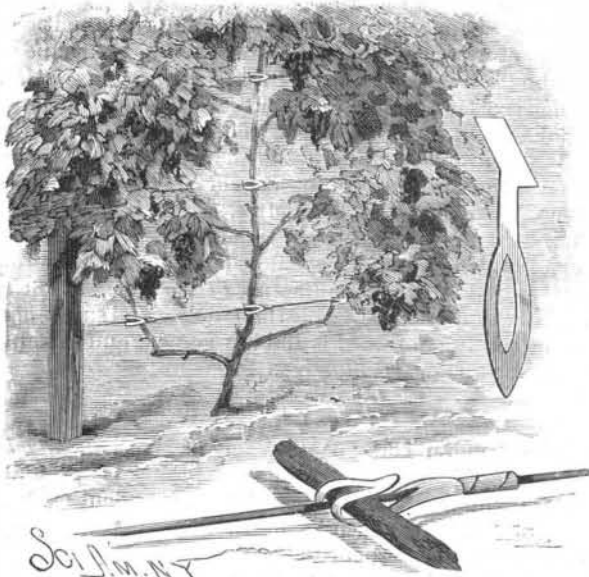


**A SPRING HOLDER FOR SECURING VINES.**

An extremely simple and easily applied device for holding vines in position is shown in the accompanying illustration, and has been patented by Mr. John Stangl, of Harlem, Clay County, Mo. It is cut or stamped from sheet metal, making a flat blank having

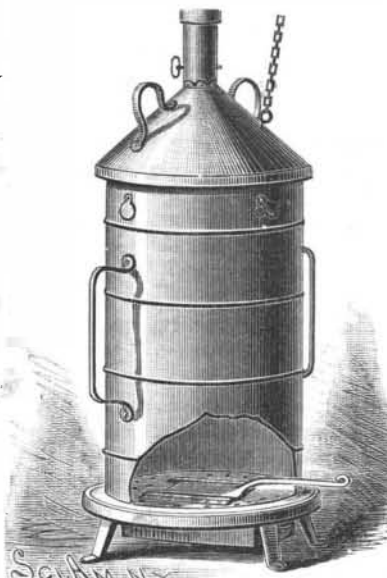


STANGL'S VINE SECURING DEVICE.

more or less spring, one end being elongated and with a longitudinal slot or opening, and the other end shaped to form flat angular lips. To apply this blank to a wire used to support the vine, it is bent to a clip or hook shape at its slotted end, and the lips are twisted or bent around the wire to form a closely fitting tube, the vine being introduced between the wire and the tongue of the hook, which thus makes a yielding holder. By the use of these holders a great deal of labor is saved as compared with the ordinary method of tying the vines by strings, while the device is more durable, and the holder being wide and flat, it cannot cut the vine.

**AN IMPROVED STRAW BURNING STOVE.**

An easily manageable, inexpensive, and efficient stove for burning straw is shown in the accompanying illustration, and has been patented by Mr. Alonzo E. Smith, of Frankfort, Dakota Ter.



SMITH'S STRAW BURNING STOVE.

The drum of the stove is of sheet metal, and has a bottom plate fixed to it by a flange overlocking an outbent flange on the body, the bottom plate resting loosely on a base plate supported by legs in the usual way, and carrying an ash receptacle. In the bottom plate is an opening, registering with a similar opening in the base plate, and controlled by a damper, the handle to operate which extends out at the front. The draught pipe extending from the cone top of the stove passes telescopically into a draught flue, the cone top having a couple of handles whereby it may be lifted from the stove body, the pipe sliding in the flue, and

the top itself supported, if desired, by a chain attached to an overhead support. The stove body may then be removed and recharged with fuel, and when returned to its place on the base, the fuel is lighted on the top, the cone top fixed in position, and the upper and lower draughts opened until the fire is well started, after which the dampers should be kept open only as desired to regulate combustion. The fire burns away from the side walls and leaves a core or cone of live embers, which may be made to last a long time and throw out a great heat.

**AN IMPROVED CAR STARTER.**

A car starting mechanism which may be readily controlled by the driver at either end of the car, to start the car either forward or backward, is shown in the accompanying illustration, and has been patented by Mr. Daniel Lynch, of Olmstedville, Essex County, N. Y.

