Sept. 11, 1956 E. H. WEBER 2,762,591

OUTLET BOX ANCHOR

Filed Nov. 10, 1951

Fig. 2

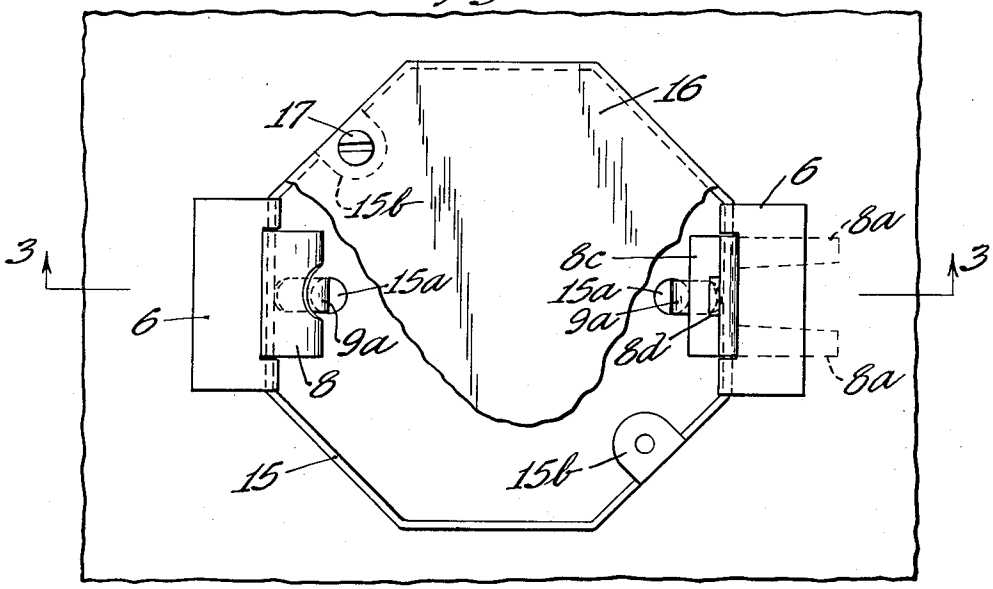


Fig. 3

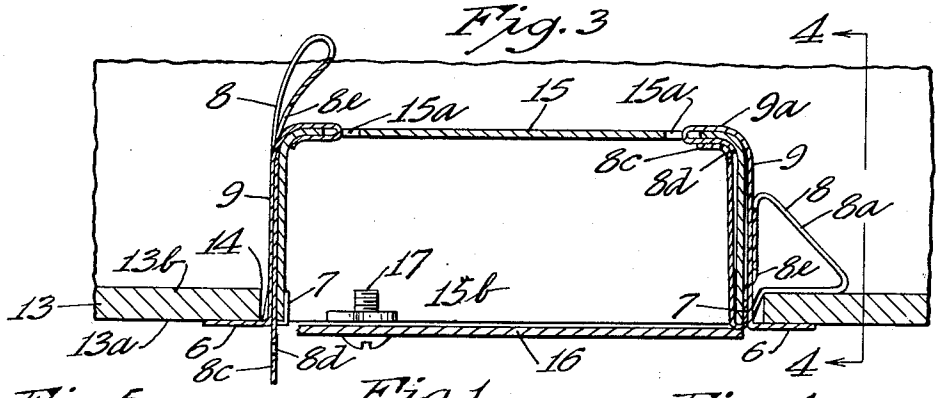


Fig. 5

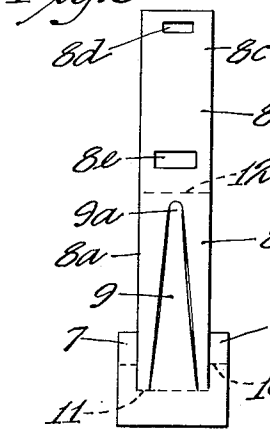


Fig. 1

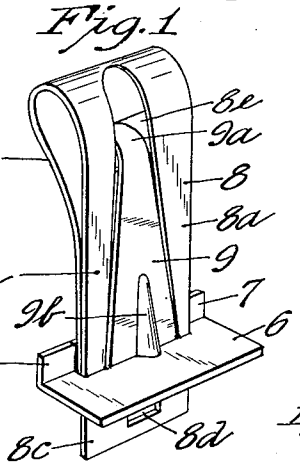
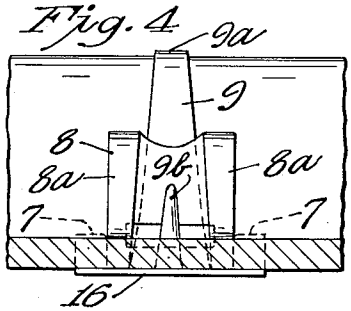


Fig. 4



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OUTLET BOX ANCHOR

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4 Claims. (Cl. 248—27)

This invention relates to mounting brackets for use in mounting such boxes as outlet boxes in wall openings.

It is the general object of this invention to provide a new and improved bracket of cheap and simple construction which can be employed without the use of screws, bolts, or the like, to mount such boxes as outlet boxes in wall openings through access to only one surface of the wall.

Another object is to provide such a bracket which can be so employed without the use of screws or bolts to firmly anchor the box to the wall.

This application is a companion application to my application Serial No. 255,821 entitled "Bracket for Supporting Outlet Box" executed of even date herewith and this application contains subject matter which is in part common to that found in my said other application, the claims of said common subject matter being found in my said other application.

The objects and advantages of the invention will more fully appear from the following description made in connection with the accompanying drawings wherein like reference characters refer to the same or similar parts through the various views and in which:

Fig. 1 is a perspective view illustrating one of the brackets of my invention as it will appear before being applied to a box.

Fig. 2 is a view in front elevation showing a portion of a wall with an electrical conduit box mounted in place within an opening in the wall by means of a pair of my brackets.

Fig. 3 is a vertical section taken substantially on the line 3—3 of Fig. 2, one of the brackets securing the left portion of the box to the wall being shown in the position it will assume while the box is being placed within the wall opening and the bracket securing the right side of the box to the wall being shown in the position it will assume after the box has been anchored in place.

