Nov. 27, 1928. 1,693,396

G. N. LITTLETON

CANOPY OR FIXTURE SECURING DEVICE

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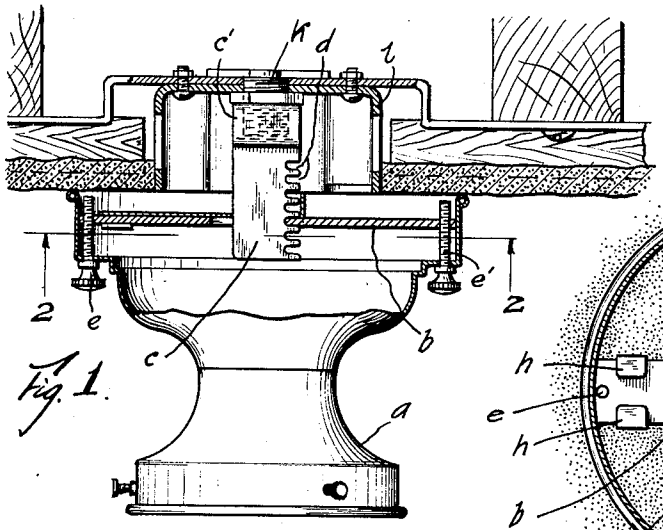
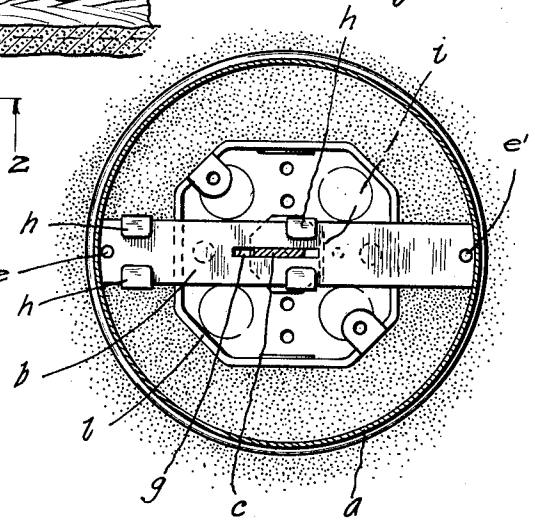


Fig. 1.

Fig. 2.



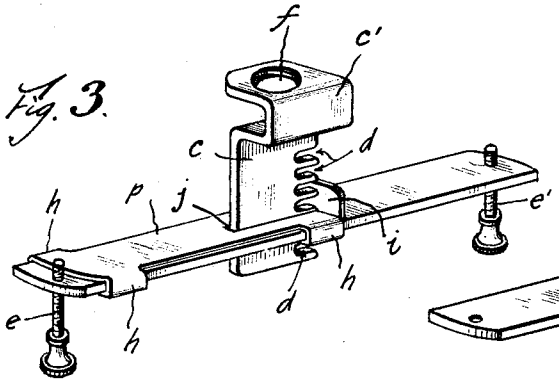
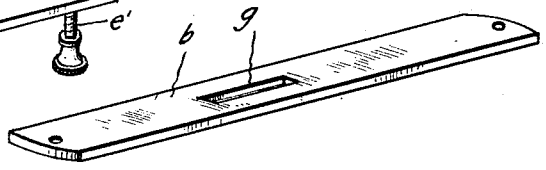


Fig. 3.

Fig. 4.



