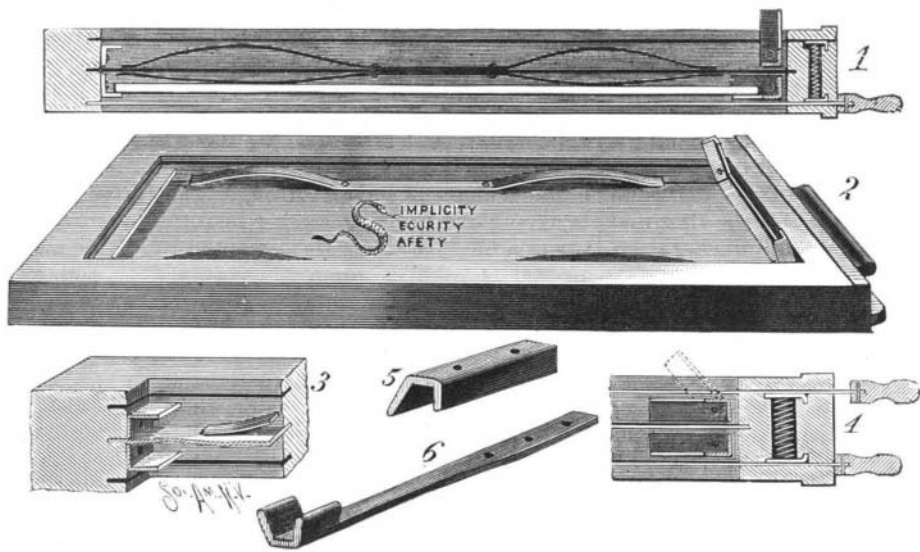


WARNER'S IMPROVED DRY PLATE HOLDER.

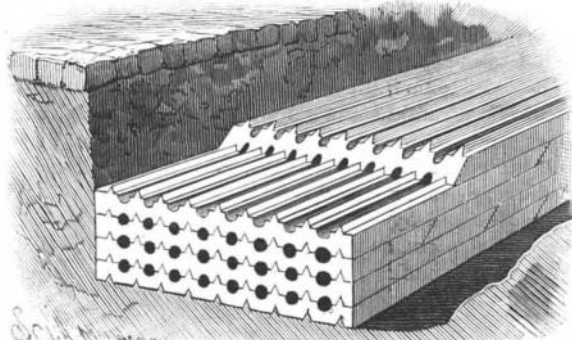
One of the most serious annoyances a photographer has to contend with in the present day of lightning dry plates is a leaky plate holder, particularly when the latter is composed of one or more separable parts,



WARNER'S IMPROVED DRY PLATE HOLDER.

since the slightest trace of light entering at some minute crevice will frequently damage a day's work. By its simplicity, solidity, and ease of operating, the holder here shown possesses features very desirable for out of door photography, in that it is perfectly light tight, strong, and compact.

Fig. 1 represents a longitudinal section, in which the upper slide is withdrawn. The body of the holder consists of a light hardwood frame, having a metal septum or division in the center, upon each side of which are riveted very light flat steel springs, shown clearly in



CONDUIT FOR UNDERGROUND CONDUCTORS.

Fig. 2. In the lower half of the holder (Fig. 1) may be seen a plate in position. An angular metal strip is rigidly secured on the left hand end of the inside of each plate compartment, intended to hold one end of the sensitive plate, while at the opposite end is a movable or pivoted angular strip or clamp, provided with projecting ends, which, when thrown up, permits the sensitive plate to freely drop down into the holder, resting, as it were, upon a bed of springs.

To insert the plate, the holder is held with its narrow end resting on a support at a slight angle, then the exposing slide is withdrawn, and the plate, film side out toward the operator, is slid over the spring under the left hand angular strip. In this position the other free end of the plate projects slightly above the holder. The right hand clamp is now turned down over the end of the plate, pressing the same down into position. The springs compensate for any variability in the thickness of the glass. Hence the film side of the plate remains always in the same plane and in focus. The exposing slide is next inserted, and the holder is filled ready for use.

Special cut off light valves, consisting of plates with one side bent down, forming an angle, to prevent slipping, and also ar-

ranged to fly outward by a miniature spiral spring between them, as the slide is withdrawn, and effectually close the slit, may be seen in Figs. 1 and 4.

