Nov. 9, 1948. C. W. PALLAS 2,453,535

MOUNTING ATTACHMENT FOR ELECTRICAL OUTLET BOXES

Filed Dec. 27, 1946 2 Sheets-Sheet 1

Fig. 1.

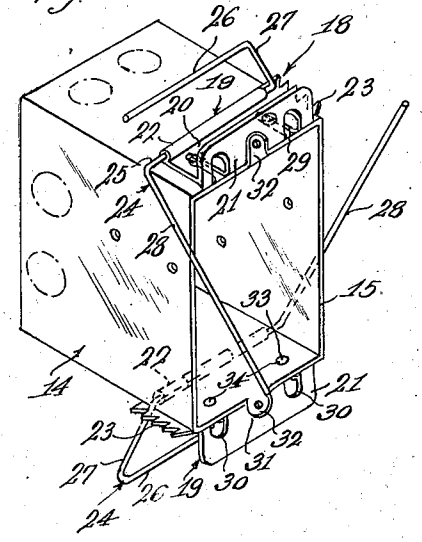


Fig. 2.

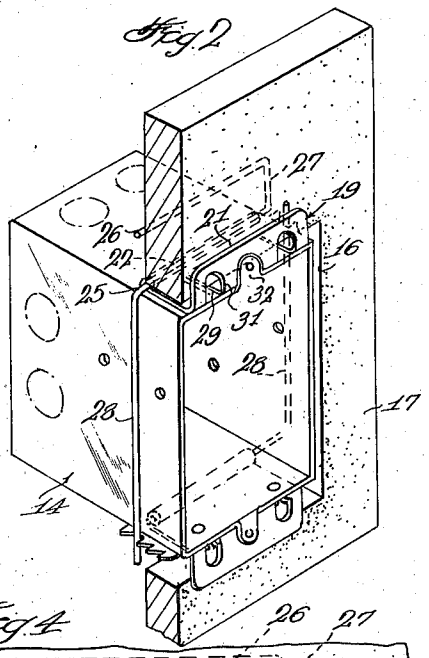


Fig. 3.

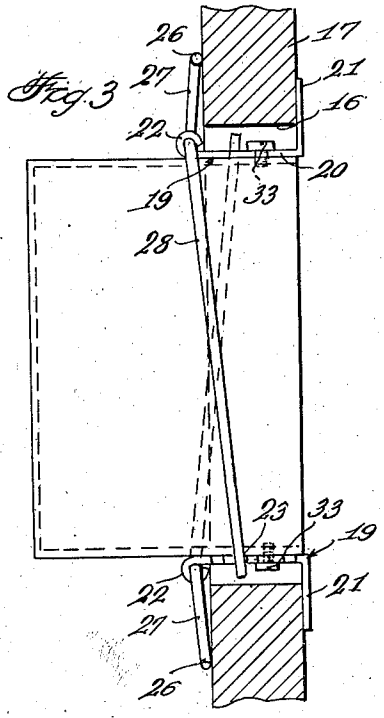
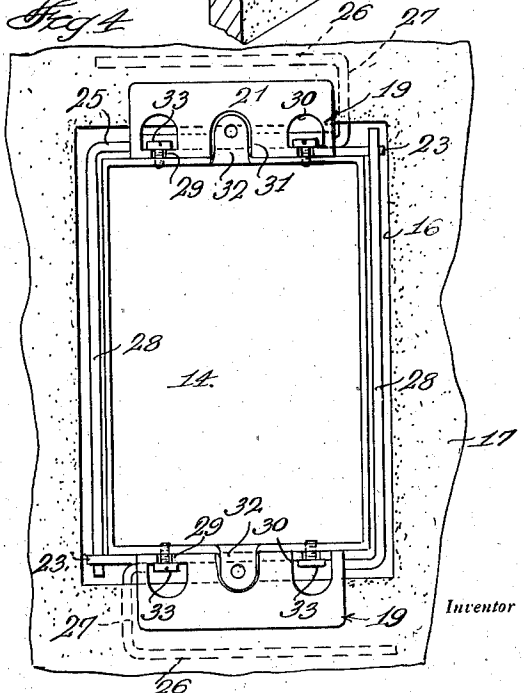


Fig. 4.



