March 13, 1928. 1,662,275

J. L. LANE

SWITCH BOX

Filed May 19, 1924 2 Sheets-Sheet 1

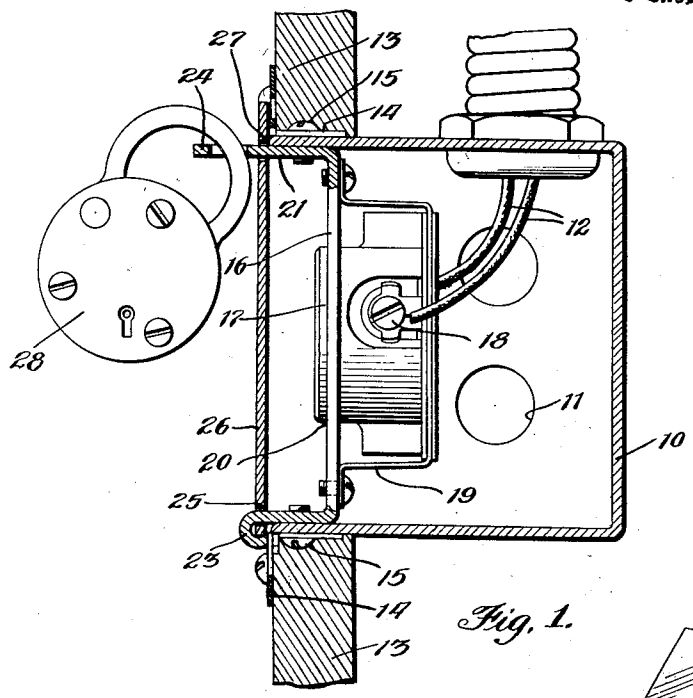


Fig. 1.

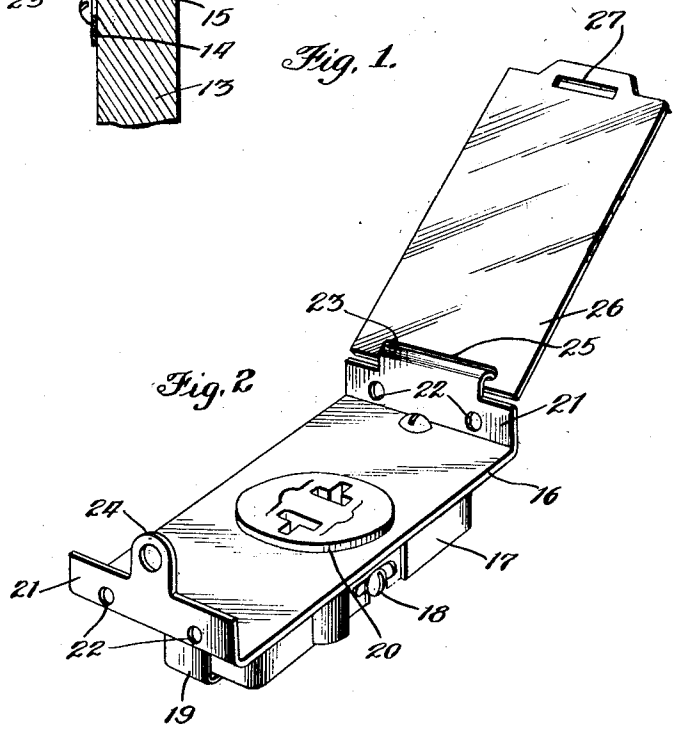


Fig. 2

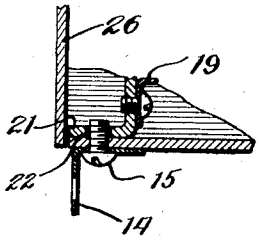


Fig. 3.

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Fig. 4.