Fig. 4 is a vertical section taken on the line 4—4 of Fig. 3, as is indicated by the arrows and;

Fig. 5 is a plan view of a blank from which one of the brackets is formed.

Referring to the drawings, the bracket as illustrated includes a rectangular base 6, having at one side thereof a pair of up-turned hooks 7, joining the same adjacent the two ends thereof. Between the two hooks 7, an elongated loop-like arm 8 joins the same side of the base 6 and this arm extends generally normal to the base. The arm 8 has an inwardly extending forked portion 8*a*, the prongs of which are tapered and the narrower ends of which prongs join the base. The inwardly extending portion 8*a* joins an outwardly extending portion 8*b* which projects outwardly beyond the base 6 and terminates in a tab 8*c*, which has an aperture 8*d* therein for a purpose presently to appear. The arm 8 is reversely bent on itself at the juncture of the inwardly extending portion 8*a* with the outwardly extending portion 8*b* and the reversely bent section of the arm as the bracket is originally formed is preferably bent somewhat out of

the plane of the inwardly extending portion 8*a* in a direction opposite the base 6, as is best shown in Fig. 1 and at the left portion of Fig. 3. Between the two prongs of the inwardly extending portion 8*a* of arm 8 a box engaging arm 9 joins the same side of the base 6 as does the loop-like arm 8 and the hooks 7. This box engaging arm 9 extends for the most part substantially normal to the base 6 in an inward direction and is of tapered construction towards its end. The end portion of the arm 9 forms a readily bendable tongue 9*a* having a purpose presently to appear. The outer part of the arm 9 immediately adjoining the base 6 is provided with a crimp 9*b* to strengthen the same and prevent it from being readily bent at this point. Due to the tapered construction of the forked inwardly extending portion 8*a* of the loop-like arm 8, this inwardly extending portion is fairly weak compared to the remainder of this arm and is accordingly readily bendable. An opening 8*e* is formed in the outwardly extending portion 8*b* of arm 8 and the tongue 9*a* of arm 9 normally projects through this opening.