Inventor

Charles W. Pallas

By Randolph & Reavers

Attorneys

Nov. 9, 1948. C. W. PALLAS 2,453,535

MOUNTING ATTACHMENT FOR ELECTRICAL OUTLET BOXES

Filed Dec. 27, 1946 2 Sheets-Sheet 2

Fig. 5.

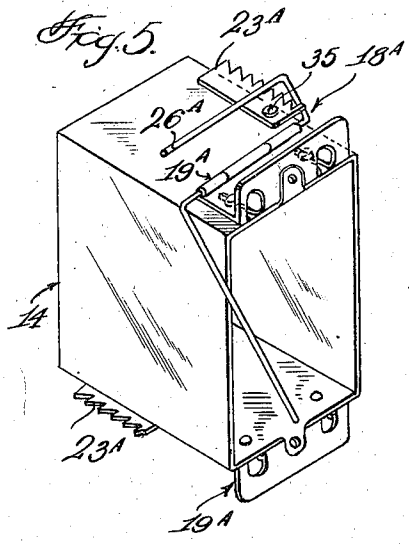


Fig. 11

Fig. 12

Fig. 13

Fig. 6.

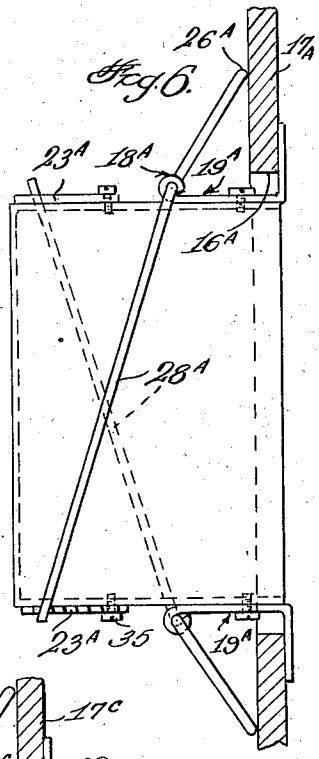
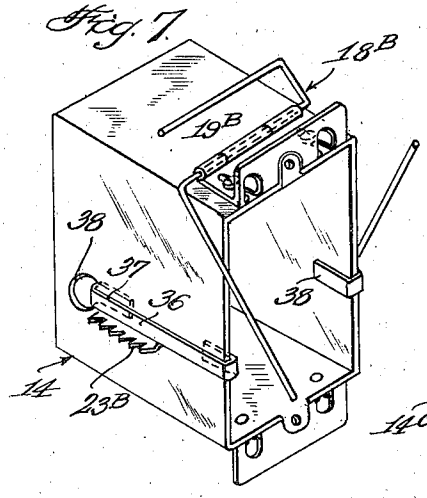


Fig. 7.



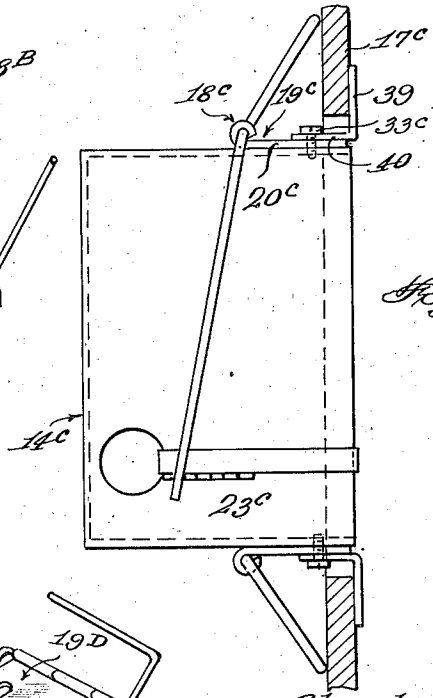


Fig. 8.