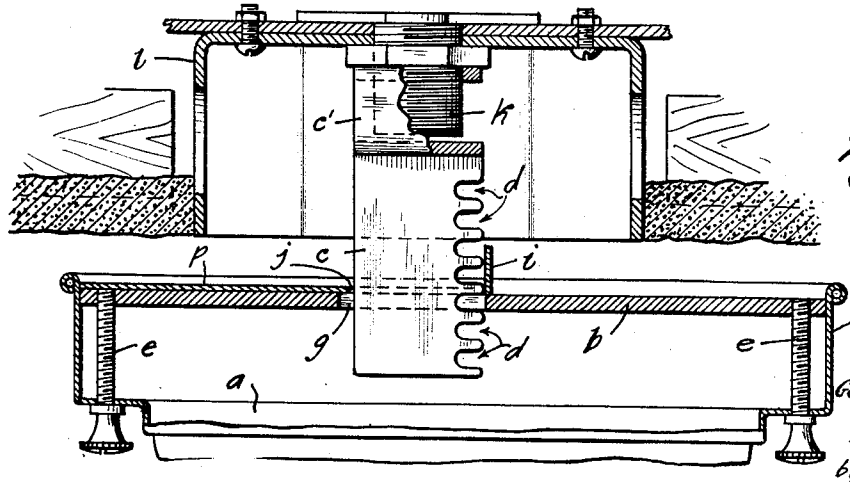


Fig. 5.

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UNITED STATES PATENT OFFICE.

GEORGE N. LITTLETON, OF PORTLAND, OREGON.

CANOPY OR FIXTURE SECURING DEVICE.

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My invention relates to means for inexpensively, yet efficiently attaching electric light fixtures, especially ceiling flanges, to the ceiling outlet-boxes.

Heretofore, the mode of attaching ceiling flanges to ceiling outlet boxes has been expensive, because of the time required and correspondingly heavy labor costs. In short, an electrician has had to reach above his head and after soldering the electrical connections, and threading the nipple into the central hole in the outlet box, he must screw a bar equal in length to the diameter of the ceiling flange onto the other end of the nipple; and then while holding the ceiling flange against the ceiling, he must insert screws through holes provided in the rim of the ceiling flange, and try, blindly to thread the screws into the holes of the bar, all the while holding his arms above his head which is a very tiresome position.

A further disadvantage of this mode is, there are no positive means of locking the ceiling flange in place, so that vibration of the building and other conditions will not tend to loosen the connection of the ceiling flange to the outlet box.

The principal object of my invention is to provide efficient, simple, and inexpensive means for attaching ceiling flanges to outlet-boxes which will be efficient, rapid, and economical of manufacture, and which will conform to present standard building codes.

A further object is to provide a positive locking means which will hold the ceiling flange permanently in place and will not tend to be loosened by vibration and other conditions, yet will allow the ceiling flange to be easily removed if desirable.

I attain my object by an outlet fixture comprising an outlet box including a nipple, a flat arm pendent from the nipple, said arm provided with a series of notches along one vertical edge, a ceiling flange, a bar arranged transversely therein, screws inserted through the ceiling flange at its rim and threaded into the ends of said bar, a slide mounted on said bar, said slide and said bar provided with elongate slots adapted to receive said pendent arm and registering in one position of said slide, in which position the slide covers one of said screws, the said slide provided with an upturned lip, and whereby when said slots have been placed in registration and the said pendent arm has been inserted therein, the movement of the ceiling flange sidewise will cause the engagement of said bar with one of the notches of said pendent arm, and thus the slide will be positioned to release the screw previously covered thereby, so that said screw may be projected to lock the slide in its engaging position.

Further details of the construction of my invention are hereinafter described with reference to the accompanying drawings:

In these drawings:

Fig. 1 shows a ceiling flange attached to the ceiling outlet box with the upper part of the ceiling flange broken away showing how my device is attached to the outlet box, the outlet box and a section of the ceiling between the joists being shown in a transverse section.

Fig. 2 shows a section taken on the line 2—2 of Fig. 1 looking in the direction of the arrows and shows the relative positions of the ceiling flange and outlet box after the ceiling flange is locked in place;

Fig. 3 shows a perspective view of my device and its details of construction;

Fig. 4 shows a perspective view of the bar to which the ceiling flange is fastened, and the slot therein in which the notched lug is inserted; and

Fig. 5 shows an enlarged section similar to Fig. 1 except that the lower part of the ceiling flange is broken away and before the said flange is fastened to the outlet box.

The ceiling flange *a* is fixed to a bar *b* of equal length to the inside diameter of the ceiling flange by screws *e* and *e'*, which are adapted to extend through the said bar.

A pendent arm *c* is provided with notches *d* and a U-shaped upper end *c'*, the sides of which are offset and at right angles to the notched portion of the lug, and a round hole *f* is provided in the upper side of the U which is threaded.