In removing the sensitive plate, the pivoted clamp is first turned up. At once the springs underneath force

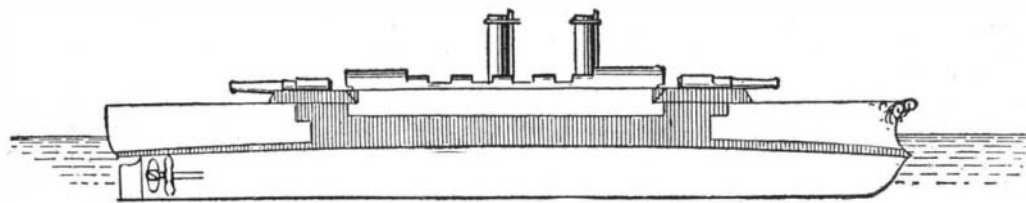
one end of the plate up and out of the holder, when it is easily caught with the fingers and slipped out. This feature of the holder is quite important, since in ordinary holders the operator is obliged in many cases to dig out, as it were, the plates with the fingers, being very apt to injure or scratch portions of the film. Fig. 3 is an enlarged view of the rigid angular strip. Fig. 4 shows the pivoted clamps down, when holding the plates. The dotted line indicates the position when thrown up.

Fig. 5 represents another form of a rigid angular strip, intended to be substituted for that shown in Fig. 3, with the bevel side downward, and in conjunction with two spring clamps, bent in the shape of a half bow, secured to the inside end of the holder in place of the pivoted clamp. With this latter device the plate is inserted by dropping it into the metal beveled strips and pulling back, with two fingers, the spring-forked strips. When these are released and fly forward, they securely grasp the plate. To remove the latter, the forked strips are pressed back, allowing the plate to be lifted out. Pivoted flat pieces of brass on the inside of the holder (not shown) are arranged to hold the spring forks back while the plate is put in or taken out. The bevel shape of the stationary clamp is intended to accommodate different thicknesses of glass. The holder being made in one piece is perfectly tight, while the arrangement of the clamps permits uneven and rough-edged plates to be quickly and easily inserted.

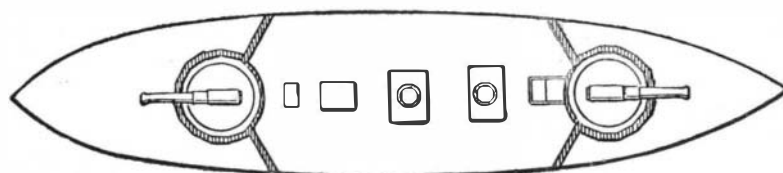
Further particulars may be had from the patentee, Mr. M. P. Warner, 69 Lincoln Street, Holyoke, Mass., who, we understand, desires to negotiate for the sale of territorial rights.

CONDUIT FOR UNDERGROUND CONDUCTORS.

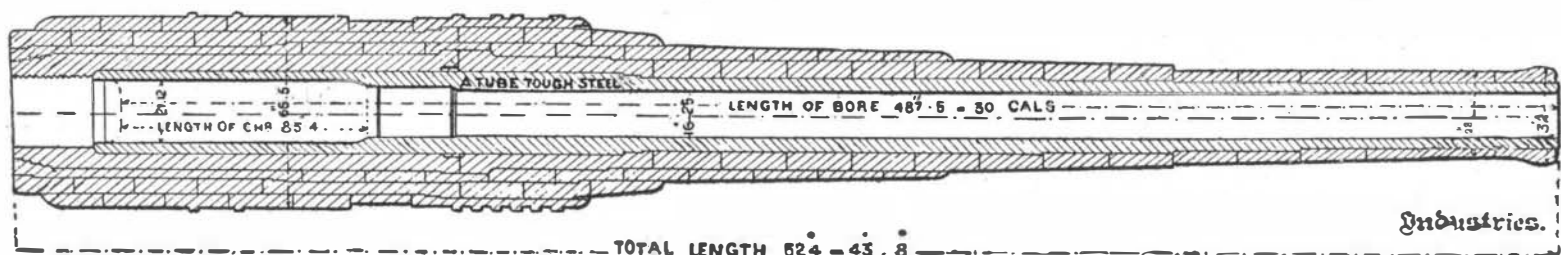
The object of the invention herewith illustrated is to provide for the perfect insulation and protection of underground conductors. In constructing such a conduit, each of a series of glass plates is provided with longitudinal recesses upon both upper and lower surfaces; the recesses in the upper face of one plate are arranged to register with those in the lower face of the other plate. Each plate is also formed with longitudinal ribs upon one face and with correspondingly shaped grooves in the other face, so that when one plate is applied to the other, the ribs will enter the grooves and the plates will be held against lateral



ELEVATION.