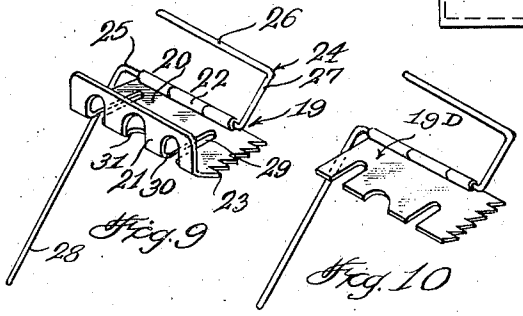


Fig. 9

Fig. 10

Inventor

Charles W. Pallas

By Randolph & Beavers

Attorneys

Patented Nov. 9, 1948 2,453,535

UNITED STATES PATENT OFFICE

2,453,535

MOUNTING ATTACHMENT FOR ELECTRICAL OUTLET BOXES

Charles W. Pallas, Elyria, Ohio

Application December 27, 1946, Serial No. 718,659

3 Claims. (Cl. 248—205)

1

This invention relates to an attachment adapted for use with conventional electrical outlet boxes and which is capable of being readily applied to or removed from various forms of such boxes and which will function for detachably clamping the outlet box to a wall, wall facing or other surface for positioning the box in an opening thereof.

The primary object of the present invention is to provide an attachment of the aforedescribed character capable of being quickly and easily applied to or removed from an outlet box and by means of which the outlet box may be quickly and easily detachably clamped to a wall or wall facing or removed therefrom by means of which the box will be effectively and securely held in position in an opening of the wall or wall facing when the attachment is in an operative position.

Still another object of the invention is to provide an attachment having adjustable means for adapting it to walls or wall facings of different thicknesses.

Various other objects and advantages of the invention will hereinafter become more fully apparent from the following description of the drawings, illustrating a preferred embodiment thereof, and wherein:

Figure 1 is a perspective view of a conventional form of outlet box with one form of the invention shown applied thereto;

Figure 2 is a similar view showing the outlet box in an applied position;

Figure 3 is a side elevational view of the box in applied position;

Figure 4 is a front elevational view thereof;

Figure 5 is a view similar to Figure 1 showing a slightly modified form of the embodiment of the invention as illustrated in Figures 1 to 4;

Figure 6 is a view similar to Figure 3 and showing an outlet box in an applied position, with use of the form of the attachment as illustrated in Figure 5;

Figure 7 is a view similar to Figure 5 and of a slight modification of the form of the invention as illustrated in said figure;

Figure 8 is a view similar to Figure 6 of the embodiment of Figure 7;

Figure 9 is a perspective view of one of the clamping units of the type as illustrated in Figures 1 to 4;

Figure 10 is a similar view of another form of clamping unit; and

Figures 11, 12 and 13 are fragmentary plan views illustrating alternate forms of teeth for the locking element of the attachment.

2

Referring more specifically to the drawings and first with reference to the embodiment of the invention as illustrated in Figures 1 to 4, a conventional form of electrical outlet box, designated generally 14, and provided with an open front 15 is illustrated in Figures 2, 3 and 4 mounted in an opening 16, of a wall or wall facing or other structure 17, by means of a preferred embodiment of the clamping attachment, designated generally 18 and comprising the invention.

The clamping attachment 18 includes two corresponding clamping units, each designated generally 19, one of which is shown separately in Figure 9. Each clamping unit 19 comprises a base plate 20 having an upturned edge 21 and a barrel or sleeve portion 22 extending along a portion of the opposite, longitudinal edge of the base 20. One end of the base 20 is extended beyond the upturned edge or flange 21 and the sleeve portion 22 and is provided with outwardly opening teeth forming a detent or locking strip 23.

A rod, designated generally 24 and forming a part of the unit 19, is provided with an intermediate portion 25 which extends through and is journaled in the sleeve or barrel portion 22. The rod 24 also includes a substantially straight end portion 26 which is disposed substantially parallel to the portion 25 and which is connected thereto by a substantially straight portion 27 which merges with the corresponding ends of the portions 25 and 26 and which is disposed at the end of the sleeve 22, adjacent to the locking strip 23. The opposite end of the rod 24 forms a lever arm 28 which is disposed substantially at a right angle to the portion 25 and which projects from the opposite end thereof.

