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COVER STRUCTURE FOR LIGHTING FIXTURES

Filed Sept. 30, 1963

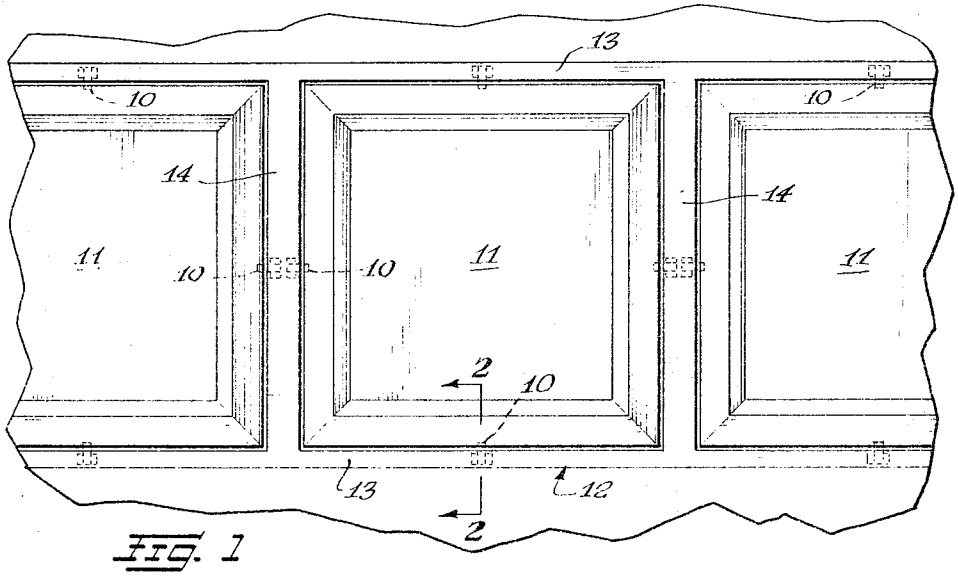


Fig. 1

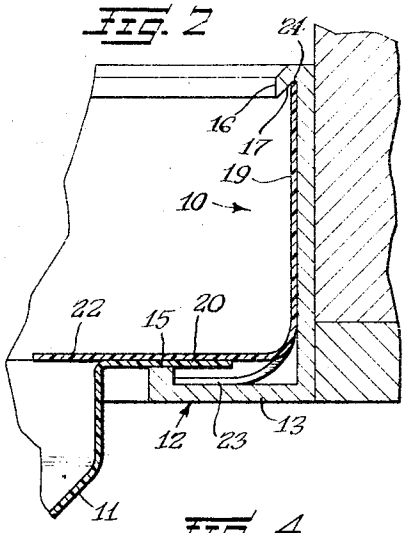


Fig. 2

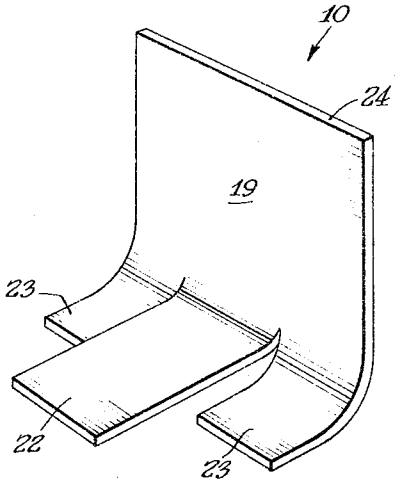


Fig. 3

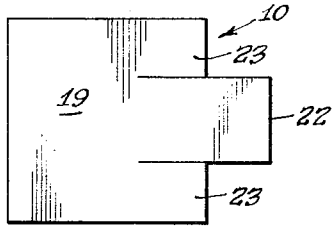


Fig. 4

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COVER STRUCTURE FOR LIGHTING FIXTURES

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5 Claims. (Cl. 240—128)

My invention relates generally to lighting fixtures and more particularly to a cover structure including means for retaining a light-passing cover in contact with a supporting framework.

Design for contemporary interior lighting is of two general types. One, the artificial type, employs as a light source one or more lighting and reflector units set in a ceiling or wall. The other, a natural light type, employs a skylight, often a plastic bubble, set above a hole in the ceiling. Both types are commonly finished off on the interior side with a decorative, light-passing cover of translucent or transparent material held in place by a supporting framework. Usually, this framework is secured in place permanently and the light-passing cover is made removable therefrom by constructing it of a material capable of being distorted temporarily to admit it past the supporting edges of the framework.

It has been common practice in the past to install stuctures of this type without providing for means other than gravity for retaining the supported edges of the light-passing cover in contact with the supporting framework after installation. This has allowed the cover, which is usually relatively light-weight, to float somewhat from its supported position in response to air currents created by air conditioners, open windows and the opening and closing of doors. This has resulted in unpleasant vibrations and rattling between cover and supporting framework, particularly in those installations having an air passage from within the lighting unit to the outdoors.

A primary object of my invention is the provision of a cover structure including means for retaining a light-passing cover in contact with a supporting framework for lighting fixtures.

Another object of my invention is the provision of such retaining means which, when in place, will allow the cover to be easily inserted and removed from the supporting framework.

Another object of my invention is the provision of such retaining means which may be quickly and permanently installed in the framework.

