No. 836,352. PATENTED NOV. 20, 1906.

C. E. YOUMANS.

SWITCH BOX.

APPLICATION FILED JUNE 13, 1904.

Fig. 1.

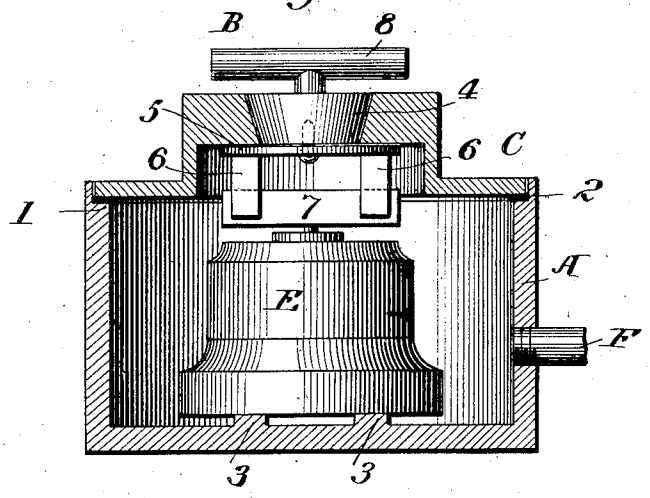


Fig. 2.

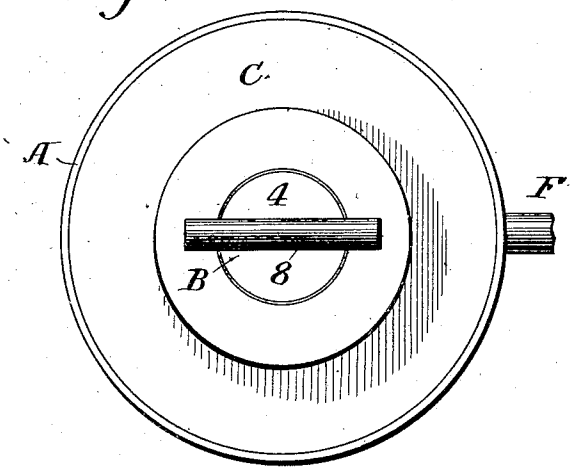
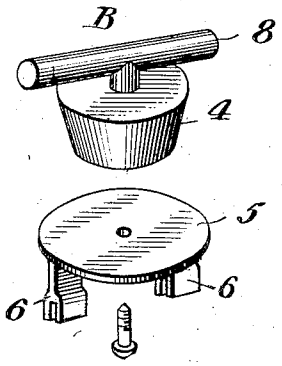


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

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SWITCH-BOX.

No. 836,352. Specification of Letters Patent. Patented Nov. 20, 1906.

Application filed June 13, 1904. Serial No. 212,408.

To all whom it may concern:

Be it known that I, CHARLES ERNEST YOUMANS, a citizen of the United States, residing at Yonkers, in the county of Westchester, State of New York, have invented certain new and useful Improvements in Switch-Boxes, of which the following is a specification.

This invention relates to protective boxes for electric switches.

The object of the invention is to provide a box of the character described which shall be water-tight to protect the switch against ravages of moisture where it is installed in wet or damp places, as on board ship, in breweries, greenhouses, &c., which may be manufactured independently of the switch, which is adapted to receive a large number of different switches of usual construction and without special adaptation to the box, which may be assembled with the switch with a minimum of care and labor, and which is provided with means whereby the switch may be operated from the exterior of the box when it is inclosed thereby.

The invention can be best set forth in connection with the accompanying drawings, of which—

Figure 1 is a vertical section of the box, showing the means secured therein for operating the switch and also a switch located within the box. Fig. 2 is a top plan view of the box, and Fig. 3 shows details in perspective of the parts composing the switch-operating means.

Referring to the drawings, the box comprises a body A, which may be circular, as shown, or of any other suitable conformation, and switch-operating means B, secured in a wall of the box at any suitable point, but which is preferably mounted in the lid C, as shown. Within the box is mounted a switch E, which in this case is shown as a rotary snap-switch of a well-known type. The construction of this switch, however, is immaterial to this invention, as it may be of any desired or suitable type. The conductors of the circuit in which the switch is connected may gain access to the box through a conduit F, making a tight joint with the box.

The lid C is secured to the body of the box in any suitable manner, so that a tight joint is formed, and this may be accomplished by counterboring the top of the box-body, so that the lid may fit therein and be supported by the shoulder 1, a gasket 2, of rubber or other suitable material, being interposed between the shoulder and the lid to render the joint water-tight. Preferably the switch is raised from the bottom of the box by ribs 3. The switch-operating means may comprise a conical plug fitting in a conical hole in the lid, a ground joint being formed between the lid and plug. This plug may be movably secured in the lid by means of a plate 5, secured to the bottom of the plug and bearing against the inside of the lid. Downwardly-extending projections 6 from the plate 5 engage with the handle 7 of the switch, whereby when the plug is turned by the handle 8 or other suitable operating means upon the exterior of the box the switch-handle 7 will be turned to operate the switch in a well-known manner.

Preferably the plate 5 and its projections 6 are made of hard fiber, so that the switch-box is entirely insulated from the switch, and the insulation of the parts may be greatly enhanced by filling the box with oil. The interstices about the conductors at their entrance to the box may be closed to prevent leakage of the oil by cement or other suitable material.

Without being limited to the precise construction shown, I claim—

1. A water-tight switch-box comprising a body portion and a lid having a tight joint therewith, said lid having a seat formed therein, a plug in said seat making a tight joint therewith, said plug being provided exteriorly with an operating-handle and interiorly with a plate adapted to hold said plug in its seat, and means on said plate adapted to engage with the operating-handle of an electric switch, the combination therewith of an electric switch having an operating-handle and inclosed in said box.

2. The combination with a water-tight box provided with a conduit making a tight joint therewith and with a plurality of supporting-ribs on its interior, and having a tight-jointed lid formed with a seat, a plug in said seat making a tight joint therewith, said plug being provided exteriorly with an operating-handle and interiorly with a plate adapted to hold said plug in its seat, and two forked projections mounted on said plate and adapted to operatively engage with the operating-

handle of an electric switch, of an electric switch provided with an operating-handle on its spindle, said switch arranged within said box and supported on said ribs.

3. The combination with an electric switch having an operating-handle mounted on its spindle, of a box comprising a body portion and a lid therefor, said box inclosing said switch but forming no part thereof, said lid formed with a central raised portion provided with a cavity adapted to house the handle of said switch, and having a conical hole in said raised portion forming a seat, a conical plug rotatably secured in said hole by a plate attached thereto, said plate bearing on the interior wall of said lid, a plurality of forked projections secured on said plate and adapted to operatively engage with the handle of said switch, and an operating-handle attached to the exterior of said plug.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHAS. ERNEST YOUMANS.

Witnesses:
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