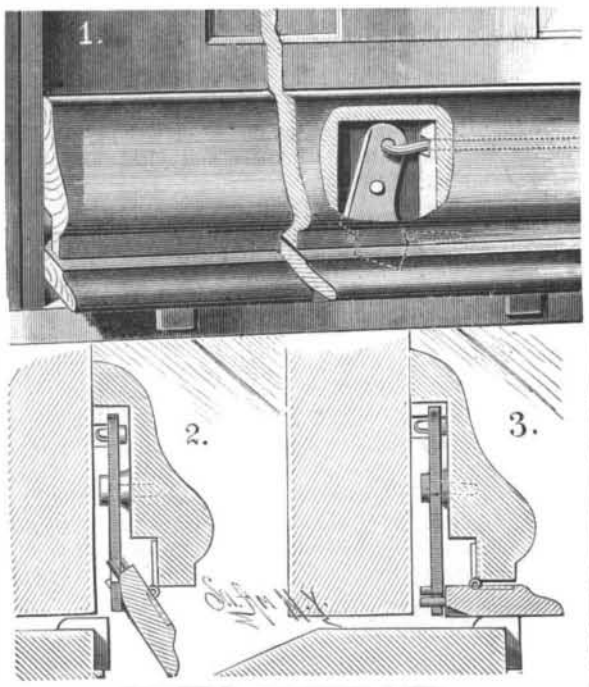
WEATHER STRIP.

Secured to the front of the door a short distance above the bottom edge is a moulding having a longitudinal groove in the bottom. A strip is hinged to the bottom of the front of the groove in such a manner that it can swing up and down. Pivoted in a recess in the back of the moulding is an upright latch lever, which has a corner notch forming a shoulder at the lower end of one side edge, and a rounded projection at lower end of the other side. A stud projecting from the back edge of the strip passes into the notch; and the free end of a spring held in the strip rests against the rounded



BENNETT'S WEATHER STRIP.

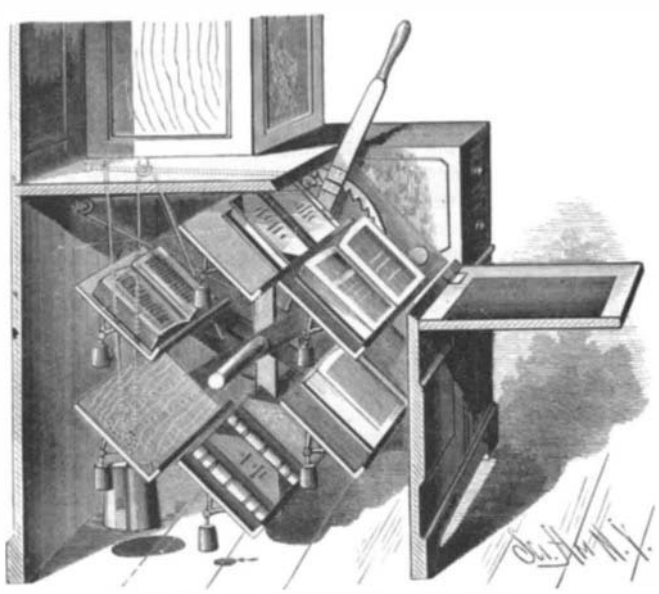
edge of the projection, thereby pressing the lower end of the lever against the stud. A rod extends from the upper end of the lever through a longitudinal groove in the back of the moulding, and projects from the inner side edge of the door, striking against a screw held in the casing. Secured to the top of the sill are angular clips or risers.

When the door is closed the strip hangs down in front of the sill, as shown in Fig. 2. If the door is opened, the under surface of the strip strikes against the risers, and it is swung upward when the stud passes into the notch and rests against the shoulder, as the spring presses the lever toward the stud (Fig. 3). If the door is closed, the end of the rod strikes against the screw, and is moved so as to force the lower part of the lever against the spring, whereby the stud is disengaged from the shoulder, and the strip drops. If the strip should not fall of its own weight, the lever pressing upon the spring would force it to drop.

This invention has been patented by Mr. W. D. Bennett, of Bedford, Iowa.

REVOLVING BOOK STAND.

The shelves of the revolving book support, on which the books are placed, are journaled between the arms of spiders rigidly secured upon a shaft journaled in bearings secured in the lower inclosure of the bookcase. The shelves are provided with flanges for holding the books in place, and are



BOWMAN'S REVOLVING BOOK STAND.

feathered by counterweights, attached to the backs, that hold the shelves always in the proper position, that is, always facing the reader, no matter what position they may occupy with respect to the shaft, whether above or below, or in front or rear of it, or whether it be turned forward or backward. The weights are so attached that they may be adjusted so that the inclination of the shelves can be changed as desired.