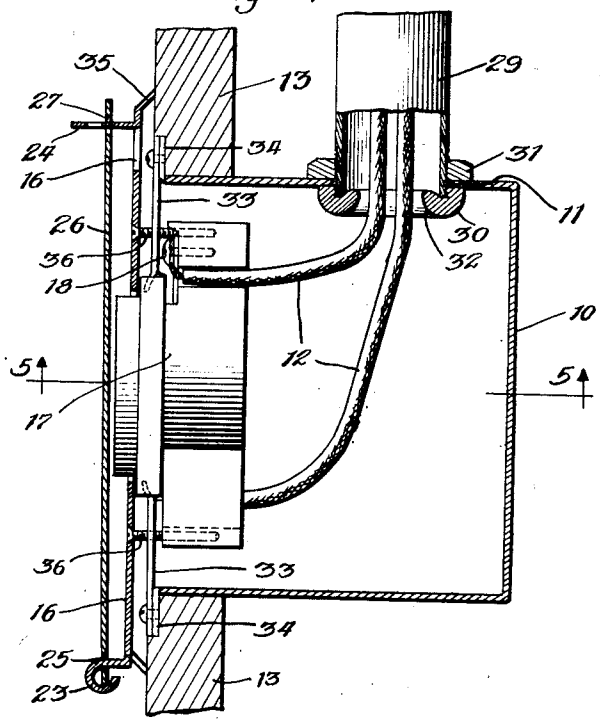
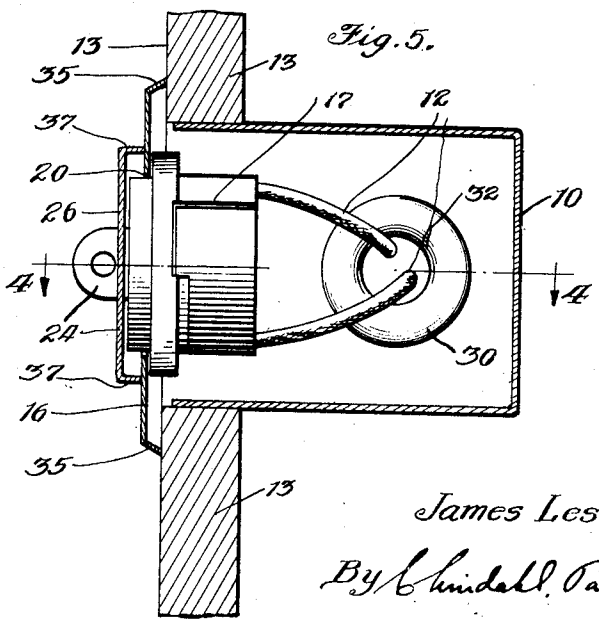


Fig. 5.



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UNITED STATES PATENT OFFICE.

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SWITCH BOX.

Application filed May 19, 1924. Serial No. 714,216.

The invention relates generally to switch boxes or outlet boxes, and has as its primary object the provision of a detachable locking means for closing the switch box against unauthorized use or meddling.

Heretofore, it has been customary to make switch boxes adapted to be locked with the means for closing and locking the same rigidly attached thereto. The boxes so made must be sold with the locking means attached, thereby making it necessary to determine in advance the precise number of ordinary switch boxes and boxes with the locking means needed. A further object therefore is to provide a locking means which forms part of an independent unit adapted to be made and sold separately from the switch box and to be easily and quickly secured thereto when desired.

Another object is to provide a detachable unit for switch boxes comprising a base plate and a cover plate, the base plate being adapted to close the switch box and give access to the plug receptable, and the cover plate to close said receptacle.

A more specific object is to provide a removable unit comprising a support adapted to be secured within the switch box, a plug socket mounted on said support, a cover plate hinged to one end of said support and adapted to close over the socket opening, and lock means for retaining the cover plate in closed position.

Another object is to provide a switch box unit and locking means of the above character which is neat in appearance, simple and inexpensive in construction, and convenient and advantageous in use.

Further objects and advantages will become apparent as the description proceeds.

In the drawings, Figure 1 is a vertical sectional view of a switch box embodying the features of my invention, said box being shown as mounted within the usual wall surface.

Fig. 2 is a perspective view of the removable unit.

Fig. 3 is a fragmentary sectional view showing the manner in which the unit may be removably attached to the switch box.

Fig. 4 is a section taken in the plane of line 4—4 of Fig. 5, and showing a modified form of my invention.

Fig. 5 is a section taken in the plane of line 5—5 of Fig. 4.

Referring first to the preferred form shown in Figs. 1 to 3 of the drawings, 10 represents a switch box of well known construction having a plurality of apertures 11 in its walls for admitting electrical conduits or leads 12. The box 10 is adapted to be mounted within many different kinds of walls or surfaces, such as the wall 13, and can be adjustably supported in any desired position by a pair of angular brackets 14, each of which is secured to the sides of the box by a pair of screws 15 in a manner well known.

