

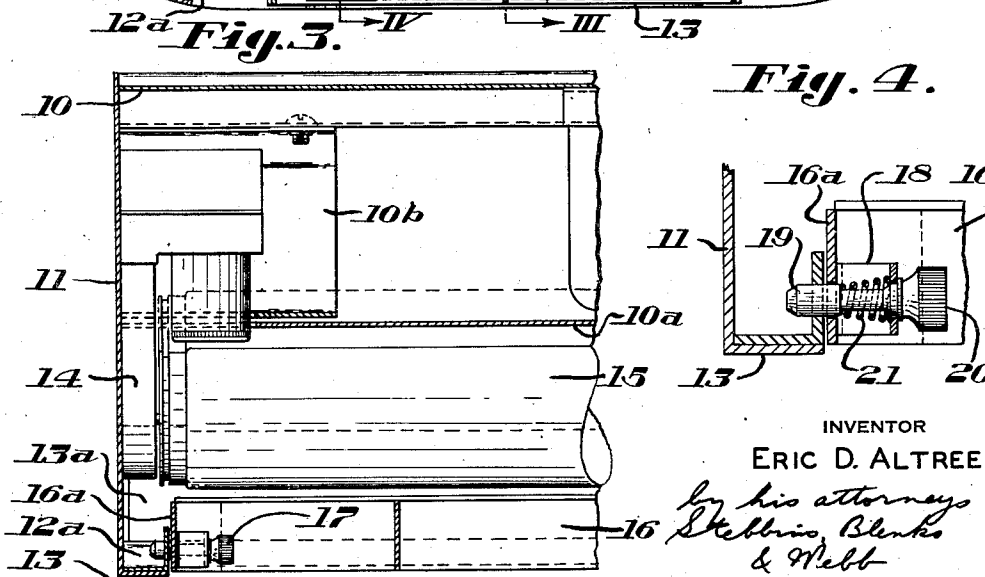
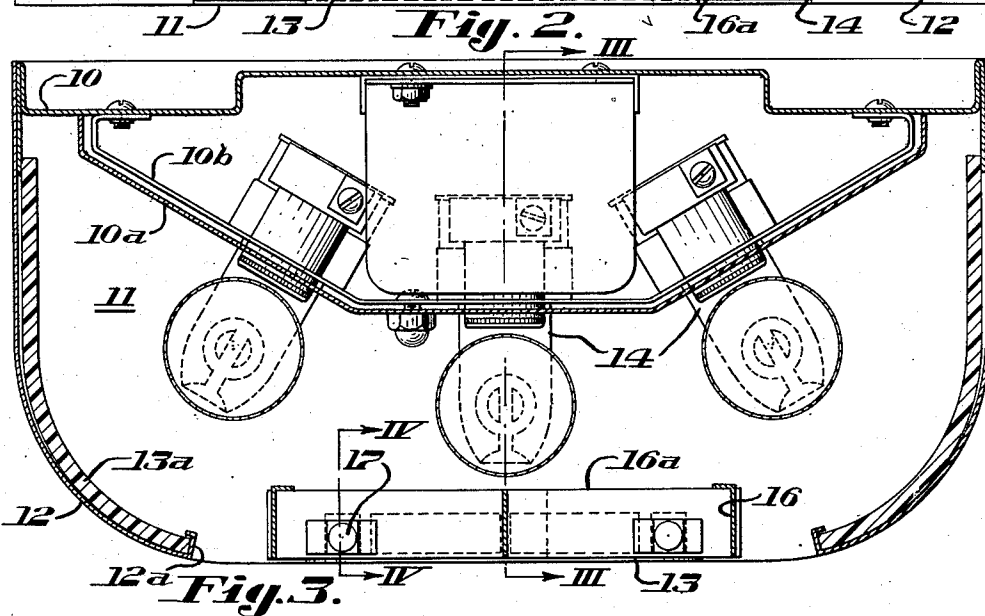
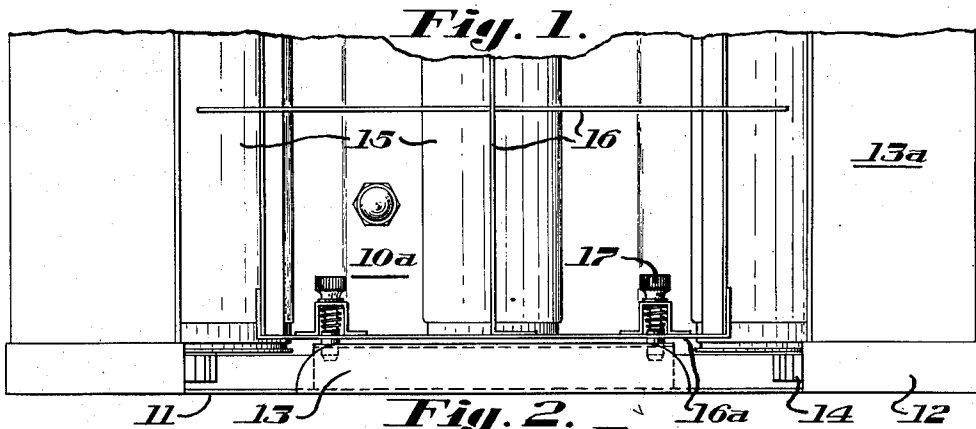
Aug. 14, 1951

