

Oct. 9, 1934.

D. H. TUCK

1,975,879

LIGHTING UNIT

Filed Dec. 30, 1932

3 Sheets-Sheet 1

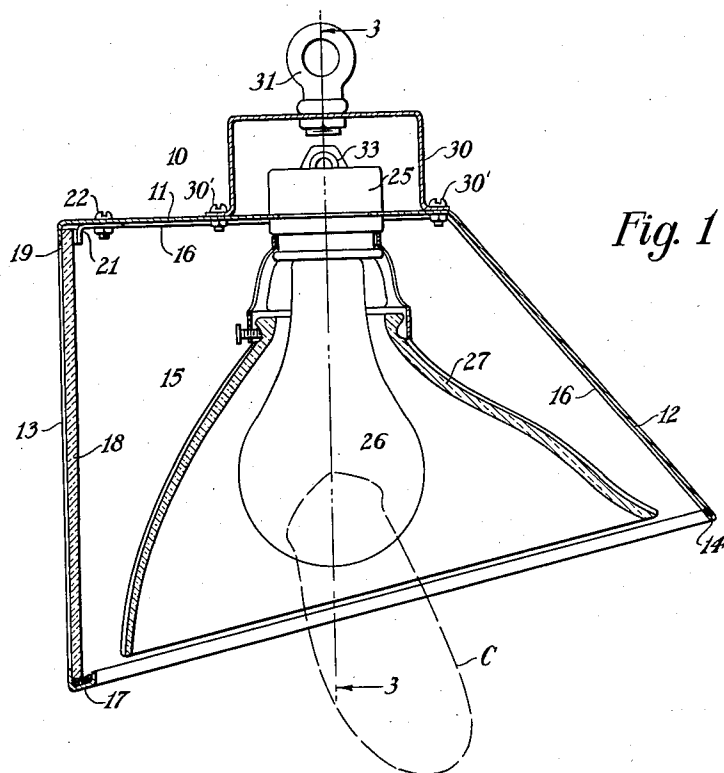


Fig. 1

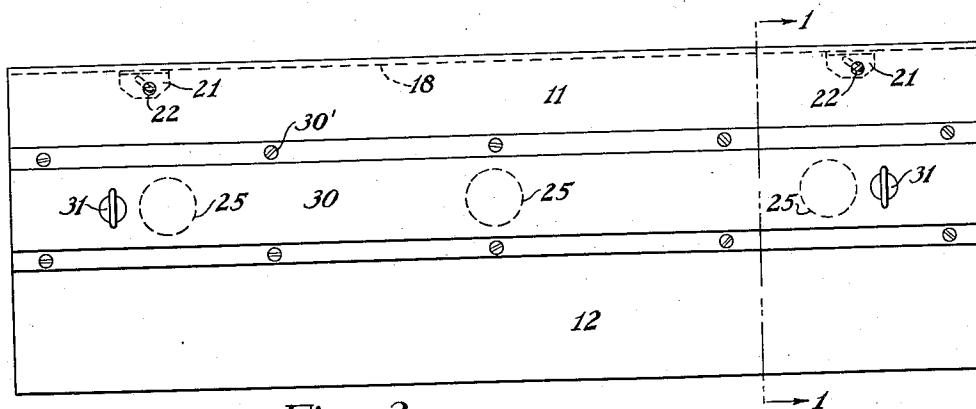


Fig. 2

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3 Sheets-Sheet 2

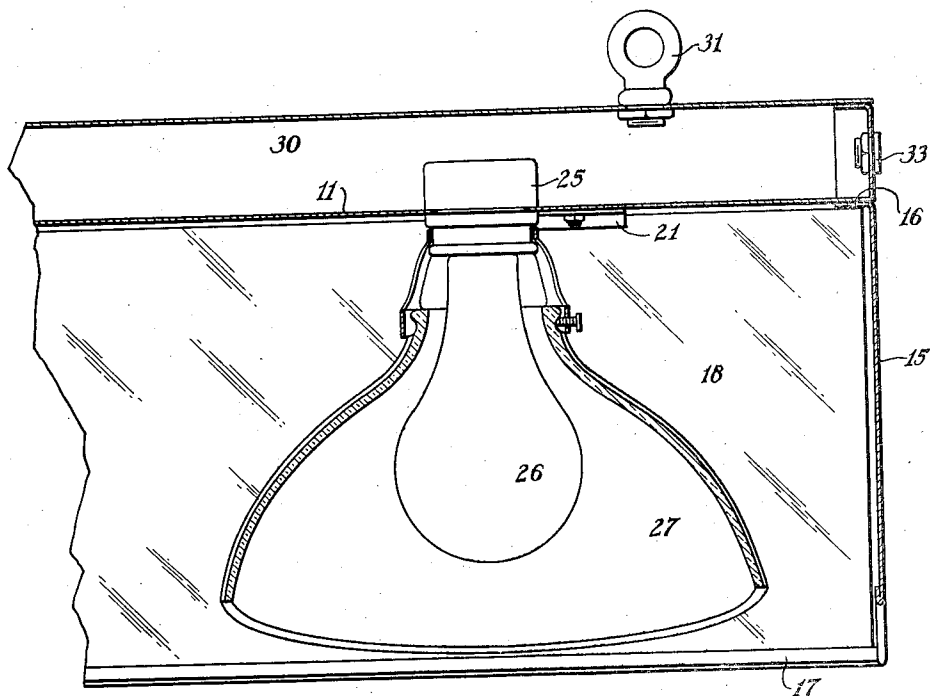


Fig. 3

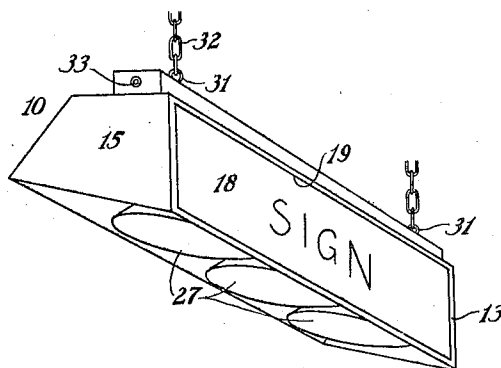


Fig. 4

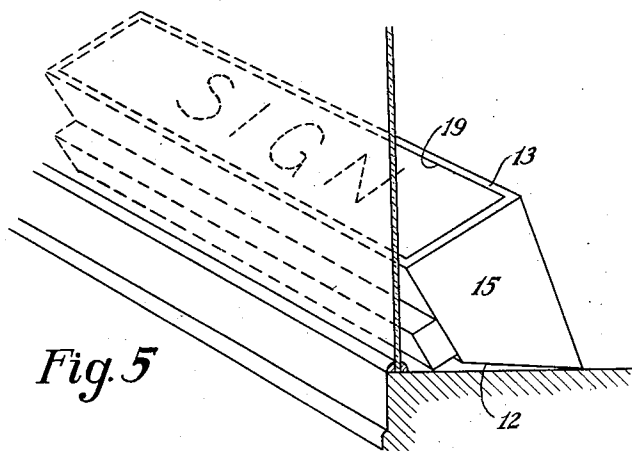


Fig. 5

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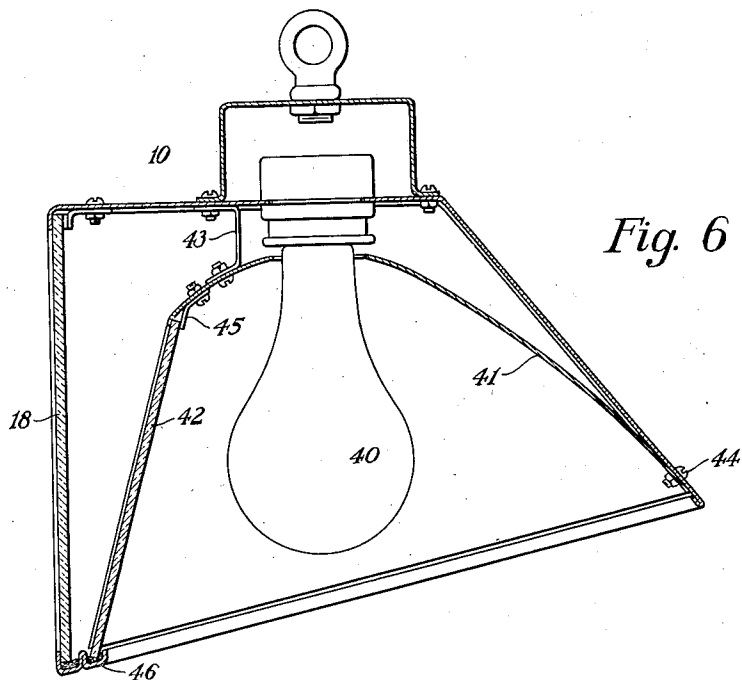
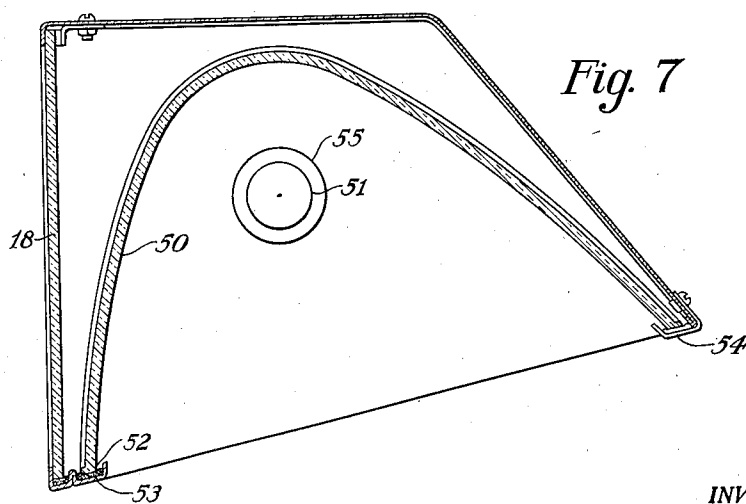
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Filed Dec. 30, 1932

3 Sheets-Sheet 3



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1,975,879

LIGHTING UNIT

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Application December 30, 1932, Serial No. 649,460

2 Claims. (Cl. 40—132)

The present invention relates to lighting units and is more particularly directed toward a dual purpose lighting unit or luminair adapted for display and sign lighting.

5 The present invention contemplates a unit suitable for this purpose designed particularly for use in show windows and over counters or other displays for the purpose of illuminating the show window or display and for the further purpose of providing a sign which attracts the attention