Mounted within the box 10 is a support or base plate 16 for a socket or plug receptacle 17 of any suitable form and having the usual screw terminals 18 for connecting the leads 12. Two kinds of plug sockets adapted to receive either a screw plug or a push plug are in common use. I have chosen to illustrate the latter type. Preferably the plug receptacle 17 is supported on the inner side of the base plate 16 by a U-shaped bracket 19, and extends to the front of the box 10 through an aperture 20 in the plate. The base plate 16 comprises outwardly bent ends 21 fitting snugly between the walls of the box 10. The screws 15 for securing the brackets 14 to the box 10 extend through apertures 22 in the bent ends 21, and thus serve also to hold the base plate 16 in position.

To provide means for closing the box 10, one of the bent ends 21 of the base plate 16 is formed with a hinge curl 23, and the other with an outwardly extending apertured lug 24. The curl 23 extends through an elongated slot 25 in one end of a cover plate 26 to provide a hinge connection for the latter with the base plate 16. In its other end the cover plate 26 is provided with some means preferably a slot 27 adapted to fit around or against the lug 24 when closed. Any suitable means, such as a padlock 28 may be used in connection with the apertured lug 24 to hold or lock the cover plate 26 in closed position. The base plate 16, plug receptacle 17, and cover 26 in effect constitute a separate unit detachably fixed to the box 10 and removably held in place by the bracket screws 15.

In the modified form shown in Figs. 4 and 5, the box 10 is supported within the wall 13 by a rigid conduit 29 securely connected at the hole 11 by a bushing 30 and a

lock nut 31 in a manner well known. The plug receptacle 17 is supported by a pair of metallic strips 33 fitting over and adjustably secured to two opposite lateral ears 34 bent out from the front edge of the box 10.

The base plate 16 in this instance is formed with beveled edges 35 fitting closely against the front surface of the wall 13 about the box opening, and is removably secured to the strips 33 by screws 36. The curl 23 is bent in one end edge 35 of the plate 16, and the lug 24 is struck up from the other end. It will be seen that the curl 23 and lug 24 may be formed to locate the cover plate 26 at different distances from the base plate 16. To close the space between the base plate 16 and cover plate 26, the latter may be formed with inwardly bent sides 37.

It will be seen that I have provided a novel switch box which can be used as an ordinary open box, but which can be easily and quickly converted into a lock box for use in public places, such as the community basements of apartment houses, where it is desirable to lock the plug receptacle from common users or meddlers. This results in saving and convenience in the manufacture, sale and installation of the boxes. For example, the electrician need only install switch boxes of common construction, and can then attach locking units wherever desired. Where a number of switch boxes or sections are ganged together as is customary to form a single box of the desired size, a number of locking units can be attached side by side to their respective sections. On sale, since the locking units can be sold separately, only one type of switch box need be retained in stock.

While I have described the invention with considerable particularity for purposes of illustration, it is to be understood that various modifications and alternative constructions may be made which will fall within the spirit and scope of the invention as expressed in the appended claims.

I claim as my invention:—

1. A switch box comprising, in combination, a box open at one end and having a plurality of outlet apertures in its walls, supporting means for said box, a support removably mounted within the box, said support having outwardly bent ends, screw means for simultaneously securing said first mentioned means and support to said box, a plug receptacle secured to the inner side of said support, an outwardly extending lug formed on one end of said support, a cover hinged to the other end of said support and fitting over said lug, and means adapted to hold said cover in closed position.

2. A switch box comprising, in combination, a box, means for supporting said box, screws for securing said means to opposite sides of said box, a support secured within the box by said screws, a plug receptacle mounted on said support within the box, a cover hinged to said support for closing said box, and locking means engaging said support to hold said cover in closed position.

3. A switch box comprising, in combination, an apertured box, a support having outwardly bent ends fitting within the open end of said box, means for removably securing said support in place, a plug receptacle mounted on said support, an apertured lug formed on one of the bent ends of said support, a cover plate hinged to the other bent end of said support and adapted to fit next to said lug, and locking means engaging said lug to retain said cover in closed position.

4. A unit for switch boxes comprising, in combination, a support having bent ends, one end of which is formed with an apertured lug and the other end of which is formed with a hinge curl and said ends having a plurality of apertures to facilitate mounting said support in place, a plug receptacle mounted on the back side of said support and extending therethrough, a cover plate pivotally secured at one end to said curl and having a slot in its other end adapted to fit over said lug, and means engaging said lug adapted to hold the cover plate in closed or locked position.

5. A unit for switches boxes comprising, in combination, a support having bent ends formed with securing apertures, an apertured lug formed on one end, a cover plate hinged to the other end, a plug receptacle mounted on the back of said support and extending therethrough, and means engaging said lug to retain said plate in closed position.

In testimony whereof, I have hereunto affixed my signature.

JAMES LESLIE LANE.