E. J. DUSTMAN.

SWITCH BOX.

APPLICATION FILED APR. 27, 1907.

904,320.

Patented Nov. 17, 1908.

Fig. 1.

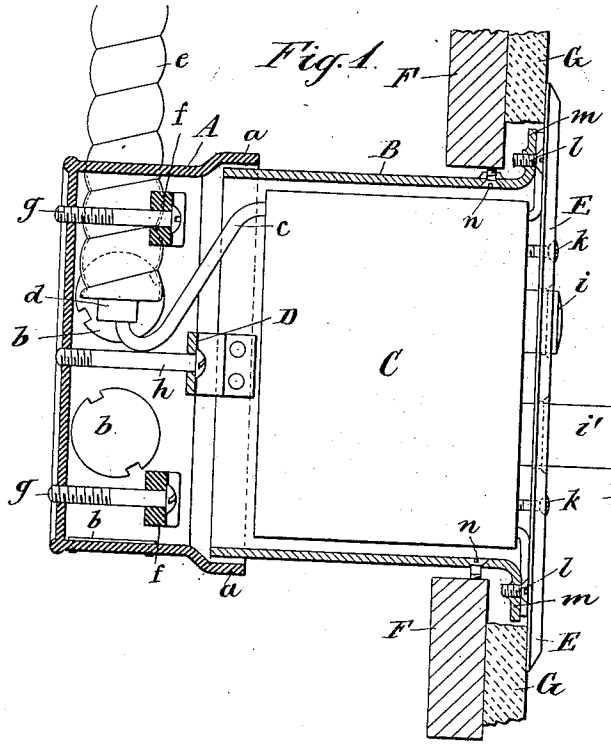


Fig. 2.

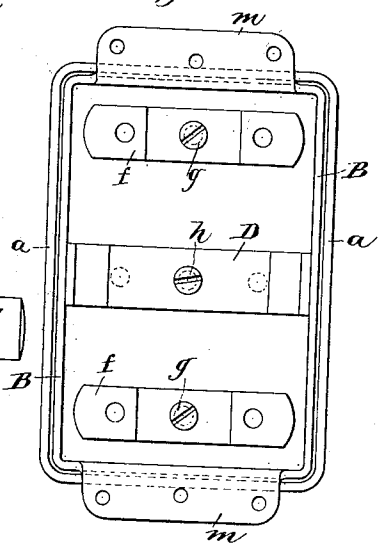


Fig. 3.

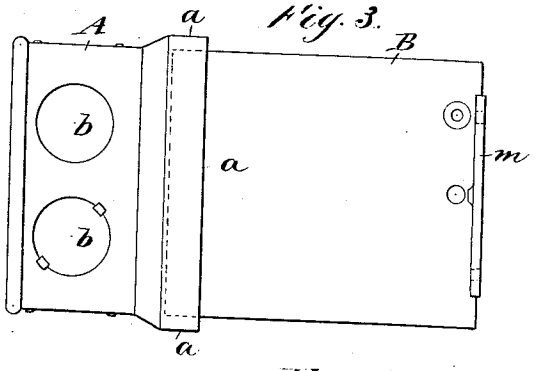
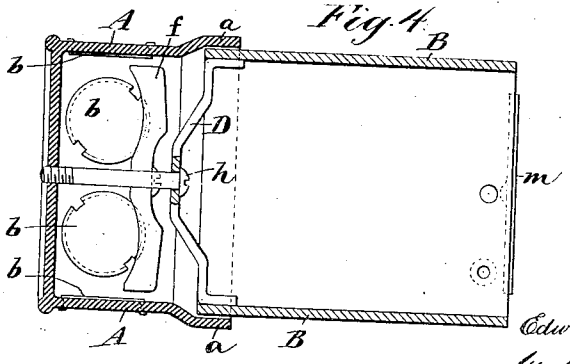


Fig. 4.



Witnesses:
F. J. Greene.
H. J. Peterson.

Inventor:
Edward J. Dustman,
by his attorney
Charles R. Seaile.

UNITED STATES PATENT OFFICE.

EDWARD J. DUSTMAN, OF NEW YORK, N. Y.

SWITCH-BOX.

No. 904,320. Specification of Letters Patent. Patented Nov. 17, 1908.

Application filed April 27, 1907. Serial No. 370,545.

To all whom it may concern:

Be it known that I, EDWARD J. DUSTMAN, a citizen of the United States, residing at the borough of Manhattan, city of New York, in the county and State of New York, have invented certain new and useful Improvements in Switch-Boxes, of which the following, taken in connection with the accompanying drawings, and the reference characters marked thereon, is a full, clear, and exact specification, sufficient to enable others skilled in the art to make and use my invention.

This invention has relation to switch boxes such as are employed in walls, partitions, and in other similar situations to inclose the switch mechanism, of whatever character that may be, and to hold the front plate near the outer face of the wall or partition to present the push buttons in proper and convenient position for operation to turn on or shut off an electric current.

The switch box may be employed in connection with electric conductors for lighting, signaling or any analogous purposes.

The object of my invention is to provide or produce a simple, cheap, efficient and convenient switch box within which the wires may be easily and quickly coupled with the switch mechanism or uncoupled therefrom, as may be desired, which box will adapt itself to different depths of cavity within which it may be located and which will permit the front plate to be readily and perfectly adjusted against the face of the wall or partition around the opening therein or therethrough and securely held in proper position by a single central point of fastening and by reason of the peculiar construction of the box.

To accomplish all of the foregoing objects and to secure other and further advantages in the matters of construction, operation and use, my improvements involve certain new and useful arrangements or combinations of parts and special features of construction as will be herein first fully described and then pointed out in the claims.