Still another object of my invention is the provision of such retaining means which is simple and economical in construction and use.

A further object of my invention is the provision of means for retaining a light-passing cover in contact with a supporting framework in a lighting fixture.

Briefly, these and other objects to become apparent are accomplished by a semi-rigid retaining clip secured to a supporting framework. The clip includes an extending portion which is designated to engage the upper side of an edge of the light-passing cover when it is inserted within the framework and to resiliently urge the supported edge of the cover against the supporting edge of the framework.

A better understanding of the construction and operation of my invention may be had from the following detailed description, appended claims and attached drawing, in which:

FIG. 1 is a bottom plan view of a series of lighting fixtures in which the light-passing covers are retained by a plurality of a preferred form of my invention;

FIG. 2 is an enlarged section view taken on line 2—2 of FIG. 1;

FIG. 3 is a perspective view of the clip section of my invention shown alone in the shape it assumes upon installation; and

FIG. 4 is a plan view of the same before installation.

Referring now to the drawing, a clip **10** is shown in FIG. 1 in combination with a series of lighting fixtures including light-passing covers **11** which are supported by a framework **12**. Framework **12** is illustrated as comprising extruded metal side members **13** and cross members **14**. As shown in FIG. 2, side members **13** comprise an L-shaped structure having a raised supporting edge **15** at the free end of the horizontal component and a downturned lip **16** forming a retaining groove **17** at the top end of the vertical component. Cross members **14** each comprise a ⊥-shaped member having the features of side members **13** on each side for supporting adjacent light-passing covers **11**. Light-passing cover **11** is a decoratively shaped, molded plastic member having a peripheral lip **20** extending beyond supporting edge **15** and supported thereby.

Clip **10** is shown in FIG. 4 before installation, comprising a flat die-cut piece of a semi-rigid material such as polypropylene plastic. Included are a rectangular body portion **19** and an extending tab portion **22** having the sides thereof cut back a distance into body portion **19** to form a pair of shorter tabs **23**.

Before installation of light-passing cover **11**, a plurality of retaining clips **10** are inserted in place in framework **12**, one or more to each side of the framework as shown in FIG. 1. This is accomplished by inserting a top edge **24** of clip **10** in groove **17**, then deforming the clip by manual pressure until the shorter tabs **23** snap in place behind raised supporting edge **15** as shown in FIG. 2. Thus held permanently in place, tab **22** extends into the open area defined by framework **12**, inward from the edges of light-passing cover **11** when installed.

Light-passing cover **11** is installed in framework **12** by distorting its shape temporarily and inserting lip **20** thereof over supporting edges **15** and under tabs **22** one side at a time. With the cover thus supported in the framework, upward movement thereof is discouraged by tabs **22**, which are sufficiently resilient to retain lip **20** in contact with supporting edge **15**. Light-passing cover **11** may be removed in a similar manner and reinstalled as often as necessary, the retaining clips **10** meanwhile remaining in place as semi-permanent parts of the lighting fixture.

Although I have shown and described retaining clip **10** as being of a certain material and adapted for use with a rectangular framework of a cross section substantially as shown, I do not wish to imply these as limitations on my invention. Other materials may be used and other means devised for securing tab **22** to a framework of any material, cross section or shape which occur to those skilled in the art.

Although I have described these and other features of a preferred embodiment of my invention in some detail, it is understood that this has been done only by way of example and that numerous changes may be resorted to without departing from the spirit and scope of my invention as hereinafter defined in claims.

I claim as my invention:

1 A cover structure for lighting fixtures comprising, in combination:

a supporting frame-work of generally L-shaped section having the horizontal component thereof turned inwardly with a raised portion providing a supporting surface at the free end of said horizontal component, and a downwardly opening lip on the inward side of the free end of the vertical component thereof; a light-passing cover having a supporting edge at the periphery thereof, said cover being supported near its edge by said raised supporting surface; resilient means cooperating with said framework and cover

comprising a flat semi-rigid body having a top edge that engages said lip and a lower portion that jointly engages the upper surface of the edge of said cover and said raised portion to thereby resiliently engage and retain said cover in contact with said framework.

2. The structure of claim **1** wherein said resilient means further includes:

an extending tab portion at the said lower portion thereof of said tab having the side thereof cut back a distance into said body to form a pair of shorter tabs adjacent to and spaced apart by the first said tab portion, the first said tab portion being adapted to overlie the edge of said cover, and said shorter tabs being adapted to releasably engage said raised portion a spaced distance below the edge of said cover.

3. The structure of claim **2** wherein said resilient means is adapted to be deformed by pressure into a configuration that essentially follows the L-shaped configuration of the supporting framework, whereby; the top edge and the lower shorter tabs are forced into abutting relationship with the lip and the raised portion respectively.

4. The structure of claim **2** wherein said framework includes metal side members and cross members located perpendicularly thereto to thereby form a multiplicity of

rectangular openings defined by said framework of L-shaped section;

said edge of said light-passing cover describing a rectangle having a dimension larger than the opening so as to provide a peripheral lip extending beyond said supporting edge;

and a multiplicity of said resilient means located about the periphery of said cover.

5. The structure of claim **4** wherein said cover is fabricated of a deformable composition of matter to enable its non-destructive distortion so as to admit said cover past the supporting edges of the framework.

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