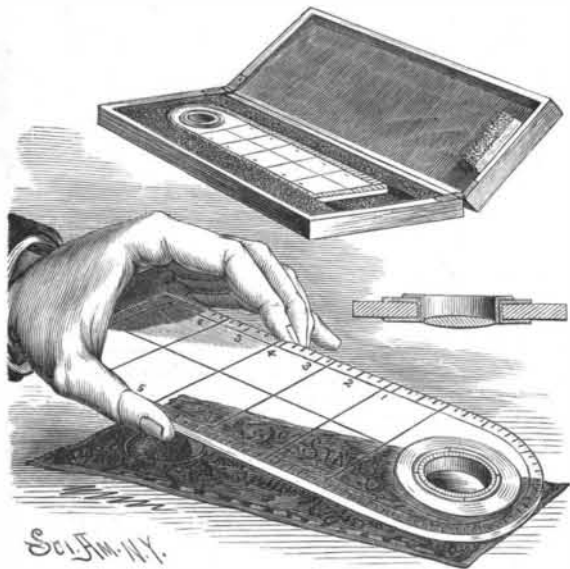


AN IMPROVED DISCOUNT MEASURING GLASS AND BANK NOTE EXAMINER.

A combination implement, especially applicable in examining bank notes, has been patented by Mr. Albert C. McMicken, of Winnipeg, Manitoba, Canada, and is shown herewith, as in use, in its case, and in section through the lens. It consists of a glass square at one end and semicircular at the other, and provided along the edges for the full length of a bank note with a scale that is marked or etched, for meas-



McMICKEN'S MEASURING GLASS AND MAGNIFIER.

uring notes and parts of a note, or ascertaining the exact size and length of signatures and numbering, for purposes of comparison. Along the edge of the semicircular end is also a scale, adapted to measure parts of circles, vignettes, curves, etc., and at this end is a magnifying lens of sufficient power to expose the fineness or coarseness of the fiber of the paper, and detect imperfections, the rim of the setting of the lens also having a scale. Upon the main body of the glass is marked the exact size of a bank note, this figure being subdivided into fifths and tenths, so that any approximate portion lost from a note may be quickly ascertained.

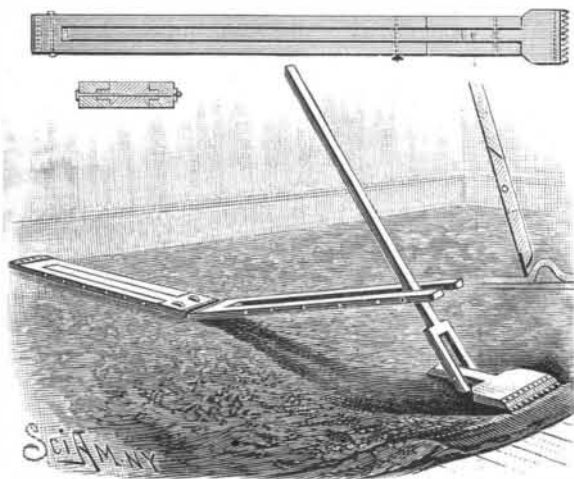
A Mill Engine Stands Fire.

A very singular incident was noted in connection with a recent mill fire in Carlton, Mich. The building was burning fiercely, but the big engine which drove the machinery continued to run all through the blaze, and by that means was saved from destruction, though there was not a wall standing on any side of it when the fire had finished.

The pumps were also running, and kept the boiler supplied, so that there could be no explosion. It was a peculiar spectacle to see the engine driving away at a slashing speed in the midst of the flames, but the motion somehow saved it from fire. All the rest of the machinery was a total loss.

AN IMPROVED CARPET STRETCHER.

