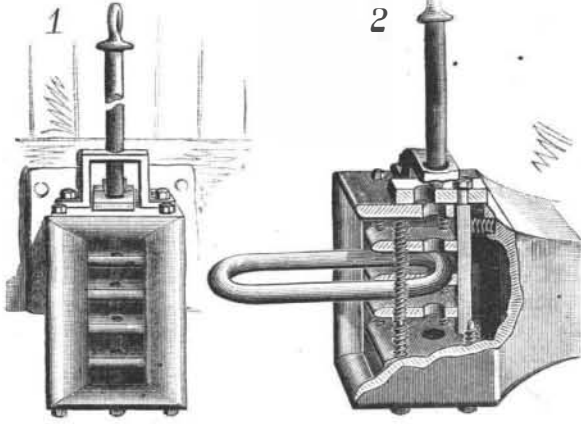


CAR COUPLING.

The front of the chamber of the drawhead is partially closed by a plate formed with an elongated opening for the passage of the link. Placed loosely upon rods within the chamber are division plates which are separated and held in position by coiled springs placed upon the rods, so that the plates have a yielding action, so as not to resist the entrance of the link. These plates support the link at various elevations, thereby adapting the coupler to cars of different heights. The plates are all correspondingly apertured,



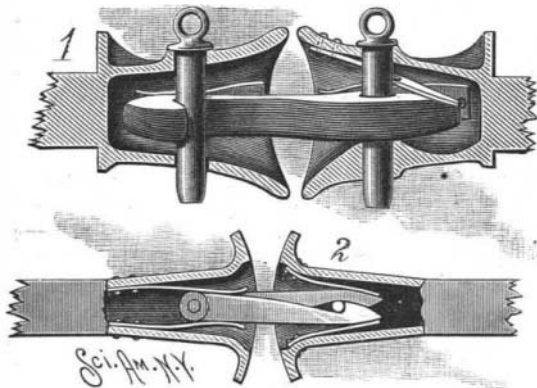
KALTENBECK'S CAR COUPLING.

to permit the coupling pin to drop into the drawhead and down through the link. The pin, when lifted out of the drawhead, is held in a raised position by a strap and sliding trip plate, the latter being forced forward under the pin by springs, which act against a bar bolted to the trip plate and passed through the drawhead, back of the division plates, as shown in Fig. 2. These springs are lodged in recesses made in the drawhead, and as they tend to constantly force the bar outward, the trip plate will be forced under the pin the instant the latter is raised, and the parts will be ready for coupling again. The entering link forces the trip plate back and allows the pin to drop and automatically couple the cars. The bar is held between guards formed in the back of the drawhead, which prevent the link entering too far; they also protect the bar from injury, so that there can be no failure in the proper action of the bar and trip plate at the time of coupling and uncoupling.

This invention has been patented by Mr. W. H. Kaltenbeck, of Roxbury, N. Y.

CAR COUPLING.

In this coupling the two drawheads are formed respectively with rounded faces and cavities. Upon a



SEABURY'S CAR COUPLING.

vertical pin in one drawhead are placed two connecting hooks, Fig. 2, whose hooked heads overlap each other to grasp the coupling pin of the opposite drawhead. The points of the hooks are oppositely beveled, so that when the cars are brought together for coupling, the pin will strike between the two bevels and force the hooks apart to permit the entrance of the pin between, and thus automatically effect the coupling of the cars. In each drawhead are arranged springs which hold the hooks in firm engagement with the coupling pin. To couple the cars, it is only necessary to place the pin in the drawhead and bring the cars together, when the hooks will enter the drawhead and engage with the pin. Uncoupling is effected by merely lifting out the pin. Fig. 1 shows plainly the construction when only one hook is used.

This invention has been patented by Mr. Charles E. Seabury, of Stony Brook, N. Y.

It may not be known to some what causes the different colors in bricks. The red color of bricks is due to the iron contained in the clay. In the process of burning, the iron compounds are changed from the ferrous to the ferric condition and rendered anhydrous, thus developing the color. Certain clays—like those in the vicinity of Milwaukee, for instance—contain little or no iron, and the bricks made from them are light or cream colored.

CONVERTIBLE WIRE BASKET.

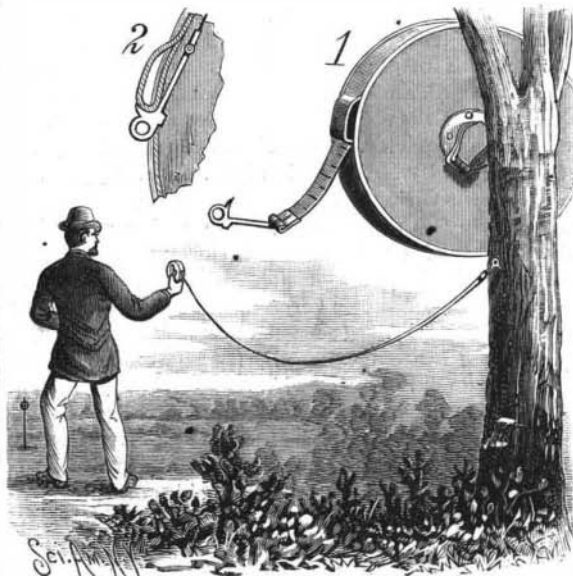
This wire basket may be used for a vast variety of purposes, some of which are illustrated in the accompanying engraving. The main ring or circle of wire is of any suitable diameter, braced by two or more cross bars, which form a bottom to the basket to stand a flower pot, etc., on. The side or main loops may be shaped as shown in the cut, and are hinged on the base ring separately, by having both of their ends bent around it, and clinched into an eye. These loops are arranged to overlap one another, so that one cannot be moved without moving all, thus always insuring the perfect circular form or curvature of the sides of the basket, no matter into what form it may be converted. The small base loops, consisting of two rows, one normally below and the other above the ring, are hinged and arranged on the ring in precisely the same manner. The side loops, moving on their hinged ends, may all be pressed upward, inward, outward, or downward, so as to be altered from a globe shape to a bell form, with all the intermediate forms and shapes.