The base 20 is provided with spaced transverse slots 29 having enlarged ends 30 formed in the upturned flange 21. An opening 31 in the base 20 is formed partially in the flat portion thereof and partially in the upturned flange 21 and is located between the slots 29.

One of the units 19 is adapted to be disposed against the top of the box 14 and the other unit 19 against the bottom thereof, with both of said units disposed adjacent the open end 15 and with portions of the openings 31 thereof abutting against or receiving outturned anchoring lugs 32 which are apertured to normally receive fastenings, not shown, for securing the box 14 to the supporting structure 17 above and beneath the opening 16, but which are not used with the clamping attachment 18. The units 19 are secured to the top and bottom portions of the box 14 by means of screws 33 which extend through

the slots 29 and into threaded openings 34 of the box 14. The units 19 are detachably and adjustably fastened to the top and bottom walls of the outlet box 14 and so that the flanges 21 thereof will project upwardly and downwardly from adjacent the open end 15. The outlet box 14 is positioned in the opening 16 of the wall 17, as illustrated in Figure 2; the rods 24 being swung into position substantially parallel to the top and bottom walls for permitting entrance of the box 14 in the opening 16. The levers 28, which are disposed on opposite sides of the outlet box 14 are then swung rearwardly through the opening 16 for moving the rod portions 26 into engagement with the back side of the wall 17 and so that the complementary flanges 21 and portions 26 will be disposed in clamping engagement with the wall 17, above and beneath the opening 16 to thus detachably clamp the outlet box 14 substantially in its position of Figures 2, 3 and 4. The lever arms 28 are sufficiently resilient so that they can be swung outwardly adjacent their free ends and released into engagement with notches formed by the teeth of the locking strips 23 for detachably locking the portions 26 in clamping engagement with the wall 17. To remove the outlet box 14, the lever arms 28 are swung outwardly and disengaged from the lock strips 23 and thereafter swung back through the opening 16 to thus release the box 14 so that it can be removed outwardly of the opening.

Figures 5 and 6 illustrate a slightly modified form of the clamping attachment, designated generally 18A, and including units 19A, differing from the units 19 only in that the portions forming the lock strips 23 are omitted. The units 19A each include an additional strip which is secured separately by a fastening or fastenings 35 to the top or bottom surface of the outlet box 14 behind and slightly to one side of the base 20A of its associated unit 19A and so that said strip 23A partially overlies the side wall of the outlet box, corresponding to the side wall over which the lock strip 23 of the unit 19 would ordinarily extend. Locking strips 23A are provided with teeth on their outer edges and form locking or detent strips for the same purposes as strips 23 and which are displaced rearwardly, relatively to the strips 23.

The attachment 18A is adapted to be used in conjunction with the outlet box 14 for mounting the box on a wall or wall face 17A of a reduced thickness and in an opening 16A thereof. It will be readily obvious that the locking strip 23A, by being disposed adjacent the rear end of the box 14 permits the lever arms 28A to be latched at a point further to the rear of the box 14 to thus detachably latch the rod portions 26A in a position further forward and thus in engagement with the rear side of the wall 17A.

Figure 7 illustrates a variation of the attachment 18A and which is designated generally 18B and including units 19B, corresponding to the units 19A. Instead of the detents or latching strips 23A which are secured by the fastenings 35, each of the units 19B is provided with a toothed detent or latching strip 23B which forms an outturned extension or flange of an elongated deformable strip 36 which is adapted to be positioned longitudinally of the box 14 and on the exterior of the sides thereof. One end 37 of each strip 36 is turned inwardly and back upon itself through an opening 38 in the side wall of the box 14, and the other end of the strip 36 is turned inwardly and back upon itself, as seen at 38, to engage around the forward edge of said side wall,

for thereby detachably mounting the locking strip 23B thereof on the box 14 and adjustably positioned between the ends of the box.

Figure 8 illustrates an attachment 18C having locking strips 23C, corresponding to the locking strips 23B and units 19C, differing from the units 19B in that the upturned flange for engagement with the outer face of the wall is omitted. Units 19C are adapted to be utilized in conjunction with outlet boxes 14C having separable attaching flanges 39 which are adapted to engage the outer surface of the wall 17C and which are provided with inturned flanges or lugs 40 through which the fastenings 33C extend for anchoring the flanges 39, 40 to the box 14C and for also securing the plates 20C of the units 19C to the box 14C.