Upon the shaft is a pulley over which passes a strong cord, which thence passes over a pulley attached to the back of the inclosure, thence around a pulley on the operating lever, and thence to a staple driven into the back of the inclosure. The other end of the cord passes from the shaft pulley up over a pulley secured to the top of the inclosure, thence under a pulley attached to a heavy weight, and thence to a staple driven into the top of the inclosure. The lever is fulcrumed upon the shaft, and is so arranged with reference to its distance of movement and to the size of the main pulley that its extreme movement will cause the shaft to make a complete revolution, bringing all the shelves successively to the front. This movement of the lever elevates the weight, which will act to turn the shaft in the reverse direction. By holding the lever at intermediate points, any one of the shelves may be held in front of the reader. The lever is held in any position by a pawl engaging with a segmental rack.

The revolving book support is especially serviceable where several authors are to be consulted, and besides effecting a saving of time does not necessitate frequent handling of the books.

This invention has been patented by Mr. D. D. Bowman, of Eureka, Cal.

To Remove Foreign Bodies from the Eye.

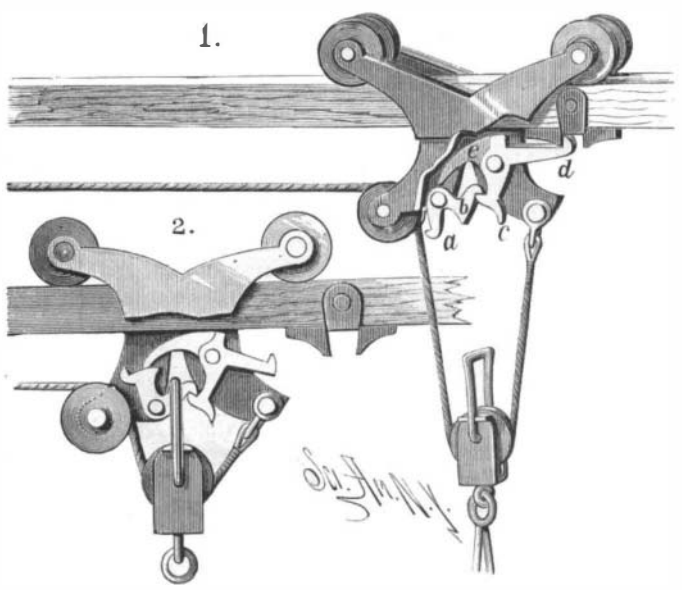
Before resorting to any metallic instrument for this purpose, Dr. C. D. Agnew (*American Practitioner*, May, 1884) would advise you to use an instrument made in the following manner: Take a splinter of soft wood, pine or cedar, and whittle it into the shape of a probe, making it about the length of an ordinary dressing probe. Then take a small, loose flock of cotton, and, laying it upon your forefinger, place the pointed end of the stick in the center of it. Then turn the flock of cotton over the end of the stick, winding it round and round, so as to make it adhere firmly. If you will look at the end of such a probe with a two inch lens you will see that it is quite rough, the fibers of cotton making a file-like extremity, in the midst of which are little interstices. As the material is soft, it will do no harm to the cornea when brushed over its surface.

When ready to remove the foreign body, have the patient rest his head against your chest, draw the upper lid up with the forefinger of your left hand, and press the lower lid down with the middle finger, and then delicately sweep the surface in which the foreign body is embedded, with the end of the cotton probe. When the foreign body is lodged in the center of the cornea, it is most important not to break up the external elastic lamina; for if you do, opacity may follow, and the slightest opacity in the center of the cornea will cause a serious diminution in the sharpness of vision.

HAY CARRIER.

The track is supported from the frame timbers of a barn by angle bolts or other suitable means. The carrier frame is formed of two plates connected by bolts, and between the upper parts of which is the track. To the upper corners of each of the plates are pivoted rollers that rest upon the upper side of the track. To the rear lower corners is attached the end of the traction rope, which passes over a pulley pivoted between the lower forward corners, and is then led over guide pulleys to the place where the horse is to be attached. Upon the rope between its end and the forward pulley is placed a pulley, with the block of which is connected the hay fork in the ordinary manner. To the block is rigidly fastened the bail, which projects upward to trip the operating parts of the carrier.