The basket is strong and durable, being made of the best spring steel wire heavily plated, and is decidedly ornamental in all the various forms it may be made to assume. It is so simple in construction that it will be instantly understood, while it may be readily changed by any one from one form to another, according to the use to be made of it. The engraving shows it as a card basket, frame to support a lamp shade and a vessel over a lamp chimney, cake and egg baskets, hanging flower basket (in which case the supporting cords are attached to the ring), flower pot, and flatiron holder. It is evident that this list comprises but a very few of the many good uses the basket may be put to.

This invention has been patented by Mr. A. S. Greenwood; further particulars can be had from the Cass-green Mfg. Co., of Cleveland, O., and Toronto, Canada.

TAPE MEASURE.

When the common tape line is used by one person, it must be fastened at the end before it can be unrolled and employed in making measurements. In the tape measure herewith illustrated, which is the invention of Mr. Jerome Fountain, of La Grande, Oregon, a simple and efficient fastener is permanently connected with the end of the line, for holding it while making measurements. The casing is of the usual form and construction. To the outer end of the line is secured a metallic clip, to which is connected a hook, shaped as shown in Figs. 1 and 2. The head of the hook is provided with a sharp point, and in it is formed an eye. The point is preferably arranged one inch from the end of the line, and is inserted in any suitable fixed object, when the line may be unrolled and used in the usual way. The eye serves to receive an awl or blade of a knife, when it is impracticable to employ the hook. The metal band forming the edges of the casing is bowed outward and then bent under or returned upon itself at one side of the opening (Fig. 2) to form a rounded support for the hook when the line is wound up; and upon the opposite side of the opening there is a beveled lip under



FOUNTAIN'S TAPE MEASURE.

which a small lug formed on the back of the hook rests when the line is coiled within the casing. The engagement of the lug with the lip is insured by the spring of the looped end of the band forming the edges of the casing. It is evident that the rounded support may be formed separately and attached by rivets to the casing when the latter is made of non-metallic material; the hook may also be varied in form and otherwise attached to the line.

OUTLINING TOOL.

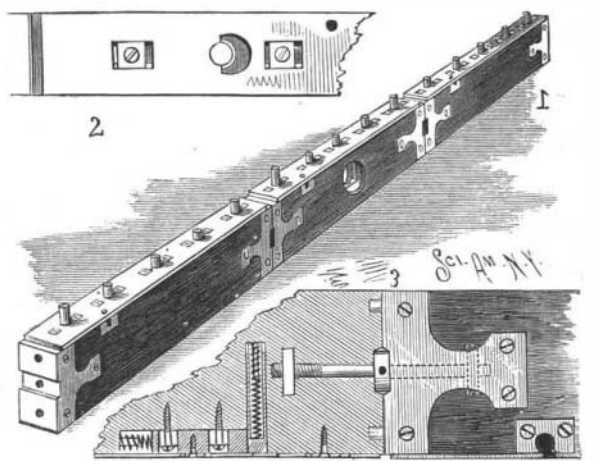
This device is designed particularly for carpenters' use in the work of dressing doors and similar pieces of stuff to their frames, whereby a perfect fit may be obtained without the necessity of frequently setting the door up in the frame to test it as the work proceeds. The tool is made in several sections, each complete in itself, adapted to be connected together end to end, by a suitably arranged right and left hand screw, as shown



GREENWOOD'S CONVERTIBLE WIRE BASKET.

in Fig. 3. Formed in one of the straight edges of each section are several chambers, in each of which is fitted a plunger, pressed outward by a coiled spring, Fig. 3. Secured upon the edge of the section is a metal plate, Fig. 2, having formed in it as many openings as there are plungers. The plate may be moved longitudinally to hold the plungers within their chambers, or to release them, so that the springs will force them outward through the openings. The plate may be moved by a small bar inserted in a hole made in the plate, a recess being formed in the side of the section for the insertion of the bar.

In use, the plungers are all forced within their



MACKENZIE'S OUTLINING TOOL.

chambers and held by the plates. The edge of the tool is then placed upon the surface of the frame or other object whose outline it is desired to obtain. By means of the small bar, the plates are then moved to release the plungers, whose springs will force them into contact with the surface against which the tool is held. The plates are then moved back as far as they will go, which will permit suitably arranged friction blocks to press upon the plungers and hold them firmly in the positions they occupy. The tool is then removed from contact with the surface, the exact outline of which will be given by the outer ends of the plungers. This outline can be easily transcribed to a door, panel, frame, or other object, which can be easily dressed to match.

This invention has been patented by Mr. Robert A. MacKenzie, of 170 East 51st Street, New York city.

In Pesth, Hungary, dynamite has been successfully used for driving piles. An iron plate 15 inches in diameter and 3/4 inches thick is placed in a perfectly horizontal position on the pile to be driven. A dynamite cartridge, in the form of a disk, containing 17 1/2 ounces of dynamite, is placed on the iron plate and exploded by electricity.