E. D. ALTREE
QUICKLY DETACHABLE MOUNTING MEANS FOR
SUSPENDED LIGHTING-FIXTURE ACCESSORY

2,564,046

Filed July 22, 1947

2 Sheets-Sheet 1



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Fig. 7.

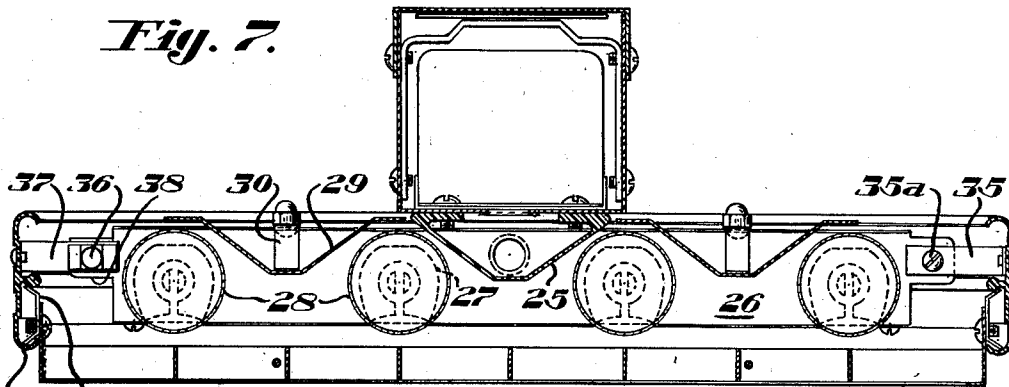


Fig. 5.

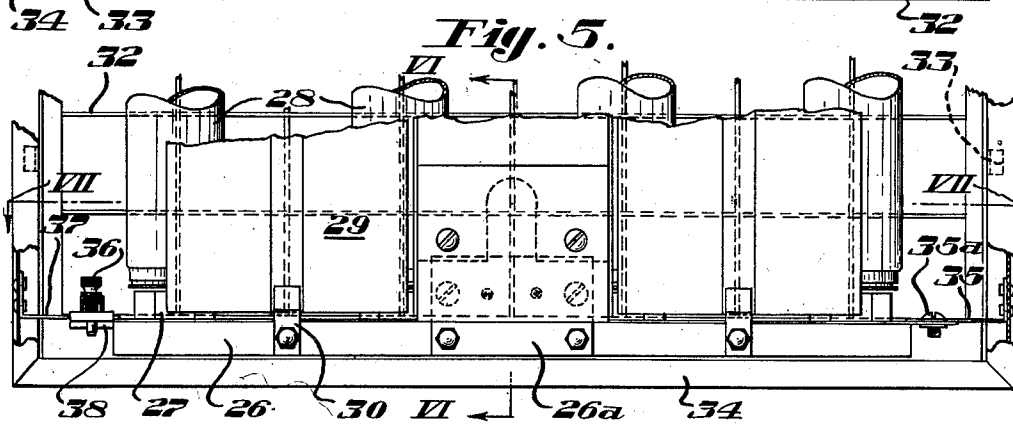
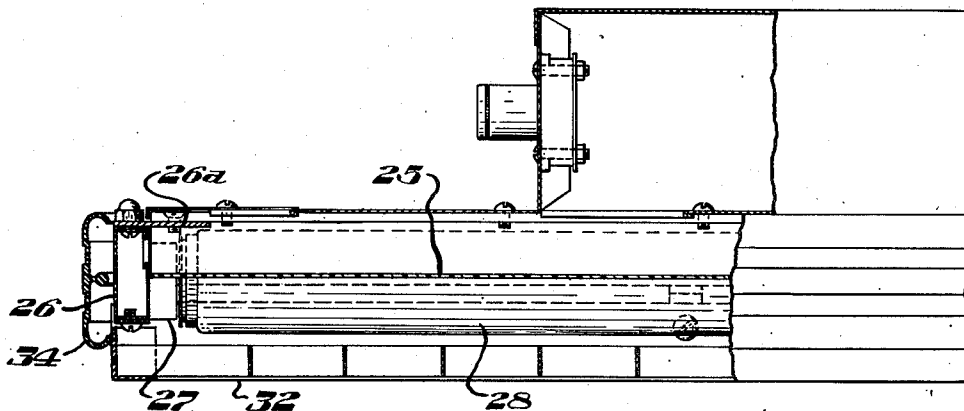


