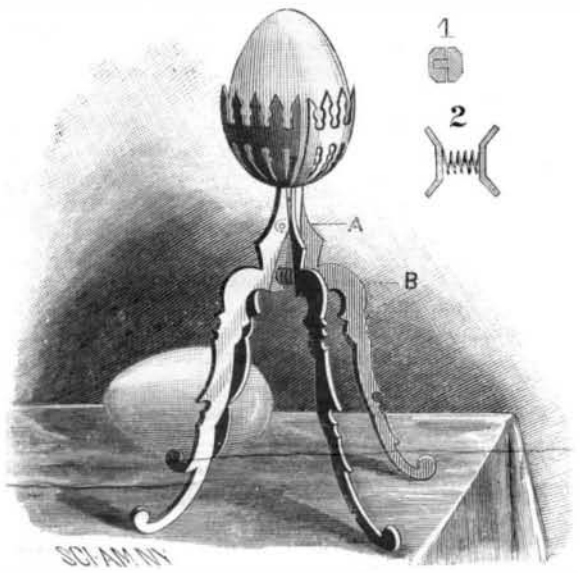
EGG HOLDER.

The holder is formed of two hollow semi-ellipsoidal sections made of sheet metal, wire, glass, or other suitable material. On the lower part of each section a stem, A, is formed, which terminates in two outwardly curved legs, B, of any desired design. The stems are pivoted to each other a short distance below their upper ends (Fig. 1 is a cross section through this portion), and between their lower ends is a spiral spring (Fig. 2) which presses them apart, thereby pressing the edges of the two hollow sections together. These sections may have their top edges pronged to give them more elas-



HERVEY'S EGG HOLDER.

ticity, and they may be ornamented in any appropriate manner. By pressing the two pairs of legs together the sections are separated and an egg can be placed between them, where it will be firmly held by the action of the spring. The holder can also be used for taking eggs from boiling water.

This invention has been patented by Mrs. F. P. Hervey, of Brenham, Texas.

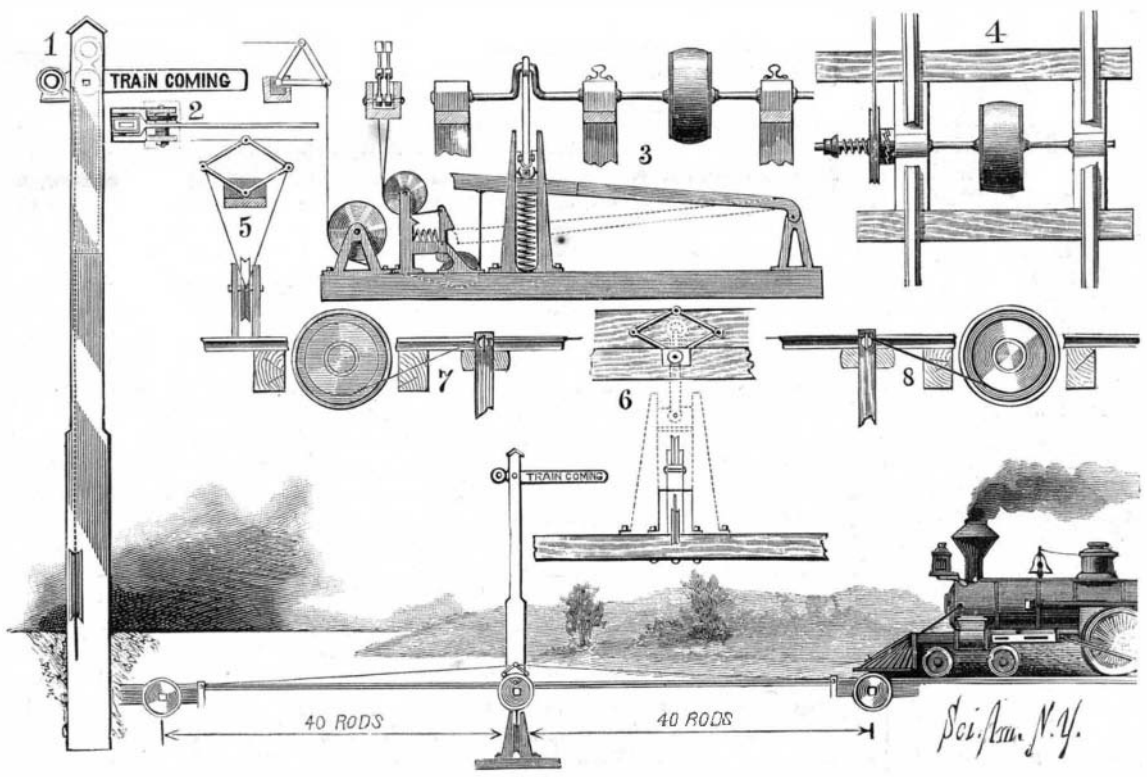
AUTOMATIC SIGNAL FOR RAILROAD CROSSINGS.