A simple carpet stretcher, easily operated by a single individual, and which can be readily adjusted for use in various sized rooms, is illustrated herewith, and has been patented by Mr. Charles T. Manter, of Bismarck, Mo. A lever is adjustably pivoted near the forward end of a slot in a light rectangular frame, which can be closed up when not in use, as shown in one of the small views. This lever at its forward end has a slot in which is pivoted the shank of a stretcher head provided with a toothed plate. An auxiliary extension arm is provided to lengthen the body of the stretcher, having journaled therein rollers to prevent the binding



MANTER'S CARPET STRETCHER.

of the carpet to the floor by the thrust of the stretcher, thus allowing the carpet to stretch evenly and smoothly clear across the room. In operation, one end of the auxiliary arm is placed against the base board, the other end being drawn out the approximate distance

and placed in contact with the inner end of the stretcher, which has been adjusted to reach nearly across the room. The lever of the stretcher is then raised nearly upright, to engage its toothed head with the carpet, a slight bearing down on the lever causing the head to assume a horizontal position, when the edge of the carpet is readily carried forward by further bearing on the lever, and thus held ready for nailing.

Exercise in the Treatment of Heart Disease.

For generations the main idea in the treatment of organic heart disease has been physical rest to diminish the labor of the damaged organ. We have been in the habit of prohibiting all forms of active labor to the sufferers from cardiac disease, and the principle of our treatment has been the unexpressed but ever present idea, accepted as a self-evident axiom, that perfect rest was the best means of securing muscular compensation. Professor Oertel's experiments and results have come with startling surprise upon those who forgot to distinguish between a useful principle and the exceptions which the multifariousness of disease renders it imperative to recognize. As is well known, he treats a considerable proportion of cases of organic heart disease by regulated exercise, especially graduated ascents of mountains, and his results place the value of his method beyond reasonable dispute. There is nothing really surprising either in his treatment or the success which has attended it. A little reflection will suffice to convince us that, while rest is often useful, and indeed quite indispensable, in heart disease, there are yet many cases in which well regulated exercise will improve the nutrition of the cardiac muscle, as of the rest of the muscular system, and hence tend to the promotion of circulatory vigor.—*Medical Record.*

SECURING PICTURES TO TOMBSTONES.

A frame or casing adapted to hold pictures on tombstones in such way that the pictures will be fully protected from injury by the air, rain, etc., is illustrated herewith, and has been patented by Mr. Solomon R. Miller, of Mount Union, Huntingdon County, Pa. A metallic casing, with lugs by which to secure it to the tombstone or monument, has a recess in which fits a second casing, preferably of rubber or other waterproof elastic material, and in this second cas-



MILLER'S TOMBSTONE PICTURE ATTACHMENT.

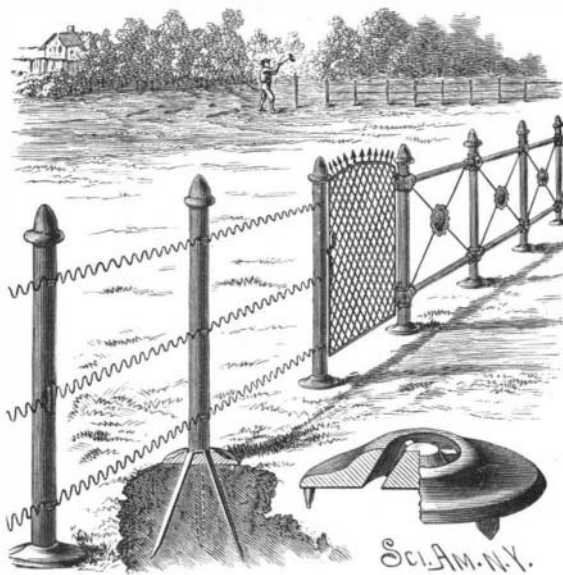
ing is placed the picture, the glass plate covering it being forced into the sides of the inner casing, so that a part of each side projects over the top edge of the glass. The lid or cover is fulcrumed on a screw secured to the casing, and fits firmly over the outer edge of the sides of the rubber casing. The cover may be provided with a suitable inscription, and the frames are preferably made of white metal or bronze, silver plated, or of pure silver or gold, and let into the marble or other material of the tombstone.

Trial of New Weapons.

