C. S. RYERSON.

AUTOMATIC CLOSURE FOR CONDUIT BOXES.

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1,334,172.

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Fig. 1.

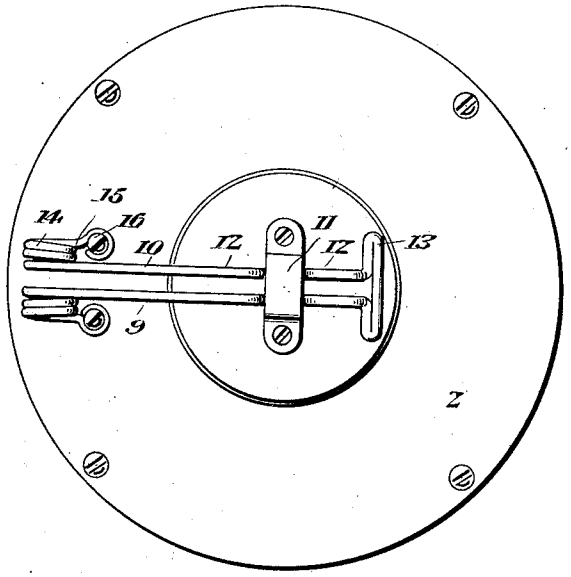
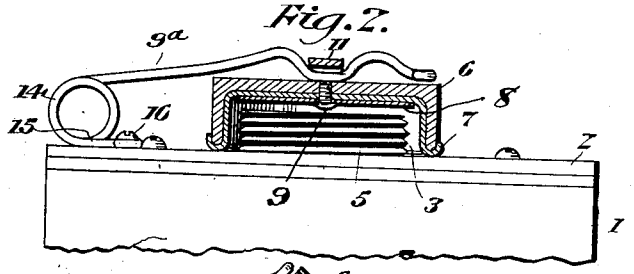


Fig. 2.



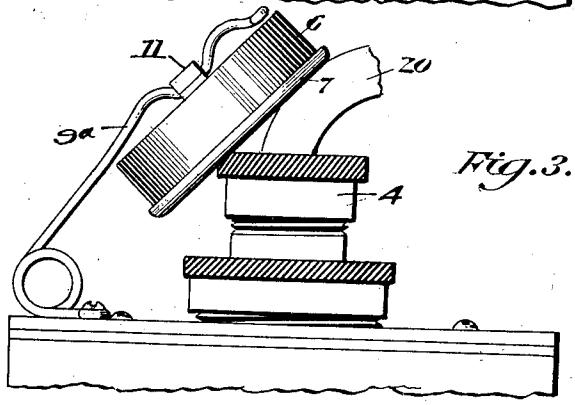


Fig. 3.

Witness

M. A. Phelps

T. E. Tremblay

Inventor

Charles S. Ryerson

By Victor J. Evans

Attorney

UNITED STATES PATENT OFFICE.

CHARLES S. RYERSON, OF NORFOLK, VIRGINIA.

AUTOMATIC CLOSURE FOR CONDUIT-BOXES.

1,334,172. Specification of Letters Patent. Patented Mar. 16, 1920.

Application filed August 31, 1918. Serial No. 252,182.

To all whom it may concern:

Be it known that I, CHARLES S. RYERSON, a citizen of the United States, residing at Norfolk, in the county of Norfolk and State of Virginia, have invented new and useful Improvements in Automatic Closures for Conduit-Boxes, of which the following is a specification.

My present invention pertains to conduit boxes the covers of which are water tight and are constructed and arranged to take attachment plugs, and the object of the invention is the provision of an automatic closure designed and adapted when a plug is removed from the cover to immediately close the cover orifice in a tight manner with a view to excluding water, moisture, dust, and gas from the interior of the box.

With the foregoing in mind the invention in all of its details will be fully understood from the following description and claims when the same are read in connection with the drawings, hereby made a part hereof, in which:

Figure 1 is a plan view illustrating a conduit box cover equipped with my improvement; the automatic closure being shown in working position.

Fig. 2 is an elevation, partly in section, of the same.

