead of placing them on a vertical stem of the deflector, whereby a longer draft or steam pipe can be employed, and thus a more perfect draft secured. The sparks are also revolved at the moment of deflection, and are thus more readily forced through the perforated chamber. The inventor has applied for a patent.

## Taper Auger for Boring Hubs.

Billings Landphere, of Unadilla Forks, N. Y., has invented an improved implement for boring hubs, the improvement in which consists in a peculiar manner of securing the screw-rod, to which the cutter is attached in the proper position in the hub. This is effected by means of rings or collars, one of which is secured by

set screws to the front, and the other to the back end of the hub. The front collar is provided with a movable nut, through which the screw-rod works, and the back collar has a circular plate, which turns in it, said plate having an oblong slot for the rod to slide in, and in which it can be secured at any desired position. The cutter is also of peculiar construction.

## Potato Prize.

The Society of Industry in France has offered a prize of 1000 francs for the best treatise on the potato; the "New York Tribune" says that the best way to improve the potato is to let the 500,000 soldiers and government sailors who do nothing but waste money, time and powder, go to digging the soil.

## SELF-WAITING DINING TABLE.

Figure 1.

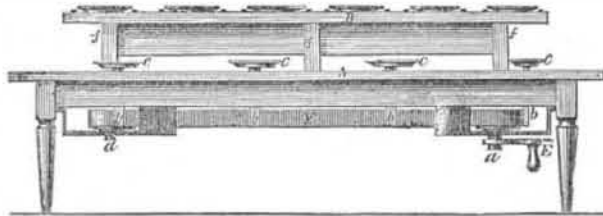
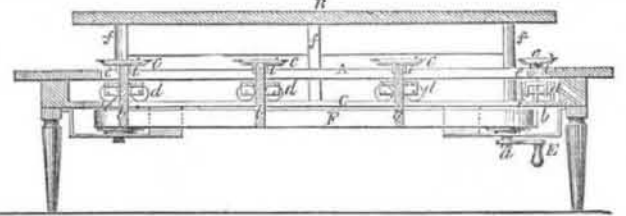


Figure 2.



L. Pusey, of Patterson, Pa., has invented and patented a self-waiting Dining Table, the novelty of which consists in constructing it with an endless band, F, situated beneath the table, and kept in constant motion during meals by any power applied at the crank, E, to which band is firmly attached, at convenient distances, the guiding carriers, b b, which pass through and are supported by small railway tracks, d d, moving in guiding apertures, e e, in the top of the table. Upon the tops of these carriers are placed waiters, c c, which are constantly passing around the table. An additional shelf, B, is

placed over the center of the table by the standards, f f, for holding such dishes as do not require to be constantly passed about.

This table is intended principally for hotels and boarding houses. It is in form like an ordinary table, in the top of which, A, at a proper distance from each side, is cut a narrow aperture of uniform width, extending nearly from end to end, and semicircularly around the ends of the table. The band, F plays around upright shafts, a a, and as before stated, keeps the waiters in motion.

Fig. 2 is a sectional view of the table, ex-

hibiting these different arrangements. The same letters refer to like parts as in figure 1.

The inventor also proposes to pass pipes around the edge of the table, for supplying the guests with coffee, water, &c., these may, if desirable, be kept hot by any available means. We should think this quite convenient, especially in those hotels where a man is under the necessity of helping himself, or going unserved, as is too often the case with the hungry traveler.

For further information address the inventor, Juniata Co., Pa.

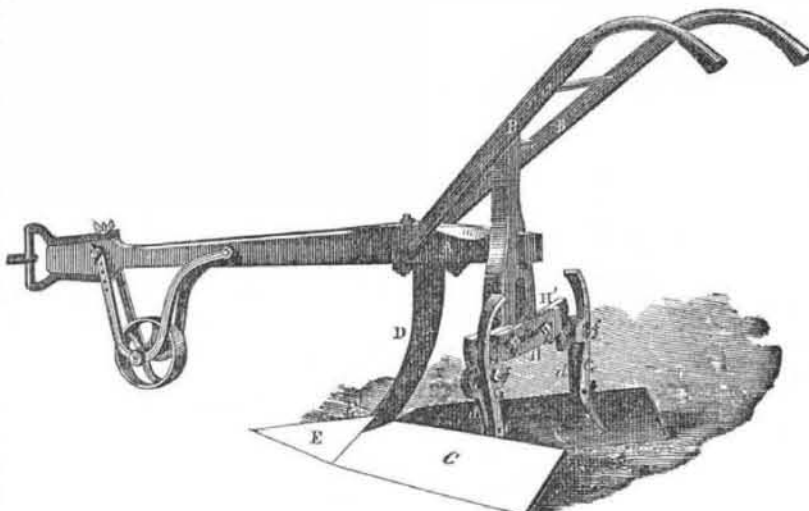
## IMPROVED CULTIVATOR PLOW.