The engravings show the various parts of an automatic device for signaling the approach of trains, patented by Mr. T. H. A. Tregea, of Pontiac, Mich. The invention belongs to that class of signals in which a semaphore is moved mechanically by the passing of trains. The signal consists of a post, Fig. 1, erected at a suitable distance from the track and carrying a semaphore arm, pivoted to the post, and having at the rear end a pair of disks arranged to cover the opposite sides of a lamp, supported by the post, so that the different positions of the arm will serve to signal to persons using the crossing, both during the day and night. (This construction will be clearly understood from the sectional view, Fig. 2.) The weight of the arm tends to maintain it in the vertical position, shown by the dotted lines. The arm is moved by a chain, which passes around a pulley at the foot of the post, and is secured to and passed over a pulley attached to the arm. The signal releasing mechanism consists of a lever (Fig. 3) pivoted at one end to a bracket in a chamber below the track; the opposite end of the lever is raised by a spring, and to it is attached a cord passing around two guide pulleys to a crank lever, shown at the left in Fig. 3. Pivoted to the frame is a pawl, thrown forward by a spring and arranged so as to be thrown back by the contact with the end of the lever; the shoulder retains the lever in the position shown by the dotted lines. Transversely across the track extends a crank shaft connected by a rod to a guide block sliding in a bracket which supports the lever spring; the shaft carries a drum between the rails. To the upper end of the pawl or trigger are attached two cords extending to two bell-crank levers placed near the level of the ground. Each setting mechanism consists of a shaft (Fig. 4), supporting a drum between the rails and carrying at one end a clutch engaging with a similar clutch at the side of a loose pulley. From each loose pulley extends a cord to one of the bell-crank levers, Fig. 3. The drums are covered with rubber, and are of such size and so arranged as to be struck by the cow-catcher so as to be turned by the passing train.

As the train passes in either direction over the signal releasing mechanism (Fig. 3), it will turn the drum and its crank in one direction or the other, in either case moving the block and insuring the catching of the lever in case the trigger should slip upon the first movement of the lever. As the lever is depressed it slackens the cords leading to the crank lever, and the signal arm assumes its lowest position. The train then passes the signal and travels over the further drum, Fig. 4, which is turned without any effect upon the signaling apparatus, but upon another train passing over it and turning it in the opposite direction, thereby turning the loose pulley by means of the clutch and drawing upon the cord to draw back the trigger and release the lever, which, being raised by the spring, draws upon the cord leading to the crank lever and raises the signal arm. The train then strikes the drum, Fig. 3, and releases the arm, and then passing to the other setting mechanism adjusts it so as to be operated by another train.

Figs. 5 and 6 are elevations of parts of Fig. 3; Fig. 4 is a plan view of one of the signal setting devices; and Figs. 7 and 8 are side elevations of each of the setting devices.

It will be seen that each train, coming from either direction, draws back the trigger and insures the display of the signal as soon as it is within forty rods therof; the signal retains its position until the train has passed it. The various parts are positive in their action, and are so constructed as to work effectively when at considerable distances apart, and in addition they are not liable to be affected by snow or ice.



TREGEA'S AUTOMATIC SIGNAL FOR RAILROAD CROSSINGS.

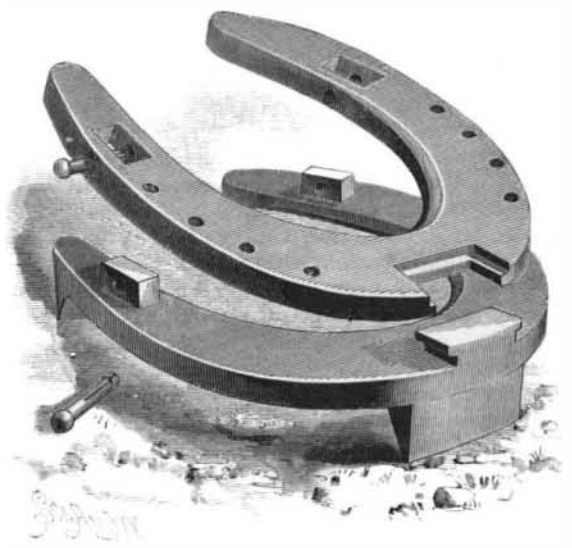
Peptonization.