Fig. 6.



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UNITED STATES PATENT OFFICE

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QUICKLY DETACHABLE MOUNTING MEANS
FOR SUSPENDED LIGHTING-FIXTURE AC-
CESSORYEric D. Altree, Pittsburgh, Pa., assignor to Pitts-
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5 Claims. (Cl. 240—51.11)

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This invention relates to an illuminating fixture utilizing fluorescent tubes as the light source and, in particular, to means for mounting a set of louvers or the like below the tubes so it can readily be removed or disposed in an out-of-the-way position to facilitate replacement of the tubes when necessary.

Lighting fixtures of the fluorescent-tube type are commonly provided with light-control means disposed below the tubes to reduce glare. Such means may be a set of louvers or one or more panels of glass or plastic, usually diffusing in character, or of prism glass. Whatever the nature of the light-control means, it must be removed from its normal position when it is necessary to change tubes. Screws have frequently been employed heretofore for detachably securing the light-control means in place. The removal and replacement of the screws are rather tedious operations requiring the use of a screw driver plus much care, time and patience, because the work usually has to be done by a man standing on a step-ladder. In addition, there is the ever-present danger of loss or misplacement of the screws.

I have invented a novel mounting means for the light-control means of a fluorescent-tube fixture which permits removal of the latter in a moment, without the use of any tool or the exercise of any special care. The mounting means, furthermore, is formed as part of the light-control means and hence is not subject to loss or misplacement. In a preferred embodiment, I provide the light-control means with a plurality of retractable pins adapted when extended to engage a ledge or other projection from the tube-supporting structure of the fixture. The pins have springs normally causing them to be extended, and heads adapted to be grasped with the fingers whereby they may be manually retracted. The light-control means may be arranged to be bodily removable or hinged on the pins at either side so as to drop down to an out-of-the-way position.

A complete understanding of the invention may be obtained from the following detailed description which refers to the accompanying drawings illustrating the present preferred embodiment. In the drawings,

Figure 1 is a partial bottom plan view showing one end of a fixture having the invention incorporated therein;

Figure 2 is a transverse section through the fixture;

Figure 3 is a partial, longitudinal section taken along the plane of line III—III of Figure 2;

Figure 4 is a partial section taken along the

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plane of line IV—IV of Figure 2, showing the mounting means to enlarged scale;

Figure 5 is a partial plan view of a modified form of fixture incorporating the invention;

Figure 6 is a partial, longitudinal section taken along the plane of line VI—VI of Figure 5; and

Figure 7 is a transverse section taken along the plane of line VII—VII of Figure 5.

Referring now in detail to the drawings and, for the present, to Figures 1 through 4, the fixture there shown comprises essentially an elongated base plate 10 having end members 11 depending from each end thereof. These members have in-turned flanges 12 on each side and a similar flange 13 along the bottom having its inner edge turned upwardly. The lower ends of the flanges 12 are turned up as at 12a. A translucent panel 13a of glass or other suitable material extends along each side of the fixture having its ends seated on the flanges 12, leaving the bottom of the fixture open between the lower edges of the panels 13a and the end members 11. A reflector 10a is mounted below the base being supported on straps 10b secured to the base. Sockets 14 are secured to the straps 10b to accommodate a plurality of fluorescent tubes 15 extending longitudinally of the fixture.

Light-control means 16 is disposed in the opening between the side panels 13a and the end members 11. This means may be of any desired type. In the illustrated embodiment, it comprises a so-called egg-crate louver. Louvers of other types may be employed or, in their stead, one or more sheets of glass or plastic, preferably diffusing in character, or prismatic glass. Whatever the particular type of light-control means employed, it is supported in the fixture by a plurality of novel mounting means indicated generally at 17, preferably disposed two at each end of the light-control means and entering holes in the upturned edge of an angle bar carried by the flange 13 of the adjacent end member 11.