Referring now to the blank shown in Fig. 5, from which the bracket is formed, this blank is formed of sheet metal and will be stamped out in the shape shown. In producing the bracket from the stamping, the hooks 7 are bent upwardly on the dotted line 10, and the arms 8 and 9 are bent upwardly on the dotted line 11. A reverse bend is made on the line 12 and the portion 8*b* is brought down against the portion 8*a*, while the tongue 9*a* of the arm 9 is given a partially reverse curvature and carried through the opening 8*e*.

In Figs. 3 and 4, there is shown a portion of a wall 13 having an outer surface 13*a* and an inner surface 13*b*. An opening 14 is cut in the wall 13 of a size to receive an ordinary electrical conduit box 15, this box being shown as being of octagonal shape and as having an inner bottom portion provided with a number of openings 15*a* in accordance with the usual practice. A cover 16 is provided for the box 15 and after the box is applied to the wall, the cover may be secured to the box as by means of screws 17 received in inwardly projecting tapped lugs 15*b*, formed at opposite points at the outer edge of the box 15.

Preparatory to mounting the conduit box 15 in the wall opening 14, two of my brackets will first be applied to the box at opposite points thereon, these brackets being secured to the box as the left hand bracket shown in Fig. 3 is applied thereto. In applying a bracket to the box, the base 6 will be disposed laterally of the box wall and the two hooks 7 will be engaged over the outer portion of the wall. The loop-like arm will be disposed against the wall of the box as will the major portion of the box engaging arm 9. The tongue 9*a* of the arm 9 will be inserted through one of the openings 15*a* of the box and this tongue will be reversely bent so that opposite portions of the tongue engage and are crimped against opposite surfaces at the inner portion of the box. The end tab 8*c* of the bracket will be disposed outwardly of the base 6.

When two of the brackets have been secured in this manner at opposite sides of the outlet box 15, the outlet box with the brackets attached will be brought into juxtaposition outwardly of the wall opening 14 and the box will then be pushed into the wall opening to carry the two bracket bases 6 into engagement with the outer surface 13*a* of the wall. To anchor the box firmly into position at one side of the box, a tool such as a screw driver will be run through the opening 8*d* of one of the brackets, and the end tab 8*c* by use of the screw driver, will be drawn outwardly away from the outer side 13*a* of the wall, thereby drawing an additional section of the outwardly extending portion 8*b* of the loop-like arm 8

outwardly beyond the base 6. As this occurs, the inwardly extending portion 8*a* of the loop-like arm 8 will bend causing a part of the arm 8 to bow laterally from the side of the box, the side of the box in fact producing somewhat of a camming action to assist in producing this bow. Eventually the intermediate portion of the arm 8 will assume about the appearance of this portion of the arm 8 shown at the right hand side of Fig. 3, and of course a surface of the loop-like arm will be brought into tight engagement with the inner surface 13*b* of the wall and in opposition to the base 6. When both brackets have been secured in the manner described, the end tabs 8*c* of the brackets, together with such additional sections of the arm 8 as extend outwardly beyond the base 6 may be cut off or bent back and forth until they break off, or may be bent inwardly against the inner side of the wall of the box as shown at the right of Fig. 3, and the installation of the box is then complete, the two brackets firmly anchoring the box in the wall.