In the accompanying drawings forming part of this specification, Figure 1 is an axial view, in section, showing my improved box located in a partition. Fig. 2 is a plan of the box with the face plate and switch mechanism removed. Fig. 3 is a side view of the box corresponding with Figs. 1 and 2, omitting the face plate and the push buttons of Fig. 1. Fig. 4 is a longitudinal sectional plan of the box on a plane at right angles with that of Fig. 1 and showing the means of securing the telescoping sections together.

In these figures like reference characters, wherever they occur, are employed to indicate corresponding parts.

The box is preferably made of metal, as is usual in this general class of switch boxes, and in its improved form, it comprises two sections or separate parts represented at A and B. The two sections together constitute a box of sufficient depth to properly contain the wires and the casing which incloses the mechanism by which the switching is effected. C represents the interior casing for the switch mechanism, the same being usually made of porcelain or some suitable nonconducting material.

The two sections, A and B, are so constructed that one will receive the end of the other, allowing sufficient play between the two for telescoping and for sidewise movements of one with respect to the other. In the form selected for illustration, the section A is enlarged somewhat, as at *a*, and this enlargement receives one end of the section B; but obviously the enlargement might be made upon section B to fit over the margin of section A, if so preferred. The section A receives the wire, being provided with suitable openings or places where openings may be easily made, as at *b*, *b*, by merely breaking out the material, after the manner usually adopted in ordinary forms of switch boxes.

The ordinary form of switch box made in one piece or of nonseparable parts is so deep and of such narrow proportions as to render it exceedingly difficult to introduce and locate and properly secure the wiring, causing much delay in the locating of the box and frequently resulting in imperfect connections being made. By making the section A short and therefore shallow, as indicated, ample facility is afforded for introducing and securing the wiring, which may be easily and perfectly accomplished without difficulty or delay. One of the wires is represented at *c*. Around this is the usual nonconducting envelop, *d*, and over this is the metal or other protector, *e*, all of the usual form. The protector with its wire is introduced through an opening made in the wall of the section A, as above indicated, at the most convenient portion, and is securely anchored in place by a yoke, *f*, which is pinched down upon it

by an anchoring screw, *g*. The section A is supplied with two of these yokes, as indicated in Fig. 2, and each yoke is intended to bear upon a couple of parallel coverings, as will be understood. But the lines may enter from opposite directions, when one yoke will be employed for holding one line and the other for another line.

The inner casing C contains the switch mechanism, which, as in the ordinary forms, has two push buttons, one represented at *i* and the other at i^1. Of these, when one is pushed in the current is shut off and the other projected to be subsequently pushed in when it is desired to turn on the current. This manner of operating the switch mechanism is well understood.

The section B is provided with a cross bar, D, the same being perforated at its central part and intended to receive a coupling screw, *h*, which enters a threaded opening in the base of the section A and serves to couple the two sections together. After the conductors have been anchored in the section A the section B is introduced and the coupling screw *h* turned to the desired point. The casing C with the switch mechanism therein is then introduced and connections made with the ends of the wire.

E represents the face or covering plate intended to fit against the face of the wall. That this fitting may be as perfect as possible, although the face of the wall may not be perfectly true, the box being secured in the opening in any desirable way, the plate E is secured in place by suitable screws, represented at *k*, *k*, which enter tangs connected with the casing C which in turn is rigidly connected with the box by screws, as at *l*, *l*, entering threaded perforations in the extended portions *m*, *m* with which the section B is provided.

When the face plate is to be applied, the screws *k*, *k* are turned in tight enough to bring the plate to touch fairly all around the margin of the opening in the wall or partition, the section B yielding in either direction sufficient to enable this adjustment to be made without disturbing the section A of the box in which the conductors are anchored. To permit of this, the cross piece D is slightly movable on the coupling screw *h* and the end of the section B within the section A may incline to the necessary degree.

It is frequently necessary to anchor the box in the opening provided for it, and the means of accomplishing this will vary with the character of the opening. In Fig. 1 I have shown the box as located in an opening in a partition, of which F, F represent the laths and G, G the plastering. In this case screws, as *n*, passing through the wall of section B and entering the laths will serve to steady the box in place; but any other suitable means of securing the box against movement in the opening or cavity provided for its reception may be adopted.

Having now fully described my invention, what I claim as new herein, is:

1. In a switch box of the character described, two separate sections one having an enlargement receiving the end of the other, a cross bar and coaxial means on which said cross bar has limited movement, said cross bar and means securing said sections together and allowing inclination of one section relatively to the other, and a face plate covering the outer end of the outer section.

2. In a switch box of the character described, two separate sections one having an enlargement receiving the end of the other, a cross bar and coaxial means on which said cross bar has limited movement, said cross bar and means securing said sections together and allowing inclination of one section relatively to the other, a switch-mechanism casing within the outer section, a face plate covering the outer end of the outer section, and means securing said face plate to said casing.

3. In a switch box of the character described, two separate sections one having an enlargement receiving the end of the other, a cross bar and coaxial means on which said cross bar has limited movement, said cross bar and means securing said sections together and allowing inclination of one section relatively to the other, a switch-mechanism casing within the outer section, a face plate covering the outer end of the outer section, and means securing said face plate to said casing, said casing having tangs secured to the outer box section.

In testimony that I claim the invention above set forth I affix my signature, in presence of two witnesses.

EDWARD J. DUSTMAN.

Witnesses:

CHARLES R. SEARLE,

CHAS. A. HAUCK.