PLAN.



LONGITUDINAL SECTION.

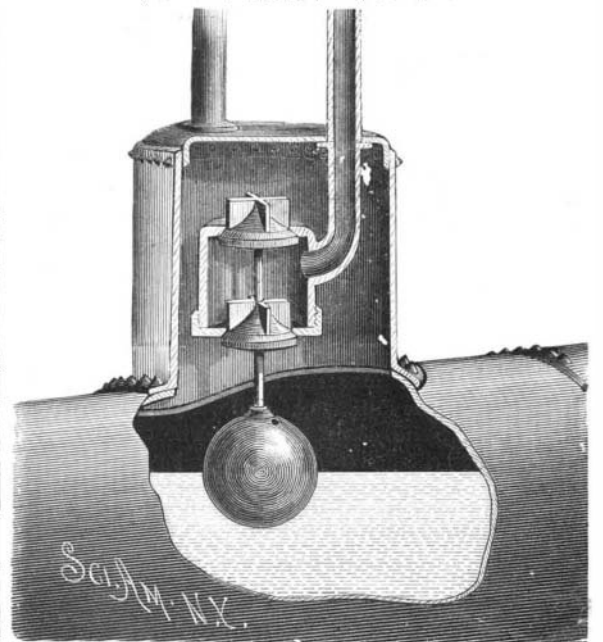
THE NEW 110 TON GUN FOR H. M. S. BENBOW.—CHARGE, 900 LB.—PROJECTILE, 1,800 LB.—[For description see page 245.]

movement. In building a conduit, the plates of one layer or series are arranged so as to break joint with those of the other layers, a proper binding material or cement being interposed between each series. This binding material holds the plates together, and insures the perfect insulation of the wires. By varying the size of the recesses, the plates may be arranged to receive single wires or couples of such size as may be required. The wires are insulated from the earth and from each other, and are protected against the action of water.

This invention has been patented by Messrs. Hans Loesner and M. De Bravura; further particulars may be obtained by addressing the former at No. 84 West Broadway, New York City.

FEED WATER REGULATOR.

The accompanying engraving represents a balance valve feed water regulator which is entirely inclosed within the steam and water chamber in which it acts, and which requires no stuffing box for its stem, to impair or interfere with its freedom of action. In the engraving, the device is shown situated in the dome of a boiler. At the delivery end of the pipe leading from the pump



ADERHOLD'S FEED WATER REGULATOR.

is a valve box made in two sections, screwing together, and fitted with two disk or puppet valves, one of which is arranged to close an opening in the upper section, while the other closes an opening in the lower section. These valves are connected by a common stem, so that they virtually form but one balance valve, which opens downward. Each valve is formed with wings or guides, arranged to fit the openings, for the purpose of steadying and directing the double valve in its movement. The lower valve is connected by a central rod with an open float, as shown.

It is evident that as the water lowers, the valve will descend and permit the passage of steam through the outlet pipe to the pump or injector, or to a whistle. And when the water again reaches its normal level, the valve will be closed by the float, to which steam is admitted to equalize the pressure and prevent collapse. This action of the valve is automatic, and in case of any sudden leak in the boiler, unnoticed by the engineer, the valve will open to admit of the pump supplying more water. And it may, if desired, be made to blow a whistle or give an alarm in case of the pump failing to supply water, by using an extra valve for that purpose. The valve moves easily, without friction, and is perfectly balanced. When one pump is supplying more than one battery of boilers, the regulator is placed at the discharge end of the feed pipe, either above or below the float; if above, the opening in the float is protected, so that water cannot fill it as it enters the boiler.

This invention has been patented by Mr. Alexander J.