An observation communicated by M. Marcano to the Academy of Sciences is suggestive of what may prove a valuable process for the conversion of albuminoids into peptones. If a small quantity of the fresh sap of certain plants—the agave, for example—be added to chopped meat first covered with water, and the mixture be kept at a temperature of 39° to 40° C., an active fermentation is immediately set up, with evolution of inodorous gases. At the end of thirty-six hours the fibrin has disappeared, and a liquid is left containing peptone equal in weight, when dried in a stove, to one-fifth the fresh meat used. This fermentation appears to M. Marcano to be due to the vital action of microorganisms, and to resemble the peptonization of the gluten of flour by a bacterium which is said to take place in bread making.

In confirmation of this view it is stated that if the juice of the plant be saturated with chloroform the fermentation is not set up. Moreover, a "mucorinee" may be cultivated by sowing a few drops of agave sap in sugared water. This mucorinee is capable of completely dissolving fibrin in the presence of water. A large number of other fruits and juices are stated to be endowed with properties similar to those possessed by the sap of the agave. Papaw juice is said to be relatively weak compared with the peptonizing activity of other juices which contain no digestive principle like "pepsin." M. Marcano is of opinion that the new method of peptonization will afford a simple and economic means of preparing pure peptone quickly and at a low price, and suggests that it might be applied upon a large scale, so as to allow of the export of meat from South America in a form more nutritious and economical than the extracts.—*Lancet.*

A NOVEL HORSESHOE.

The engraving shows a horseshoe recently patented by Mr. David J. Pryor, of Roxbury, Mass. The shoe is made of malleable iron, and consists of two parts, one of which is formed with heel and toe calks and the other with side rows of holes in the usual manner. The upper part is nailed to the hoof in the same way that the common shoe is. The method of uniting the two parts is clearly shown in the cut. The toe portion is slipped into the flanged recess in the upper or permanent part, and the two lugs at the heel enter openings, and are firmly held by split keys. In icy weather the



PRYOR'S NOVEL HORSESHOE.

smooth shoe can be removed, and the one formed with calks secured in its place in a very short time; the operation is simple and easy, and can be performed by any one. The upper plate will last for a very long time, being subjected to little or no wear. When the hoofs are to be trimmed down, the same shoe is replaced. Should the horse interfere when shod with calks, or should he become uneasy in the stable, the under part can be taken off. When considered necessary, an elastic packing can be placed between the two parts. By the use of these shoes, visits to the blacksmith need not be so frequently made, and the cost of shoeing will not be so great as when the old style shoes are used.

The Condition of Our Country.

Cheap wheat, cheap iron, cheap money, are the raw materials of prosperity, and these the United States now has in abundance. While our population has been increasing, deposits have been accumulating in the banks, inventions have been multiplied, intelligence has been spreading, and all the processes of civilization have been going on, the course of industrial readjustment has been strengthening all the foundations of our prosperity. Credits have been revised, and many abuses which grew up during the generous practices of the too abundant confidence of a few years ago have been put an end to. Tendencies to extravagant living have been checked, and it is a very rare exception that people are not living within their means. Frauds that take root naturally and flourish in eras of expansion have been overtaken and exposed. Enormous masses of debt have been liquidated. The commercial observer will, on the whole, probably find it impossible to discover in any preceding period of the history of this country a greater accumulation than that which he can now easily find of what we term the raw materials of prosperity.—*The Age of Steel.*

BOGUS GOLD DUST.—Under this heading we lately gave an account of the transmission to the Philadelphia mint of a package of metallic dust, apparently gold, but which proved on assay to be in great part spurious. The grains consisted of iron filings galvanized with gold. The specimen was, it appears, forwarded by Mr. Stifft, the well known jeweler of Little Rock, who bought it for the genuine gold; but subsequently becoming suspicious that he had been imposed upon, he sent it to the mint in order to have its value exactly determined. Mr. S. writes us that he lost $100 by the deception, but would give another hundred for the arrest of the swindler.