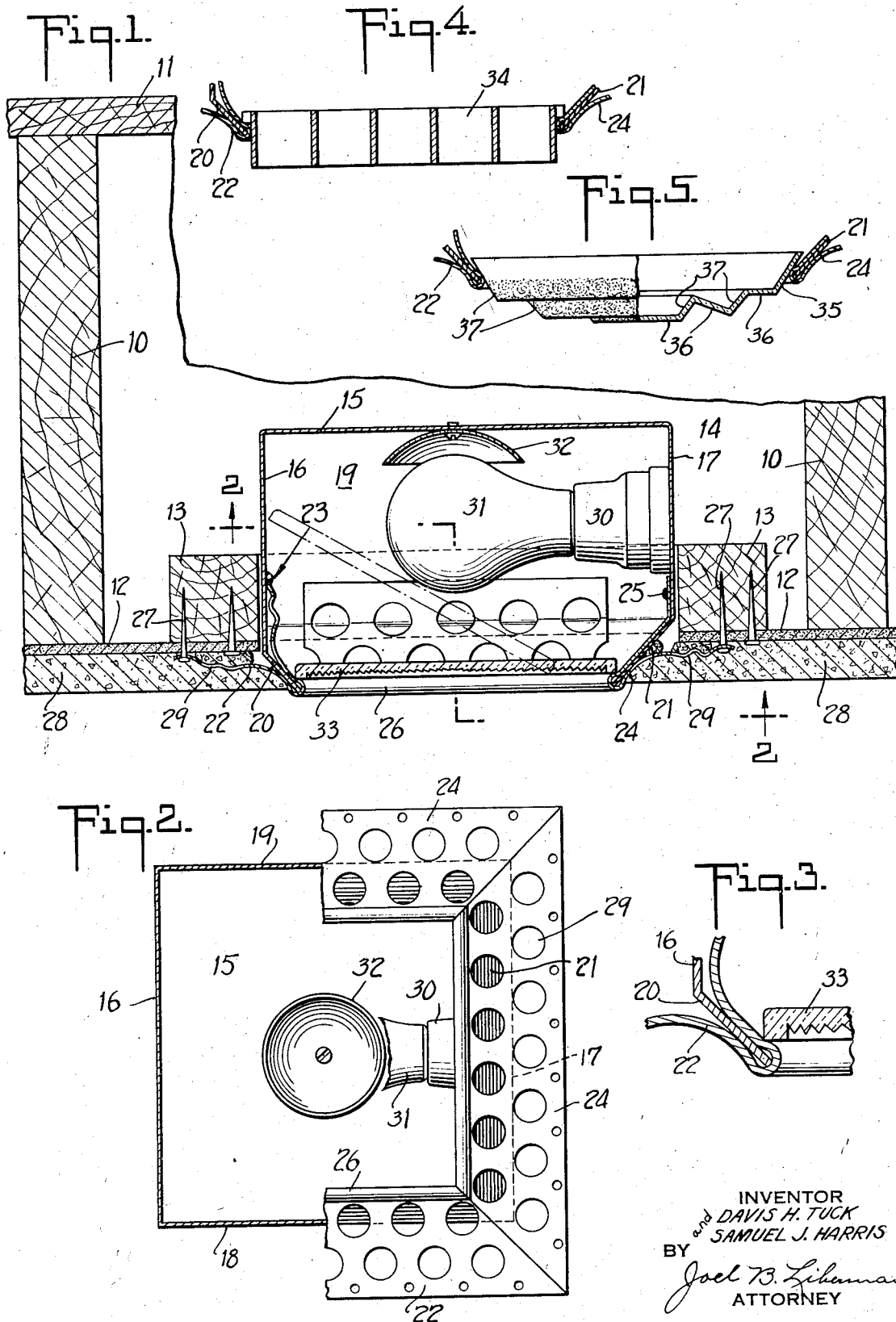


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BUILT-IN LIGHTING UNIT

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8 Claims. (Cl. 240—78)

The present invention relates to built-in lighting units, and is more particularly directed toward lamp boxes and lighting units adapted to be recessed in plastered ceilings.

5 Lamp boxes designed for recessed mounting and for the support of louver screens, glass plates and the like have generally been provided with a frame about the opening and another hinged frame for supporting the screen. This exposed material in some locations is deemed to be unsightly and for small units adds considerably to the cost of the unit.

15 The present invention contemplates lighting units of the type referred to which have no exposed frame about the lamp box, or about the screen, and no hinge, but wherein the screen is easily removable.

20 The present invention also contemplates the installation of recessed lighting units wherein the entire unit may be readily secured in place in an opening provided in the ceiling lath. The unit is so designed that when it is secured to the lath it is automatically placed with its opening the right distance below the lath so as to be at the plaster line, and plaster beading is provided to form a plaster ground so that when the ceiling is plastered the plastering can be carried over to the plaster beading forming a proper finish.

25 The accompanying drawing shows, for purpose of illustrating the present invention, several embodiments in which the invention may take form, together with modifications of certain parts, it being understood that the drawing is illustrative of the invention rather than limiting the same.

30 In the drawing:

35 Figure 1 is a vertical sectional view through a ceiling showing the installation of the lighting unit;

40 Figure 2 is an inverted elevational view of the lighting unit with parts in section on the line 2—2 of Figure 1;

45 Figure 3 is a fragmentary sectional view of an enlarged scale; and

50 Figures 4 and 5 are fragmentary views illustrating modifications.

In Figure 1 the floor joists are indicated at 10, the rough flooring at 11 and lath at 12. Any form of lath may be used. This lath is preferably reinforced by a rectangular frame indicated at 13.