Between the forward parts of the plates is pivoted a two-armed plate. The outer end of the upper arm, *b*, is rounded and has a hook formed upon its outer side edge; the lower arm, *a*, has a hook formed upon the outer end of its outside edge. Between the rear lower parts of the plates, and at a little higher level than the plate just described, is pivoted a three armed plate formed as clearly shown in the engraving. To the underside of the center of the track is attached a catch that is made double, so as to be used without change, when the carrier is upon either arm of the track. The catch has a dovetailed recess in the center of its lower side, the lower sides of its end parts are slightly concaved, and the outer ends are square. When the carrier is over the hay wagon, and the hook plates are in the position shown in Fig. 1, the pulley carrying the loaded fork rises to the carriers, the bail strikes the upper arm of the plate, *b*, and also raises the inner arm of the plate, *e*, thereby withdrawing the hook, *d*, from the catch and allowing the carrier to be drawn forward by the rope, the hook plates being in the position shown in Fig. 2. When the carrier is drawn back for another load, the end shoulder on the arm, *e*, strikes the end of the catch, which turns the hook plate and withdraws hook, *c*, from hook, *a*, releasing the bail and allowing the fork to descend for another load. This movement raises the hook, *d*, into contact with the catch, and lowers hook, *b*, into contact with hook, *c*, so that the weight of the arm, *b*, will hold the hook, *d*, in contact with the catch and prevent the carrier from being moved. This invention has been recently patented by Mr. Edwin Woodward, of Stryker, Ohio, and is being manufactured by Woodward Bros. of same place.

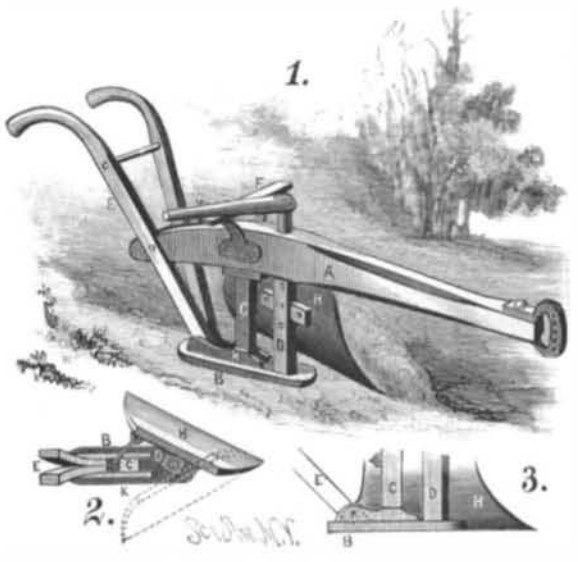


WOODWARD'S HAY CARRIER.

SIDE HILL PLOW.

The side hill plow here shown is of simple and durable construction, and may be very easily handled. It is the invention of Mr. John Rapp, of Collinsville, Conn. A shoe, B, is securely attached to the beam by a standard, C, mortised into the shoe after passing between upright cleats fixed to the shoe; between the cleats the lower forward converging ends of the handles also fit, the handles being also mortised into the shoe, so that the standard and handles firmly hold the shoe against backward movement, while the cleats act as lateral braces. From the shoe the handles diverge and pass at each side of the beam to which they are bolted. The mould board, H, is bolted to the standard, D, which has side extensions to resist the strain.

This standard is pivoted in the shoe and in the beam, so



RAPP'S SIDE HILL PLOW.

that the mould board can be swung to either side for cutting both ways on the side hill. The mould board is turned by a lever, G, which is pivoted to the upper end of the standard and works over a cross bar, F, bolted to the beam, which serves as a fulcrum on which the mould board can be raised by the lever prior to reversing. The mould board is held in both positions by a hook hung on a staple fixed to the standard, C, and hooked into eyes fastened to the back of the mould board near its opposite edges, as clearly shown in Fig. 2.

Kiln Drying Temperatures.

The following are the temperatures adopted by Franz Chodounsky, a well known Bohemian maltster. At the time of charging the kiln, a temperature of 108½° F. should be indicated by the thermometer hung underneath the upper floor of the kiln; two hours afterward the temperature should be 111°; at the expiration of three hours, 113°; and at four hours, 117½°; after five hours, 122°; after six hours, 133°; after seven hours, 144½; and at the expiration of eight hours, from 156° to 160°. The maltster ought not to allow a variation of more than 4° from the above temperatures. The temperature of the malt on the upper floor is thus under control, and ought to acquire the following temperatures at each successive hour: 87°, 84°, 86°, 99½°, 102°, 111°, 117½,° and 131°. The malt should reach the lower floor of the kiln at 129°, and pass from hour to hour to the following temperatures: 117½°, 116½°, 130°, 133°, 147°, 171½°, 178°. The malt is charged at the rate of 1·25 hectoliters per square meter (= nearly 3 bushels per square yard); the thickness of the layer of grain should be a little over 3 inches at first; after four hours, about 2¾ inches; and after eight hours rather less than 2½ inches. On descending to the lower floor of the kiln, it should not exceed the last named thickness, and toward the middle of this stage the thickness should be reduced to 2 inches, and at the end of the kiln drying be a trifle less.