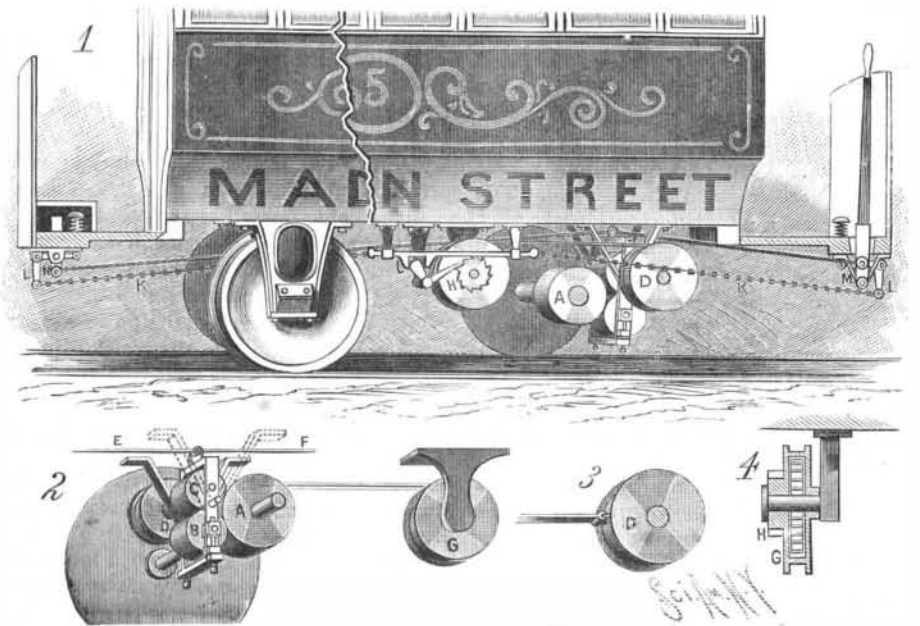
Fig. 1 is a perspective view, partly in section, Fig. 2 is a detail perspective view of principal parts of the mechanism, Fig. 3 shows the connection of the spring tension band with the barrel on one of the friction wheel shafts, and Fig. 4 is a vertical sectional elevation of the starter spring, with its barrel or case and attached ratchet wheel. To the axle of the wheels there is fixed a friction drum, A, against which friction wheels, B C, fitted in a frame, are adapted to act, this frame being so pivoted that either of the wheels may be brought into contact with the drum. On the shaft of the friction wheel, C, there is fixed a barrel, D, to which is connected one end of a band or belt, the other end being secured to the periphery of a case or barrel, G, within which is fitted a coiled spring, the case being journaled on a shaft fixed in a hanger pendent from the car body. One end of this spring is fixed to the shaft, and the other end to the case, to which also is fixed a ratchet wheel, H, with which a dog pivoted in a hanger fixed to the car body is adapted to engage to prevent the unwinding of the spring until the dog is tripped. The connection of the band with the barrel, D, is such as to allow the band to wind in either direction on the barrel. To the top of the pivoted friction wheel frame there are connected two rods, E F, extending to either end of the car, where they are connected with levers, M, whereby the contact of the friction wheels, B C, with the axle drum, A, is controlled. The dog pivoted to a hanger on the car body, and adapted to engage the ratchet wheel, H, on the spring barrel, G, is connected by chains, K, to elbow levers, L, at either end of the car, operated by foot plates attached to the platform.

In stopping the car, the driver pushes the vertical lever from him, thereby carrying the lower friction wheel against the friction drum, and also operating the barrel, D, which, through the belt or band, turns the spring case to store power therein, as the band is wound upon the barrel, D, and the ratchet wheel and dog prevent the recoil of the spring. The friction wheel also operating on the axle as a brake to stop the car. When the car is to be started, the driver, pressing upon the foot plate, operates one of the chains, K, tripping the dog from the ratchet wheel on the spring barrel, thus releasing the spring, and at the same time pulling the vertical lever toward him, brings the upper friction wheel in contact with the car axle drum, A, so that as the spring recoils, the band will be rewound on the spring case, G, and unwound from the barrel, D, and the direct pressure of the friction wheel on the axle drum will correspondingly contribute to turning the car axle and wheels and moving the car forward. If, in starting the car, it is desired to back it, the recoil of the spring may also be utilized for this purpose. When a car has only one driving platform, as is obvious, the rod, chain and lever connections need only extend to one end of the car.