The bar *b* is provided with a longitudinal slot *g* somewhat longer than the width of the arm *c*. A slide *p* is fixed over the bar *b* and held thereon by turned down ears *h*, and is provided with an upturned end portion *i* which is adjacent the end of a longitudinal slot *j*, which coincides with the slot *g* in the bar *b*, and the length of the slot *j* is equal to the width of the arm *c*, including the notches *d*, and the plate *p* is of such length that when the slot *j* is coincident with the inner end of the slot *g*, the other end of the plate will be adjacent to, but will not cover

the hole through which the screw *e* is threaded.

A nipple *k* is fastened by a suitable bushing to the central hole of the outlet box *l* and the pendent arm *c* is threaded thereon.

In assembling my device and attaching the ceiling flange to the outlet box after the electrical connections are made, the arm *c* is threaded onto the nipple as before mentioned, and then the bar *b* is fixed to the ceiling flange by the screws *e* and *e'* as best shown in Fig. 5, care being taken to only thread the screw *e* only so far into the bar *b* that the end of it will be flush with the upper surface of the bar.

The bar *b* having been attached to the ceiling flange, the plate *p* is set on the bar *b* so that its outer end bears against the ceiling flange and also covers the end of the screw *e* which has been threaded flush with the bar *b*, and so that the slot *j* will be coincident with the outer end of the slot *g* of the bar *b*.

The flange *a* is then raised to its position on the ceiling so that the arm *c* enters the slots *g* and *j* with the notches *d* bearing against the upturned end *i* and the flange *a* is moved in a direction so that the bar *b* will enter between one of the notches *d* and the slide *p* will be forced into position as shown in Fig. 3.

The screws *e* and *e'* will then be threaded from the outside sufficiently to hold the flange securely to the outlet box as shown in Fig. 1. The screw *e* then extends beyond the surface of the bar *b* and the slide *p* is held against lateral movement by the arm *c* on one end and the extended end of the screw *e* on the other, so that the notches *d* are in positive engagement with the bar *b* thus holding the ceiling flange permanently to the outlet box.

To remove the ceiling flange, all that is necessary is to retract the screws *e* and *e'* and sever the electrical connection. The remaining parts of the device may then be unscrewed at leisure from the nipple *k*.

I claim:

1. In an outlet fixture the combination of an outlet box, a flat pendent arm secured in said outlet box and provided with a series of notches along one vertical edge, a ceiling flange, a bar arranged transversely therein, a slide mounted on said bar, said slide and said bar provided with slots adapted to receive said pendent arm, said slots registering in one position of said slide, whereby the movement of the ceiling flange sidewise will engage a notch of said pendent arm.

2. In an outlet fixture the combination of an outlet box, a flat pendent arm secured in said outlet box and provided with a series of notches along one vertical edge, a ceiling flange, a bar arranged transversely therein. screws inserted through the ceiling flange at its rim and threaded into the ends of said bar, a slide mounted on said bar, said slide and said bar provided with slots adapted to receive said pendent arm, said slots registering in one position of said slide in which position the slide covers one of said screws, whereby the movement of the ceiling flange sidewise will engage a notch of said pendent arm and permit said screws to be projected in front of the slide to lock the same against retraction.

3. In an outlet fixture the combination of an outlet box including a nipple, a flat pendent arm secured to said nipple and provided with a series of notches along one vertical edge, a ceiling flange, a bar arranged transversely therein, a slide mounted on said bar, said slide and said bar provided with slots adapted to receive said pendent arm, said slots registering in one position of said slide, whereby the movement of the ceiling flange sidewise will engage a notch of said pendent arm.

4. In an outlet fixture the combination of an outlet box including a nipple, a flat pendent arm secured to said nipple and provided with a series of notches along one vertical edge, a ceiling flange, a bar arranged transversely therein, screws inserted through the ceiling flange at its rim and threaded into the ends of said bar, a slide mounted on said bar, said slide and said bar provided with slots adapted to receive said pendent arm, said slots registering in one position of said slide in which position the slide covers one of said screws, whereby the movement of the ceiling flange sidewise will engage a notch of said pendent arm and permit said screws to be projected in front of the slide to lock the same against retraction.

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