The details of the mounting means 17 are shown in Figure 4. Flanged clips 18 are secured to the end plates 16a of the louver 16 and these parts have aligned holes to accommodate a spring-pressed pin 19 having a head 20. A compression spring 21 is disposed about a reduced portion of the shank of each pin and normally tends to cause the latter to project outwardly beyond the end plate 16a of the louver sufficiently to enter holes in the upturned edge of the flange 13. The pins 19 may be retracted by pulling inwardly on the heads 20, thus compressing the springs 21. When the pins have been sufficiently retracted, they

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clear the upturned edges of the flanges 13, thus permitting the louver to be lowered away from the fixture and affording ready access to the tubes 15 for inspection or replacement.

When the pins 19 at the opposite ends and on the same side of the louver 16 are retracted, that side of the louver 16 is released from the adjacent end members 11 and is thus free to be disposed in an out-of-the-way position. The two opposite pins 19 then act as hinges. Thus the louver 16 may be readily opened from either side. Alternatively, if the two pins at the same end of the louver 16 are retracted, the louver 16 may be bodily removed by lowering that end sufficiently to clear the adjacent end member 11. To replace the louver, it is only necessary to insert the pins 19 at one end thereof through the holes in the upturned edges of one of the flanges 13, retract the pins at the other end and raise the louver into place after which the pins when released will enter the holes in the edges of the flanges of the other end member and rest thereon.

Figures 5 through 7 show a modified form of fixture comprising a base extrusion 25 having end members in the form of cross arms of box section 26 secured to each end thereof by plates 26a, provided with sockets 27 adapted to accommodate fluorescent tubes 28. Reflector troughs 29 are supported from the cross arms by clips 30 between each of the outer pair of tubes. The base extrusion 25 serves as a wireway and as a reflector for the middle pair of tubes.

An egg-crate louver 32 is mounted below the tubes 28 by clips 33 engaging the lower flange of a frame 34 of channel section extending peripherally of the fixture. The frame is hinged to one end of the cross arms 26 by angles 35. These angles extend inwardly from the frame and have bolts 35a extending through them and tongues extending outwardly from the cross arms. Retractable supporting pins 36 are mounted on angles 37 at the opposite side of the frame 34 and are adapted to project through holes in tongues 38 extending from the other ends of the cross arms.

With the construction just described, the frame 34 and louver 32 may be swung downwardly on the bolts 35a by pulling inwardly on the pins 36 so that they disengage the tongues 38. The pins 36 are similar in construction and mounting to the pins 19. When the frame and louver have been swung downwardly to substantially vertical position, the tubes 28 are readily accessible for servicing. The tongues 38 slope outwardly and downwardly and have a camming action so that the pins 36 reenter the holes therein automatically when the louver is swung back to normal or horizontal position.

It will be apparent from the foregoing that the invention provides a simple, inexpensive and efficient means for removably mounting a lighting-fixture accessory in operative position below the fixture. The invention permits the accessory to be removed or shifted to an out-of-the-way position in a moment without using any tools or exercising any particular care. In addition, all

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the parts are permanently secured in place so they cannot become lost.

Although I have illustrated and described only two specific embodiments of the invention, it will be recognized that changes in the details disclosed may be made without departing from the spirit of the invention or the scope of the appended claims.

I claim:

1. An illuminating fixture having an elongated base with transverse end members and side panels supported by said end members, a source of light carried by the base, light control panel means extending substantially the full length of the fixture below the source of illumination and between said side panels and having cross members extending generally parallel to said transverse end members, and a pair of pins retractably mounted in said cross members at each end thereof for sliding movement towards and away from said transverse end members, said end members extending downwardly at least as far as the plane of the light control panel means and having apertures in line with said pins into which the pins may extend to support said light control means, the pairs of pins on opposite ends of the panel lying on opposite sides of the longitudinal center line of the panel means.

2. An illuminating device as described in claim 1 in which said transverse end members have inwardly and upwardly turned flanges along their lower edges, said flanges having apertures into which the pins may be inserted.

3. An illuminating device as described in claim 1 having springs secured to said pins and said cross members of the light control means for resiliently pressing said pins towards the transverse end members.

4. An illuminating device as described in claim 1 in which said light control means has a rectangular frame extending substantially the length and width of said means, said frame having end members which carry the movable pins.

5. An illuminating device as described in claim 1 in which the pairs of pins at each end of said panel and the apertures in the end members are spaced the same distances from each other whereby said light control panel may be turned end for end in assembling.

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