The annexed engraving is a perspective view of an improved Cultivator, invented by L. M. Whitman, of Weedsport, N. Y., which was patented Oct. 11, of the present year.

The nature of the invention consists in a novel mode of setting the inclined blades and in constructing the share and the lower part of the main standard, together with the front end of the adjustable blades, in such a manner that they can all be held together, and in their places by one bolt, and the said bolt, at the same

time be made to serve as a center for the blades to turn upon, as they are adjusted by the standards attached to their hind ends.

A represents the beam; B B the handles; C C the adjustable blades or mould-boards, which may be set very steep to throw the soil up against the hills, or less steep to allow it to pass over them and fall in the open space at the center. The front ends of these blades lap over each other, and are so shaped that they lay snugly on the lower part of the standard, D, and



the front ends of the inclined blades being united by a bolt at E', which passes through them and the share, E. On this bolt the blades are allowed to swing freely.

To the back ends of these blades are firmly attached levers, G G; by which the blades are adjusted. These levers carry the fulcrum pins, c c, which connect them with the vertical standards, d d, of the notched adjustable cross-bars, H H', which serve to move the blades further

apart or nearer together. Through the vertical standards, d d, are cut circular slots, e e, in which the set screws, f f, work freely to alter the inclination of the blades. Notches are cut in the back of the standards, which are held by the set screws firmly against a cog on the front of each lever. This plow we should think worthy the attention of farmers and manufacturers.

For further information address S. G. Wise, assignee, Weedsport, Cayuga Co., N. Y.

## Improved Furnace.

Daniel Willis, of New York City, has applied for a patent on an improved heating apparatus for cooking purposes or warming rooms, which consists in making the fire chambers in sections and providing each section with a broad horizontal flange which serves for keeping them in place, and as supports for them and also for radiating surfaces. There are also several minor improvements.

## Draw Head and Buffer.

David A. Hopkins, of Elmira, N. Y., has applied for a patent upon an improved draw head and buffer, which is so constructed as effectually to resist any percussive force, and at the same time present a yielding resistance to an

opposing car, thus preventing the shocks so common at the starting and stopping of trains. The block is of peculiar form for holding the link in either a horizontal or inclined position.

## Coal in Abundance.

Here is a paragraph from the Fairmount Virginian. "It would astonish people who pay twenty cents a bushel for coal, to see that article dug out of our streets in grading them. Such was the case last week. In grading the street leading to the bridge, Mr. Martin, the contractor, struck a vein, from which he allowed persons to dig and haul away what they wanted, at the rate of 1½ cents per bushel." Wish they would do so here.

## Shaving by Machinery---Queer Invention.

William Johnson, of North Shields, joiner, has invented a shaving-machine. This machine is of singular construction, and contains every qualification necessary for the process.—In appearance it is not unlike an old-fashioned arm-chair. But the most unique feature in the whole affair is the arrangement of the razor blades, which are fixed longitudinally on cylinders, from three to six inches in length, four on each cylinder, at an angle of sixty degrees, with fine camel-hair brushes between; for you are lathered and shaved at one and the same time, the lather being slipped from the interior of the cylinders, which are hollow. The machine is put in motion by the weight of the patient, the seat gradually giving way beneath, and sinking with him until he reaches the ground, when the operation is completed. The seat, rising as soon as it is released from his weight, is ready to commence again without any preparation. A musical box, of Mr. Johnson's construction, and capable of performing a great variety of airs, is appended to the machine, and can be attached or detached according to the pleasure of the person undergoing the operation, so that you may be shaved to any tune you please! Experiments, (says the "Gateshead Observer,") have been tried and found satisfactory.

[This invention will certainly remove the objection made by those who wear long beards, as it relates to shaving and time. All that the long beards have to do is to sit down and off goes the hair like a wool picker. This machine comes of the Yankees visiting England in 1851; the hint was no doubt derived from a flock cutter, and Miniss' self-walking and running chair.

## Safety Ropes for Buildings on Fire.

A correspondent recommends the shooting of a rope by bow and arrow over buildings on fire, for the purpose of drawing up ladders, or for drawing up another rope with an eye on it, to take off persons, who may ascend to the roof, or who may in high buildings be cut off from coming down by fire below, when no ladder can reach them. The fire safes which are used in London are effectual remedies for such cases. They can be erected from the street in a few seconds, to reach the tops of the loftiest buildings, and we wonder our fire companies have never adopted them here.

## Imponderable Agents.

The articles which have appeared in this volume of the "Scientific American" on the above subjects, contributed by C. W. S., will be carefully reviewed by us in future numbers, commencing two weeks from the present date.