55 This frame accommodates a lamp housing 14 of suitable size and convenient shape. It is here shown in the form of a square box having a top wall 15 and side walls 16, 17, 18 and 19. The lower portions of the side walls 16 and 18 are provided with inwardly extending, oblique flanges 20, while the lower portions of the side walls 17 and 19 are provided with inwardly extending oblique flanges 21 which start at a higher elevation than the flanges 20. These flanges provide a square opening. The flanges 20 are received in a length of plaster beading 22, one portion of which extends up along the inside of the housing and is spot welded to it, as indicated at 23. The other portion of the plaster beading extends outwardly 10 and upwardly as indicated in the drawing. The oblique flanges 21 receive another length of plaster beading, indicated at 24. This is preferably bent over so as to lie close to the box wall, as indicated at the right-hand side of Figure 1, and 15 is spot welded to it as indicated at 25. It has an outwardly and upwardly extending portion as shown at the right of Figure 1.

These four lengths of plaster beading form a rectangular finishing opening 26 which is offset 20 from the center of the housing and spaced a predetermined distance below the lath. They are secured to the lath 12 and to the frame 13 by nails indicated at 27. This permanently and definitely locates the lamp housing with respect to the plaster line, and when the plaster is applied, as indicated at 28, it passes up through the holes 29 in the plaster beading and is securely anchored to it.

30 The lamp housing is provided with a lamp socket, indicated at 30, which carries a lamp bulb 31 with the light center preferably over the center of the opening 26, and a small reflector 32 is carried by the top of the lamp housing above the lamp bulb. The opening 26 is closed by a light transmitting screen which may be of various forms. In Figure 1 it is shown as a flat prismatic plate 33. Instead of a prismatic plate one could, of course, use a diffusing plate, if the light controlling features of the prismatic plate were not required. In Figure 4 it is shown as a cellular louver screen 34, while in Figure 5 it is shown in the form of a shallow light transmitting dish 35 having transparent portions, indicated at 36, and enamelled walls indicated at 37.

45 These light transmitting screens rest on the plaster beading as indicated, and can be removed and reinserted into the box very easily. To remove the plate 33 shown in Figure 1 it is merely necessary to slide it to the left and up, as indicated in the dotted position, and then turn it sideways so that it can be brought to such a position that it will pass down through the opening 26. The other screens may be removed in a similar manner.

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It is obvious that the invention may be embodied in other forms and constructions within the scope of the claims and we wish it to be understood that the particular forms shown are but merely illustrative. Various modifications and changes being possible, we do not otherwise limit ourselves in any way with respect thereto.

What is claimed is:

1. In combination, a lathed ceiling having an aperture, a downwardly opening lamp housing disposed in the apertured ceiling and having plaster beading to define the contour of its opening, the plaster beading extending outwardly from the opening and being secured to the lath to locate the plane of the opening below the plane of the lath, plaster covering the lath and the plaster beading, a lamp in the housing, and a light transmitting screen disposed across the housing opening.

2. In combination, a lathed ceiling having an aperture, a frame about the aperture and above the lath, a downwardly opening lamp housing disposed to the lath to locate the plane of the opening below the plane of the lath, plaster covering the lath and the plaster beading, a lamp in the housing, and a light transmitting screen disposed across the housing opening.

3. In combination, a lathed ceiling having an aperture, a downwardly opening, rectangular lamp housing disposed in the apertured ceiling and having downwardly and inwardly converging edges, strips of plaster beading secured to the edges of the housing to define a rectangular opening, the plaster beading extending outwardly from the opening and being secured to the lath to locate the plane of the opening below the plane of the lath, plaster covering the lath and the plaster beading, a lamp in the housing, and a light transmitting screen disposed across the housing opening.

4. In combination, a lathed ceiling having a rectangular aperture, a rectangular frame about the aperture and above the lath, a downwardly opening, rectangular lamp housing disposed in the apertured ceiling and secured to the frame and having downwardly and inwardly converging edges, strips of plaster beading secured to the

edges of the housing to define a rectangular opening, the plaster beading extending outwardly from the opening and being secured to the lath to locate the plane of the opening below the plane of the lath, plaster covering the lath and the plaster beading, a lamp in the housing, and a light transmitting screen disposed across the housing opening.

5. In combination, a lathed ceiling having a rectangular aperture, a downwardly opening, rectangular lamp housing disposed in the apertured ceiling and having plaster beading to define a rectangular opening with its center offset with respect to the center of the housing, the plaster beading extending outwardly from the opening and being secured to the lath to locate the plane of the opening below the plane of the lath, plaster covering the lath and the plaster beading, a lamp socket secured to the side of the housing remote from the opening and disposed over the center of the opening, a lamp in the socket and a light transmitting prismatic plate disposed across the housing opening.

6. A lighting unit mounted flush in a plastered ceiling, comprising a downwardly opening housing, plaster beadings secured about the edges of the housing and forming a finished opening in the plastered ceiling and a shelf support for a light transmitting closure for the housing, the beadings having attaching portions extending outwardly and upwardly from the finished opening for securement of the housing to a support within the ceiling structure, said portions being perforated to receive and support plaster extending to the finished opening, and a light source within said housing above said opening.

7. A lighting unit as in claim 6, wherein the housing has inwardly extending oblique flanges so that the opening is smaller than the body of the housing.

8. A lighting unit as in claim 6, wherein the housing is rectangular and has inwardly extending oblique flanges so that the opening is smaller than the body of the housing and the flanges are of a greater width on two adjacent sides than on the other adjacent two sides whereby the opening has its center offset from the center of the housing.

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