10 of persons outside the show window, or in front of the counter.

The present invention contemplates a portable unit forming no part of the show window or counter construction designed to produce a very satisfactory intensity of light projected at a suitable angle toward a display, as well as a sign.

In order to obtain the most advantageous light distribution, the present invention contemplates making up the dual purpose unit in the form of an inverted trough adapted to be suspended in a show window or otherwise supported and to receive one or more incandescent lamps (or other light sources) each preferably associated with a translucent reflector adapted to project light out through the bottom of the trough-like member and to transmit a small amount of light toward the side walls of the trough. One or more of these side walls may be provided with signs adapted to be illuminated by the light transmitted through the reflectors.

The reflector or reflectors are preferably designed to provide an asymmetric light distribution so as to project the maximum beam beyond the side of the trough opposite that which carries the sign. This improves the illumination of a display located behind (and below) the trough.

Where point source incandescent lamps are employed, each lamp may be placed in an asymmetric prismatic glass reflector.

Other and further objects of the invention will appear as the description proceeds.

The accompanying drawings show, for purposes of illustrating the present invention, several of the many embodiments in which the invention may take form, it being understood that the drawings are illustrative of the invention rather than limiting the same. In these drawings:

Fig. 1 is a vertical sectional view, taken on the line 1—1 of Fig. 2, of one form of dual purpose lighting unit;

Fig. 2 is a top plan view of the unit shown in Fig. 1;

Fig. 3 is a vertical sectional view on the line 3—3 of Fig. 1;

Fig. 4 is a perspective view of the lighting unit showing it in hanging position;

Fig. 5 is a perspective view of the lighting unit in position for flood lighting or foot lighting from underneath;

Fig. 6 is a transverse sectional view through a modified form of construction employing a two part reflector of glass and metal; and

Fig. 7 is a similar view of a construction employing a tubular light source and a trough-like glass reflector.