**AN IMPROVED MACHINE FOR COLORING PAPER.**

The invention herewith illustrated provides a simple and effective machine for thoroughly coloring one side of a web or roll of paper, which has recently been patented by Mr. Gonzalo G. Ancira, of Guadalajara, Mexico. The machine has the usual revolving heated drying rollers, from the middle one of which the web is led up over a roller mounted in a bracket projecting from standards secured to the main frame, the standards carrying an attachment for coloring the web or paper on one side only. From this roller the web passes between the color cylinder and the pressure

roller, thence around another roller, and upward under a tension roller, two further rollers conducting it to the drying cylinder. When it is desirable to interrupt the coloring process, the operator presses the lever



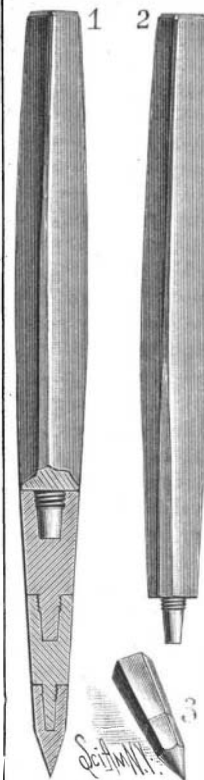
LYNCH'S CAR STARTER.

shown, whereby the pressure roller is swung upward and permits the web to rise out of contact with the color cylinder. The color supply from the fountain is regulated by means of a stop cock, and the tension roller has a free vertical motion in the slotted standards, whereby any slack is taken up that may occur between the rollers.

For further information relative to this invention address Mr. J. A. Medina, Nos. 104 and 106 John Street, New York City.

**AN IMPROVED NAIL SET.**

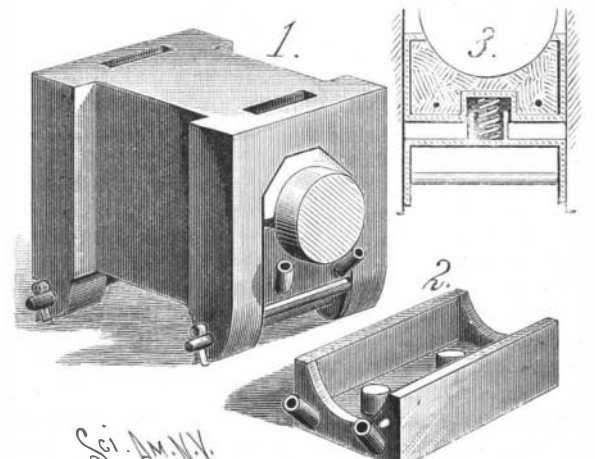
A sectionally constructed nail set, or nail set and punch combined, adapted to act upon variously sized nails, from spikes to brads, is shown in the accompanying illustration, and has been patented by Mr. Richard W. Trotter, of No. 449 Warren Street, Brooklyn, N. Y.



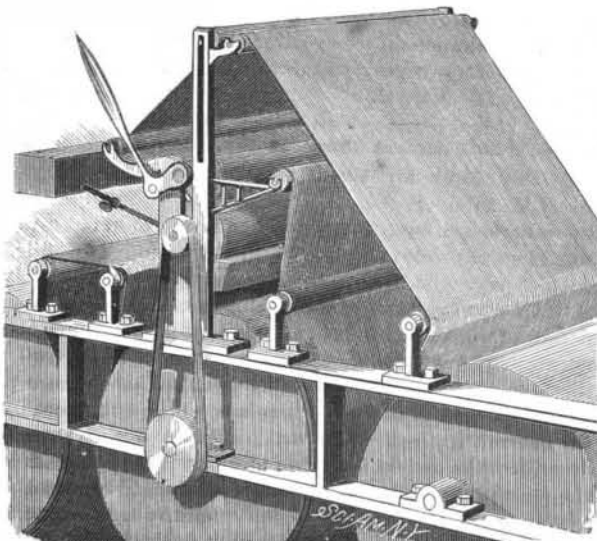
The upper or stock part of the tool is solid or entire, while its lower part is composed of any number of thimble-like extensions, each succeeding one transversely smaller than the other. With this construction one tool is made to take the place of several nail setting tools of different sizes. The lowermost section of all is made rounded, or conical and pointed, in the form of a punch tip, adapted to screw on to the lowermost shank, whereby the nail set may be used as a metal punch for making round holes.

**IMPROVED LOCOMOTIVE JOURNAL BOX LUBRICATOR.**

An improved lubricator for use in connection with journal bearings, and especially designed for use with locomotives, is shown in the accompanying illustration, and has been patented by Mr. Benjamin E. Dupont, of No. 117 Spring Street, Lexington, Ky. A case is made to closely fit the under side of the journal, the upper edges of the sides of the case having inwardly extending flanges to prevent the packing from being drawn out of the case, by the journal in its revolutions. Housings, in which are mounted spiral springs to hold the case against the journal, are fitted within the bot-



DUPONT'S LUBRICATOR.



ANCIRA'S PAPER COLORING MACHINE.