It should be noted that by use of my brackets, the box can be completely installed and anchored in the wall by access only to one side of the wall. In other words, it is not necessary in installing an outlet box for a workman to have access to both sides of the wall within which the box is to be placed. Also, no screws or bolts need be used to firmly anchor the box in position.

After the box has been anchored in position in the wall opening the cover 16 may be readily applied to close the box 15. While the bracket of the present invention is primarily intended for use in installing such boxes as electrical conduit boxes, switch boxes and the like in wall openings, it is also capable of use in installing other boxes and other devices in wall openings. It will be seen that a highly efficient bracket has been provided.

It will of course be understood that various changes may be made in the form, details, arrangement, and proportions of the parts without departure from the scope of the present invention, which, generally stated, consists in the manner shown, and described, and set forth in the appended claims.

What is claimed is:

1. A supporting bracket for mounting an outlet box in an opening in a wall comprising, a base adapted to engage a front surface of the wall, an arm joined to said base and adapted to extend generally normal thereto in an inward direction through said opening when in wall engaging position, said arm having an extended portion providing a reversely bent tongue of bendable material for inserting through an opening through the internal structure of a box and crimping against two opposite surfaces thereof, a hook joined to said base for extending over the forward edge of a side wall of the box, an arm having a loop, at least a portion thereof being constructed of bendable material, said arm also being joined to said base and extending generally normal thereto in the same direction as said first named arm and having an end tab disposed outwardly from the base, said two arms being insertable with the box within the wall opening to bring said base into engagement with the front surface of the wall and said tab being engageable to pull outwardly of the wall surface in relative movement with said base whereby to cause an inner portion of the looped arm to buckle and engage the inner portion of the wall as the sole fastening means in clinching relation with said base.

2. A supporting bracket for mounting an outlet box in an opening in a wall comprising a base adapted to engage a front surface of the wall, a box engaging arm of generally triangular shape joined to an edge of said base and projecting laterally therefrom to extend within said opening, said box engaging arm having a bendable tongue at its inner end insertable through an opening in the internal structure of the box for crimping against two opposite surfaces of the box, a reversely bent arm also joined to an edge of said base and projecting in the general direction of said box engaging arm, said reversely bent arm having a uniformly increasing area from said base inwardly up to the bent portion and having the reverse portion bent against the inwardly extending portion adjacent the juncture edge of said base and extending outwardly past the base so as to lie forwardly of the wall when mounting a box, whereby the outwardly extending reverse portion will be engageable to draw a further part of the outwardly extending portion beyond the base to cause the inwardly extending portion of the arm to move in contact with the box and cause a portion thereof to bend away from the box and into engagement with the inner surface of the wall in opposition to said base.

3. A supporting bracket for mounting a box in an opening in a wall comprising, a base adapted to contact a front surface adjacent said opening, a box engaging arm joined to said base and projecting laterally therefrom for clamping in crimped engagement the bracket to the outside of said box, a distortable arm also joined to said base and projecting laterally in the same general direction as said first mentioned arm, said distortable arm having a continuously tapered cross section adapted to lie closely adjacent the outside of said box then bent reversely against itself to form an end tab extending laterally across the base in a direction opposite that of said box engaging arm, said two arms being insertable with the box into the wall opening to cause the base to bear against the front surface of the wall, whereupon said end tab can be grasped and the distortable arm drawn outwardly in sliding contact with the outside of the box to cause a medial portion thereof to bow away from said side surface of the box and tightly engage the rear side of the wall in opposition to said base.

4. A supporting bracket for mounting a standard electrical connection box in an opening in a wall comprising a generally rectangular wall-engaging base having adjacent its two ends and at one side thereof angular tabs forming hooks, an elongated and tapered arm joined to the same side of the wall-engaging base in inwardly spaced relation from the said hooks, said arm being reversely bendable at its outer end for insertion through an opening at the rear of said electric box, and a distortable arm joined to said base at the same side as said first mentioned arm, the latter arm being tapered from the rear of the box toward its juncture with the base.

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