Nine preliminary rounds for a range trial of the new 12 inch breech loading mortar were fired at Sandy Hook, November 15, in the presence of General Benet, Chief of Ordnance, Captain Smith, and the Testing Board. With the mortar placed at 45 degrees elevation and with a charge of 65 pounds of powder and shell weighing 265 pounds, the following results were obtained: Initial velocity, 1,037 feet; pressure, 2,700 pounds; range, 9,385 yards, or 5 1/4 miles. Although the preliminary test was not made to demonstrate the accuracy of fire of the mortar, the ordnance officers are well satisfied, from an examination of the shot after firing and other observations, that they were not wrong in believing the breech loader to be superior in this regard to the muzzle loader. Further experiments to test endurance, accuracy of fire, and range will be carried on during the present and coming month. The 8 inch breech loading steel rifle was also subjected to a range trial, November 15, and very satisfactory results obtained. With a charge of 95 pounds of powder, which is 15 pounds less than the usual charge, a 289 pound projectile, and the gun placed at 17 1/2 degrees elevation, the shot was fired a distance of six miles and 138 yards. The muzzle velocity recorded was 1,800. With the regular charge of powder and weight of projectile it is figured by the officials at Washington that a range of 6 1/2 miles should be reached.—*Army and Navy Journal.*

AN IMPROVED FENCE POST.

A simple, light, and durable post, which can be easily and cheaply made and set up, to afford a strong support for the wire or other longitudinal stringers or rails of a fence, is shown herewith, and has been patented by Mr. Louis Turnberger. The post is a metal tube or pipe, with slots dividing its lower end into parts or tongues, which, when the post is driven into the ground, spread outward and form prongs to firmly anchor the



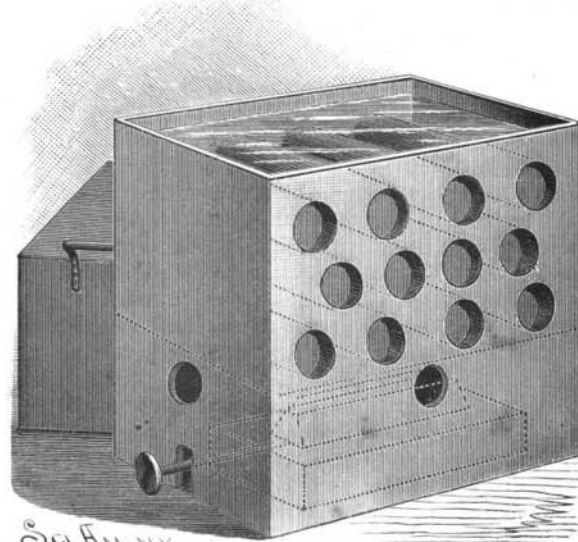
TURNBERGER'S FENCE POST.

post. The ground plate has a raised central portion, with prongs on the bottom to hold it in position, and around its center are segmental slots, corresponding with the number of prongs of the post, and made flaring downward and outward from the top of the plate, thereby providing at the center of the plate a core of general conical form. This ground plate is first fixed in position by its prongs, being partially bedded in the ground, if necessary, when the post, with its slotted lower ends placed in the downward flaring slots of the plate, is driven down, forming spreading prongs, which give a good hold on the ground. The wire stringers of the fence are entered into transverse notches made in the post, where they may be held by a vertical wire having slight bends, and an ornamental cap is screwed or driven on the top. The post is equally adapted for use with other forms of fence-making materials, the fastenings being made in any approved way.

For further information relative to this invention address Mr. John P. Mern, of No. 80 Schaeffer Street, Brooklyn, E. D., N. Y.

A HEATER FOR GIANT POWDER AND OTHER EXPLOSIVES.

An apparatus designed to promote convenience, economy, and safety in heating and thawing giant powder and other explosives usually put up in sticks or packages is represented in the accompanying illustration, and has been patented by Messrs. Thomas and Alfred J. Rundle, of Iron Mountain, Mich. It consists of an open topped tank having a series of open ended tubes, with a slip cover or hood adapted to close the tank and the ends of the tubes, there being an apartment below the tank proper to hold a lamp or other means of heating the water in the tank, the fire being so inclosed as to protect the explosives from possible contact therewith. Each tube is of sufficient ca-



THE RUNDLE HEATER FOR GIANT POWDER, ETC.

capacity to hold an ordinary stick or package of explosive, which may be inserted or removed from either end, or, if liable to break or stick in the tube, a package can be readily pushed through, and the heater thus kept clear of all remaining powder or explosives.