Fig. 3 is an elevation showing the automatic closure in the position it is caused to assume when the attachment plug is connected with the box.

Similar numerals of reference designate corresponding parts in all of the views of the drawings.

On the conduit box 1 is a water tight cover 2, equipped with a threaded nipple 3 for the usual connection of an attachment plug 4. The nipple 3 surrounds the orifice 5 in the cover 2, and manual means have heretofore been provided for the closure of the orifice 5. In many instances, however, the party charged with the care of the conduit box has omitted after the removal of an attachment plug to place the manual closure means in position, and hence water or moisture or gas or dust has found its way into the interior of the box which is objectionable for obvious reasons.

My invention as before indicated seeks to accomplish the automatic and effectual closure of the orifice 5 when the attachment plug 4 is removed, and to the attainment of the said end I employ a cap 6 in which is a gasket 7; the said cap 6 being adapted to assume a position over the nipple 5 with the gasket 7 interposed between the edge of the cap and the surface of the cover 2. Preferably the gasket 7 is secured to the cap through the medium of a thin metal plate 8 which bears against the gasket, and screws which extends through the plate 8 and the gasket and the cap, and effects connection of the same as shown in Fig. 2.

The cap 6 is carried by a spring arm 9^a that is permanently attached to the cover 2, and the arrangement is such that when the attachment plug 4 is in working position the cap 6 will be maintained in position as shown in Fig. 3 with the spring arm under tension, and consequently when the plug attachment 4 is removed the spring arm 9^a will promptly move the cap 2 and hold it under pressure in the position shown in Fig. 2 with the result that the orifice of the box cover will be effectually closed in a gas-tight manner. In the present and preferred embodiment the spring arm 9^a is formed of two stretches of resilient wire 10 which stretches extend through the strap 11 secured on the cap 6, Fig. 1, are provided with humps 12 disposed at opposite sides of the strap with a view to preventing shifting of the cap endwise of the arm, and are merged at their forward ends into a transverse loop head 13 which by bearing on the upper side of the cap at opposite sides of the diameter thereof is adapted to prevent canting of the cap and in that way assure the cap firmly taking and remaining in its closed position. At their rear ends the stretches 10 merge into coils 14, disposed at right angles to the cover, and the said coils 14, in turn, merge into terminals 15, connected by screws 16 or other suitable means to the upper side of the cover.

It will be manifest from the foregoing that immediately following the removal of the attachment plug 4 the cap 6 will be automatically moved to and held in the position shown in Fig. 2 for the purpose before set forth, while when it is desired to replace the attachment plug the same may be readily accomplished as the closure trap is raised by hand, and then when the closure cap is released it will bear against the plug or the wire 20 leading therefrom in readiness to assume the closed position, when the plug attachment is removed.

Notwithstanding the practical advantages

that follow from the use of my novel automatic closure, the same is simple and inexpensive in construction and it will not, therefore, materially increase the cost of the conduit box cover.

Having described my invention what I claim and desire to secure by Letters-Patent is:

1. The combination of a conduit box having an orifice adapted to take an attachment plug, a cap positioned to be engaged by said plug and adapted on removal of the plug to close the orifice in the box, a spring arm connected to the box, coöperating means on the arm and the cap for holding the cap against endwise movement of the arm while permitting lateral movement of the cap on the arm; said arm also provided with a head opposed to and normally spaced from the cap and adapted to prevent undue canting of the cap while enabling the same to readily find its seat.

2. The combination of a conduit box having an orifice and adapted to take an attachment plug, a cap for closing the orifice when an attachment plug is removed from the box, a strap on the cap, and a spring arm at right angles to the strap having spaced stretches interposed between the strap and the upper side of the cap and humped at opposite sides of the strap to prevent movement of the cap in the direction of the length of the arm and terminating in a loop T-head disposed above and normally spaced from the upper side of the forward portion of the cap and merged at their rear ends into coiled springs which in turn merge into terminals connected with the box.

In testimony whereof I affix my signature.

CHARLES S. RYERSON.