The units or attachments 18B and 18C function in the same manner for detachably clamping their outlet boxes in a relatively thin wall and in the same manner as previously described in reference to the unit or attachment 18A except that the lever arms thereof engage and are latched in the latch strips 23B or 23C, respectively, instead of to the separate latch strips 23A.

Figure 10 illustrates a unit 19D, which differs from the unit 19 only in that the upturned flange 21 thereon is omitted. The unit 19D is adapted to be used in conjunction with the outlet box 14C having the wall engaging flanges 39, 40 and is intended to be secured to the outlet box and to the flanges 40 in the same manner as previously described and as illustrated in Figure 8.

Figures 11, 12 and 13 illustrate various forms of teeth that may be provided for the locking strips in lieu of the teeth as illustrated in the strips 23, 23A, 23B and 23C.

Various other modifications and changes are contemplated and may obviously be resorted to, without departing from the spirit and scope of the invention as hereinafter defined by the appended claims.

I claim as my invention:

1. A clamping attachment for use with an electrical outlet box comprising a pair of corresponding units each including a base having means for detachably and adjustably securing it to the outer side of a wall of an outlet box, adjacent the open end of said box, each base being provided with an outturned flange adapted to engage the front side of a wall, adjacent an opening in which the box is adapted to be detachably mounted, each unit including a lever arm having an angularly disposed portion journaled in a portion of the base and a wall engaging portion disposed to be moved into engagement with the back side of the wall when the lever arm is swung in one direction and a toothed locking strip associated with each of the base portions of said units, each of the locking strips being detachably and adjustably engaged by the lever arm of the other unit for releasably retaining the wall engaging portion thereof in engagement with the wall and on the opposite side thereof to said flanges, the locking strip of each unit constituting an integral extension of one end of the base portion of said unit.

2. A clamping attachment for use with an electrical outlet box comprising a pair of corresponding units each including a base having means for detachably and adjustably securing it to the outer side of a wall of an outlet box, adjacent the open end of said box, each base being provided with an outturned flange adapted to engage the front side of a wall, adjacent an opening in which the box is adapted to be detachably

mounted, each unit including a lever arm having an angularly disposed portion journaled in a portion of the base and a wall engaging portion disposed to be moved into engagement with the back side of the wall when the lever arm is swung in one direction and a toothed locking strip associated with each of the base portions of said units, each of the locking strips being detachably and adjustably engaged by the lever arm of the other unit for releasably retaining the wall engaging portion thereof in engagement with the wall and on the opposite side thereof to said flanges, said locking strips being disposed on the exteriors of the top and bottom surfaces of the outlet box and rearwardly of and to one side of their associated base portions and being detachably secured thereto for receiving and adjustably engaging the lever arm of the other attachment unit.

3. A clamping attachment for use with an electrical outlet box comprising a pair of corresponding units each including a base having means for detachably and adjustably securing it to the outer side of a wall of an outlet box, adjacent the open end of said box, each base being provided with an outturned flange adapted to engage the front side of a wall, adjacent an opening in which the box is adapted to be detachably mounted, each unit including a lever arm having an angularly disposed portion journaled in a portion of the base and a wall engaging portion disposed to be moved into engagement with the back side of the wall when the lever arm is swung in one direction and a toothed locking strip associated with each of the base portions of said units, each of the locking strips being detachably and adjustably engaged by the lever arm of the other unit for releasably retaining the wall engaging portion thereof in engagement with the wall and on the opposite side thereof to said flanges, said locking strips forming outturned flanges of elongated, deformable strips, said strips being disposed along the exteriors of the sides of the outlet box and having corresponding ends adapted to be turned inwardly and back upon themselves through openings in said side walls and opposite ends adapted to be turned inwardly and back upon themselves around the open front of the box, for detachably and adjustably supporting the locking strips relatively to the sides of the box.

CHARLES W. PALLAS.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,793,187	Neall	Feb. 17, 1931
2,155,627	Welch	Apr. 25, 1939