

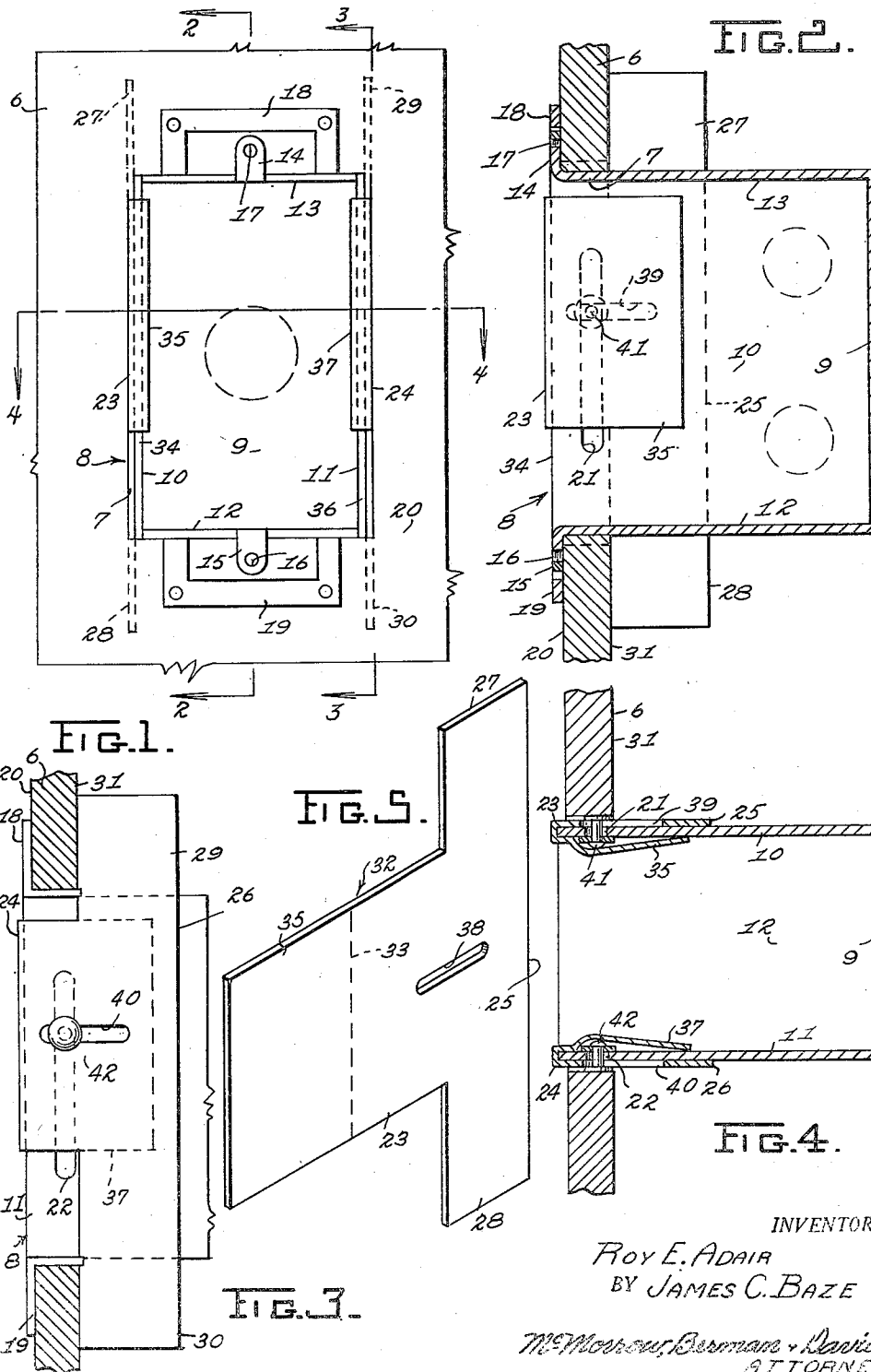
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ELECTRIC SWITCH BOX SUPPORT

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ELECTRIC SWITCH BOX SUPPORT

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This invention relates to supporting and attachment means for switch casings and boxes, and particularly to an electric switch box support.

The main object of my invention is to provide means for securing an electric switch box in position in a cavity of a wall, and specially in such types of wall which preclude the use of bolts and screws for direct mounting of the switch box thereto and therein.

Another object is to provide a type of support which is preferably used in pairs with one disposed at each side of the switch box to hold the latter in desired position.

A further object is to have a pair of supports of the character indicated which are anchored in place by virtue of their form and their direct attachment to the switch box involved, which anchored condition retroacts on the latter and thus secures the same rigidly in place within a predetermined opening in the wall provided for the switch box.

