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AUTOMATIC MOUNTING MEANS FOR A CEILING LIGHT FIXTURE

Filed April 24, 1959

FIG. 1.

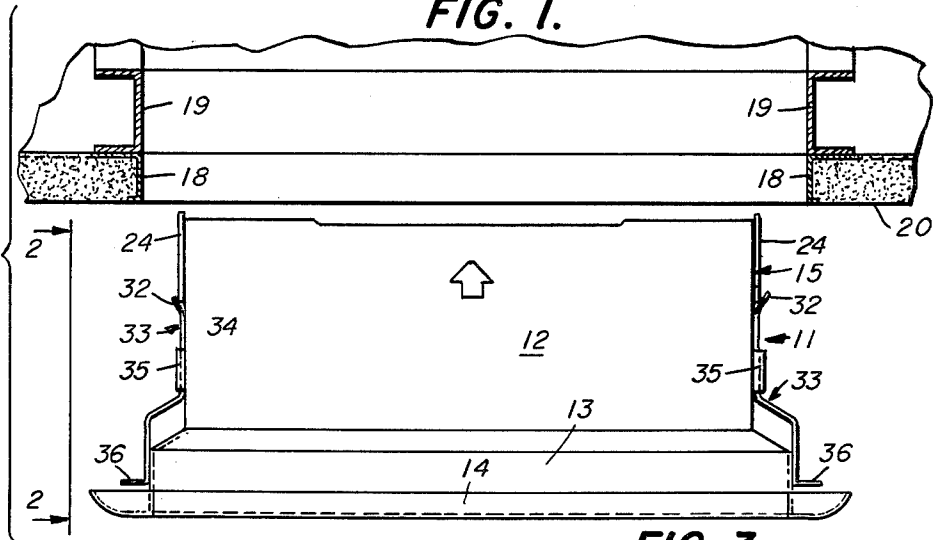


FIG. 2.

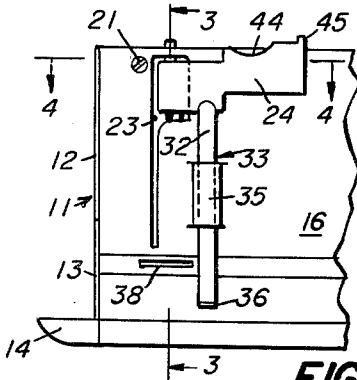


FIG. 3.

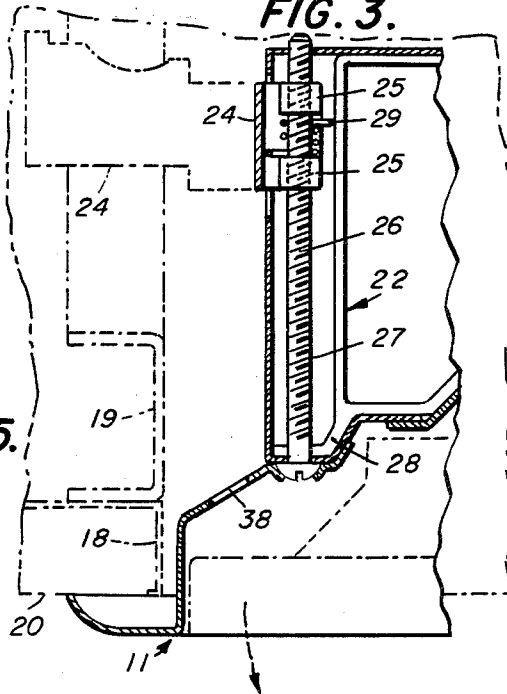


FIG. 5.

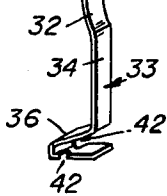


FIG. 6.

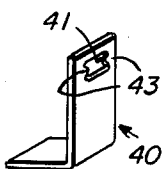
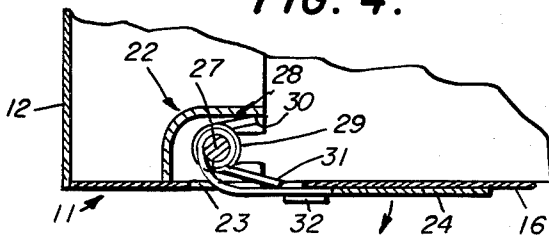


FIG. 4.



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1

2

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AUTOMATIC MOUNTING MEANS FOR A CEILING LIGHT FIXTURE

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1 Claim. (Cl. 248—343)

This invention relates to automatic mounting means for a recessed ceiling light fixture by which supporting flag tabs are automatically turned out to engage the ceiling joists or structural members outlining the opening in the ceiling for the fixture.

One object of the invention is to provide in a recessed ceiling type light fixture concealed automatic means for releasing and swinging into position of supporting flag tabs attached adjacent the four corners of the fixture. Another object is to provide in a recessed light fixture automatic means for hanging the fixture on the ceiling joists adjacent the ceiling opening. Another object is to provide retractable tab means for supporting a light fixture in a ceiling opening.

Referring to the accompanying drawings which disclose a preferred form of my invention,

FIG. 1 is an end view of a rectangular light fixture positioned below a ceiling opening for said fixture;

FIG. 2 is a fragmentary side elevational view of the fixture from the position 2—2 of FIG. 1;

FIG. 3 is an enlarged fragmentary cross-sectional view taken on the line 3—3 of FIG. 2;

FIG. 4 is a fragmentary cross-sectional view taken on the line 4—4 of FIG. 2;

FIG. 5 is a perspective view of the holding trigger for a flag tab; and

FIG. 6 is a perspective view of an extension foot for the trigger.