In the form shown in Figs. 1–5 of the drawings, the trough-like structure 10 is made out of sheet metal. A comparatively large piece of metal is bent to form a rectangular upper or top wall 11; a rear wall 12, and a front wall 13. The lower edge of the rear walls is folded back to provide a reinforcing bead 14 as indicated. End plates 15 form the ends of the trough. They have flanges riveted or spot welded as indicated at 16.

The lower edge of the front wall or panel 13 is bent to form a channel 17 adapted to receive a glass plate 18. This glass plate may be transparent or diffusing, or partly opaque, and carries any appropriate sign. It is received behind an opening 19 in the front panel 13 of the trough. The glass plate 18 is held in place by two clips 21 slidably mounted on bolts 22 carried in the top wall 11. This arrangement facilitates insertion of the glass panel or its removal.

A number of lamp sockets 25 are secured in place in the upper or top part 11 of the trough forming member. These sockets open downwardly and are adapted to carry incandescent lamps 26 and prismatic glass reflectors 27, preferably having an asymmetric light distribution as indicated by the photometric curve C. As the plane of the lower face of these reflectors is oblique to the axis as indicated, it is preferable to give the trough-like member the cross section indicated, as it affords suitable screening and a protection for the reflectors.

The trough-like member may be provided with an inverted sheet metal channel member 30 secured in place by bolts indicated at 30' to form a wiring channel. The unit may carry two loops 31 to facilitate supporting it on chains, as indicated at 32. These chains are so placed that the center of gravity is underneath the chains so that the unit hangs true. The wires may be led in through a bushing, indicated at 33, carried in the end of the wiring channel.

A unit such as above described may be conveniently mounted in a show window at a suitable height so as to not interfere with observing the

display. It will provide a strong and intense illumination on the articles in the show window or display, and at the same time will provide an attractive sign.

5 The form shown in Fig. 6 employs a trough 10 like that shown in Figs. 1-4. The incandescent lamps are shown at 40. Instead of prismatic glass reflectors, a metal reflector 41 and diffusing glass plate 42 are employed to direct most of the light
10 downwardly and rearwardly. The glass is preferably rather dense, but sufficiently translucent to pass light to the sign panel 18. The reflector 41 may be supported by straps 43 and screws 44, and the glass 42 by clips 45 and a channel 46.

15 In the form shown in Fig. 7, the reflector is in the form of a translucent trough 50. It receives a long light source 51, such as a neon tube, a mercury lamp, or two or more incandescent lamps. Sockets 55 for supporting two such lamps may be
20 secured to the ends of the trough. One edge 52 of the glass trough is received in a channel 53 of the metal trough and the other edge is held in place by clips 54. The trough 50 may be formed of prismatic glass of the desired design, or one
25 may use a bent piece of dense diffusing glass.

Where the advantages of light control by reflectors of efficient design are not required, one can employ a trough with a light reflecting paint or coating, shaped as shown, or formed into a
30 long reflector.

The device may be readily adapted for use as a foot light for amateur theatricals by resting on the floor at the front of the stage, the translucent sign being blocked out or rendered opaque in any
35 convenient manner. The device may also be used

for foot lighting of windows. As shown in Fig. 5, it may be placed on the floor of the show window just behind the glass. In this case the chains are not necessary, and the sign will, of course, be made up to read in the proper manner.

It is obvious that the invention may be embodied in many forms and constructions within the scope of the claims, and I wish it to be understood that the particular forms shown are but a few of the many forms. Various modifications and changes
85 being possible, I do not otherwise limit myself in any way with respect thereto.

What is claimed is:

1. A luminair for display and sign lighting, said luminair having a row of light sources each carried in translucent asymmetric reflectors adapted to project maximum beams in the same in a lateral direction, a translucent sign alongside the reflectors and adapted to be illuminated by the light which escapes through the reflectors, and
90 a trough-like enclosure for the reflectors and light sources and having an open side to receive the sign, the enclosure having an open side arranged at an acute angle to the sign for the transmission of light from the reflectors, said enclosure
95 being opaque except for the open side thereof and the sign, said reflectors being of a shape that the edges of the open sides thereof lie substantially parallel to the open side of the enclosure.

2. A luminair as set forth in claim 1, wherein
105 the sign is on the side of the reflectors forwardly of the direction of maximum beam so that the sign does not obstruct the view of the display to the rear of the luminair.

DAVIS H. TUCK. 110

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