It is also an object to have two opposed supports made of a pair of similar stamped metal plates bent to envelop or clasp the sides of the switch box and be secured thereto in concealed manner.

Other objects and advantages of the invention will appear in further detail as the specification proceeds.

In order to facilitate ready comprehension of this invention for a proper appreciation of the salient features thereof, the invention is illustrated on the accompanying drawing forming part hereof, and in which:

Figure 1 is a front elevation of a switch box when in place in the opening of a wall and illustrating the same held in place by means of a pair of supports made according to the present invention and embodying the same in a practical form.

Figure 2 is a vertical section taken on line 2—2 in Figure 1;

Figure 3 is another vertical section taken on line 3—3 in Figure 1, and virtually illustrating one of the supports of the invention in side elevation;

Figure 4 is a transverse section taken on line 4—4 in Figure 1;

Figure 5 is a perspective view of a blank which when bent forms one of the supports embodying the invention.

In the views, the same reference numerals indicate the same or like parts.

When switch boxes are installed in walls of

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sheet rock, beaver board and the like, difficulty is usually encountered when attempting to secure the boxes of this character in place, because walls of such compositions will not hold screws, especially when such a wall merely has a large opening into which the box will fit, but no stud or joist or any other wall-supporting member adjacent thereto. This situation creates a serious problem, inasmuch as walls of this character frequently form partitions in modern houses and use of electricity is so common that switch boxes must be installed substantially everywhere.

Upon considering this problem, it has occurred to us that special support means should be available for engaging with the sides of a switch box and upon the inside surfaces of the wall involved in such fashion as to anchor the switch box in place. As a result, we have found it quite feasible to produce a special kind of support for each side of a switch box by which to secure the same to walls of sheet rock, beaver board, plaster and similar composition walls, as will now be more fully described.

Hence, in the practice of our invention, and referring again to the drawing, at 6 a limited area of the sheet rock or similar wall is indicated in which is formed a substantially rectangular opening 7 within which a switch box, generally indicated at 8, is located. The mentioned electric switch box primarily includes a back 9, upright side walls 10 and 11, a bottom 12 and a top 13, the top and bottom having integrally upwardly and downwardly-bent lugs 14 and 15 provided with threaded holes 16, 17 into which screws may be introduced when securing switch plates or the like to the switch box 8 when the same is completely installed and electrical devices have been properly disposed in the box. Upon the top and the bottom are also welded or otherwise secured a pair of brackets 18 and 19 substantially disposed in the same plane as lugs 14 and 15 and together with the latter forming front stops engaging against the front surface 20 of the board wall 6 to provide a predetermined position for switch box 8. Obviously, the stop means formed by the lugs 14 and 15 and brackets 18 and 19 will not suffice to hold the switch box in place, but merely prevent the same from falling through the opening 7 inwardly of the wall, and the means for cooperating with the stop members just described and also preventing outward displacement of the switch box from the wall opening are provided by the invention now specifically to be described.