The automatic mounting means of this invention may be used on any recess type rectangular box-like light fixture which is to be mounted in a recess in a ceiling, the fixture face being substantially in the plane of the ceiling. The recess in the ceiling structure is one which is outlined preferably by a plaster screed or equivalent framing means, and longitudinal horizontal ceiling supporting structural members, such as joists (wood or metal), are required to be present to be engaged by the flag-tab means of this invention.

For illustrative purposes, the fabricated fluorescent light fixture of my copending patent application, Serial No. 807,594 will be described. This fixture generally consists of a pair of opposed contour end members which constitute the basic structural elements of the fixture, a shaped sheet metal body extending between and attached to the end members, an end closure plate, trim members extending outward around the lower margin of the body and end closure plates, and bracket means adjacent the four corners (integral with the end members) for operatively mounting a vertically adjustable elevator screw.

Referring to the drawings showing a preferred form of my invention, a fixture 11 of the kind generally described above is shown, in end view, with end closure plate 12 having an attached end trim plate 13 with curved flange trim 14 across the end and on the two long margins of the fixture housing 15. The fixture 11 is adapted to be mounted in the ceiling recess, a plaster screed 18 being provided to outline the opening, and longitudinal horizontal structural support members 19 being shown adjacent the screed 18.

The end portions of the side walls 16, which are attached by screws 21 to the end member 22 of the fixture,

are provided with a window opening 23 to permit a flag-tab 24 to swing out to overlay and engage the structural support members 19. The flag-tab 24 is pivoted by the spaced-apart threaded ears 25 on the threads 26 of the elevator screw 27, which is rotatably mounted in bracket means 28 which is integral with the end member 22 of the fixture. In the illustrative form shown, the bracket means 28 is formed integrally in the casting which forms the end member 22 of the fixture, but it will be obvious that a bracket may be attached to any recessed fixture housing structure so that the elevator screw 27 and the flag-tab 24 will function in an equivalent manner. A torsion spring 29 is provided around the screw 27 between the ears 25 so that its ends 30 and 31 press respectively against the bracket 28 and the flag-tab 24, normally holding the flag-tab in outward position at right angles to the side walls 16, thereby being positioned to engage the top surface of the member 19, to support the fixture in the recess.

The flag-tab 24 is, at the beginning of the operation of mounting the fixture in the recess, held flat against the side wall 16 by the bent-out holding means 32 of trigger means 33 which has a vertical bar 34 which is mounted for longitudinal vertical sliding in the strike-out guide 35, the foot 36 of the trigger means extending at right angles and being adapted to engage the screed 18 or the edge of the ceiling opening as the fixture is pushed up into the recess.

It is desirable that the flag-tab 24 be positioned relatively high up on the elevator screw 27 when the fixture is inserted in the ceiling opening so that the flag-tab may open out freely and not be obstructed by lateral contact with the edges of the ceiling opening (screed) or by the sides of the support members 19, but will be in position to rest upon the top surface of the members 19. By adjusting the elevator screws 27 at the four corners, the fixture is raised until the trim 14 makes contact with the ceiling surface 20.

If for any reason the fixture must be removed, the flag-tabs 24 may be pressed back against the walls 16 of the fixture 11 by means of a screw-driver or other long flat tool inserted in slots 38 in the trim 14 adjacent the elevator screws 27, the flag-tabs then being retained by the bent-out end 32 of the trigger means 33 after the fixture 11 has been lowered slightly to release the contact of the foot 36 of the trigger from the screed 18. The trigger 33 is reset by hand to retain each of the flag-tabs.

To provide selective length for the trigger means 33, an extension foot element 40 may be alternatively attached to the foot 36 by joggling insertion of the foot 36 in the slot 41 of the extension element 40, notches 42 being provided in the foot 36 to pass by the bearing tabs 43 in the ends of the slot 41.

The flag-tab 24 is provided with one flat edge for resting upon horizontal surfaces of the structural support member. It may, however, also be contoured, as shown in the drawings, by the circular notch 44 and projecting tip 45, to fit over pipe support means or support means of other surface contours.

The advantages of my invention will be understood from the above description. The fixture may be automatically hung without tools in the ceiling opening and accurately adjusted to the proper elevation by the use of a simple screw-driver. The stated objectives have been attained.

I claim:

In a box-type light fixture arranged to be mounted in a ceiling recess framed on at least two opposed walls by ceiling structural members so that the fixture, except for a light dispersing face and a marginal trim, is substantially concealed, means for mounting said fixture comprising flag-tabs mounted at support positions on said

3

fixture, each of said flag-tabs being rotatably mounted on a threaded vertical pin on which each of said flag-tabs is rotatable from a position parallel to the walls of said fixture to a position at right angles thereto; bracket means on said fixture for rotatably mounting said threaded vertical pin, means accessible from the said light dispersing face of said fixture for rotating each of said threaded vertical pins whereby to adjust the elevation of said flag-tabs relative to the lower trim edge of said fixture defining said light dispersing face; said flag-tabs being spring biased to project normally at right angles to the fixture walls; vertically movable trigger means attached to said fixture below said flag tab disposed to releasably hold said flag-tabs in position against the fixture

4

sidewalls; and foot means extending from said trigger means adapted to engage the edge of the ceiling opening when the fixture is elevated into said opening whereby to actuate said trigger means to release said flag-tabs over the ceiling structural members framing said opening.

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