In both side walls 10 and 11 adjacent the for-

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ward edges thereof, a pair of vertical, elongated slots 21 and 22 are formed. As may be noted in Figure 1, the side walls 10 and 11 are spaced slight distances within the sides of opening 7 and wall 6 which serve to accommodate the thickness of a pair of anchoring plates 23 and 24 which extend rearwardly between the side walls 10 and 11 and the side edges of the opening along the outer sides of the mentioned side walls to a distance inwardly along said side walls indicated at 25, but immediately rearwardly, that is, upon the rear surface 31 of wall 6, the rearward extension 25 on plate 23 and 31 on plate 24 is in each case upwardly and downwardly extended to form anchoring wings or lugs 27, 28 in the case of plate 23, and 29 and 30 in the case of plate 24. Each of plates 23 and 24 is made by bending either to the right or the left a plate, generally indicated at 32 in Figure 5, along a line indicated in broken lines at 33. In the case of plate 23, the outer end of the blank 32 forms a leg which is bent toward the right to envelop the forward edge 34 of wall 10 and extend in upon the inside of that wall in the form of a covering plate or leg 35 largely covering the vertical slot 21 in wall 10. In the opposite fashion, when the blank 32 is bent at 33 toward the left to form plate 24, and envelop the front edge 36 of wall 11, the bent portion of the plate will form the inside covering plate or leg 37 largely covering the slot 22 in wall 11 upon the inside thereof. The plate 23 may be considered to include a second leg which includes the part of plate 25 on the outside of the box and being the portion of the plate between line 33 and the edge at 25 of the plate so that the two legs embrace the edge of the side 10 of the box. Anchoring lugs 27 and 28 extend in opposite directions from the second leg of the plate 23. The inwardly-extending covering plates or legs 35 and 37 will serve a further function of covering another slot in each case, inasmuch as the blank 32 contains a transverse intermediate slot 38 disposed intermediate the inner end 25 and the bend 33 which in the case of plate 23 becomes slot 39 and in the case of plate 24, horizontal slot 40, a pair of loose rivets 41 and 42 being located in the slots and engaging with the side walls 10 and 11 by extending through the vertical slots 21 and 22 therein, and in this manner securing plate 23 to wall 10 and plate 24 to wall 11. In other words, each rivet extends through the vertical slot in the side wall of the switch box 8 at one side and also through the outer portion of anchoring plate 23, for example, and in the opposite plate 24 through the horizontal slot therein outside wall 11 and through the vertical side in the latter wall, so that in each case the side wall is anchored to the vertical wall 6 by means of the plate secured to the side wall of the switch box involved. Due to the vertical length of the side wall slots 21 and 22, it is obvious that during installation the anchoring plates 23 and 24 may be dropped so that the rivets reach substantially the lower ends of the vertical slots when the upper anchoring wings or lugs 27 and 29 will clear the upper portion of the opening 7 in wall 6, which primarily allows installation of the box and then the accompanying anchoring plates 23 and 24, and after the box is in place the plates are pushed inwardly until they are perfectly vertical and the upper lugs or wings 27 and 29 can be drawn upwardly behind the rear surface 31 of wall 6, when the anchoring plates will be held in place by friction and will prevent displacement of switch box 8 outwardly, while the upper and lower brackets

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18 and 19 with lugs 14 and 15 will prevent inward displacement of the box, thus anchoring it firmly in position in wall 6. Due to the inward extension of the covering ends or plates 35 and 37, they obviously cover the horizontal slots 39 and 40 in the anchoring plates, as well as the rivets extending through the slots at either side of the switch box.

Manifestly, variations may be resorted to and parts and features may be modified or used without others within the scope of the appended claims.

Having now fully described our invention, we claim:

1. A support for each side of an electric switch box comprising top, bottom and side walls and adapted to occupy an opening in a building wall, said support including a plate member extending a distance inwardly between each side wall of the switch box and the adjacent sides of the building wall opening and bent over the near or forward vertical edge of the respectively-adjacent side wall of said switch box to form a covering plate extending a predetermined distance into the latter box upon the inner side of the side wall thereof, and a pair of integral anchoring lugs or wings extending upwardly and downwardly from the inner end of the plate member within said building wall above and below the opening therein and engaging against the inner side of said building wall to prevent outward displacement of said switch box from the opening therein, each side wall of said switch box having an elongated vertical slot adjacent and parallel to the near or forward edge thereof, and each plate member having an elongated horizontal slot extending inwardly from the forward bent portion thereof to a point between the upwardly and downwardly-directed anchoring lugs thereof for receiving a rivet extending through the horizontal slot and the vertical slot in the side wall of the switch box respectively adjacent thereto.

2. Support means for an electric switch box comprising top, bottom and side walls and adapted to occupy an opening in a building wall with the side walls of said switch box provided with individual elongated vertical slots spaced within and parallel to the near or forward edges of said side walls, said support means including a pair of plate members extending a distance inwardly between each side wall of the switch box and the adjacent side of the building wall opening from the front edges of the side walls of the switch box and bent over said forward edges of said side walls and directed inwardly upon the inner sides thereof to form covering plates extending into the switch box, a pair of elongated horizontal slots being provided individually in said plate members extending from within the bent portions thereof a distance inwardly upon the exterior sides of the side walls of the switch box, and a pair of integral anchoring lugs or wings extending upwardly and downwardly from the inner end of each plate member within said building wall above and below the opening therein and engaging against the inner side thereof to prevent outward displacement of said switch box from said opening, the slots in said plate members intersecting the slots in the side walls of the switch box and serving to receive interconnecting rivets to secure said side walls to said plate members.

3. The combination with a box including a pair of spaced sides and each having one end free, of a means for supporting said box in an opening in

a wall comprising a plate member including a pair of spaced legs receiving and embracing therebetween the free end of each of said sides, a pin extending through and mounted in each of said sides adjacent the free end thereof and in one of the spaced legs of each of said plate members for sliding movement to adjustably connect said side and leg together, and opposed anchoring lugs projecting from said one of the spaced legs of each of said plate members and bearing against the adjacent portions of the bounding wall of said wall opening for retaining the box in position in the wall opening.

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