

May 20, 1941.

I. M. KIRLIN

2,242,525

ILLUMINATING DEVICE

Filed Oct. 30, 1937

3 Sheets-Sheet 1

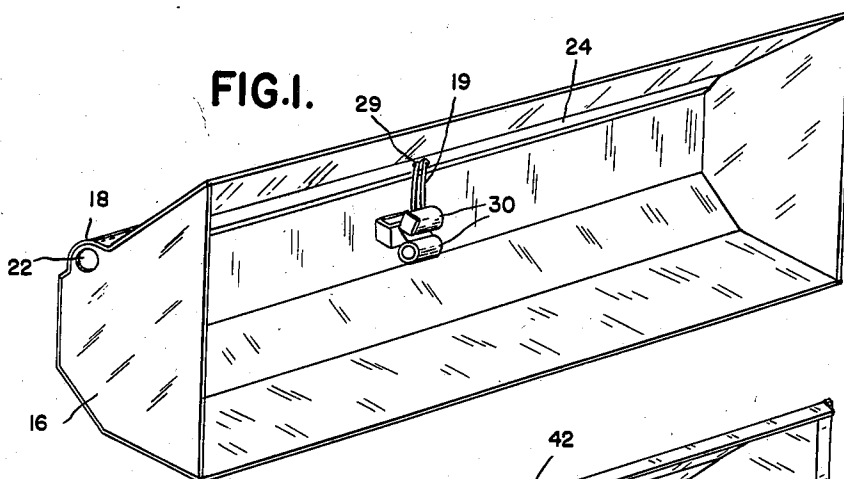


FIG. 2.

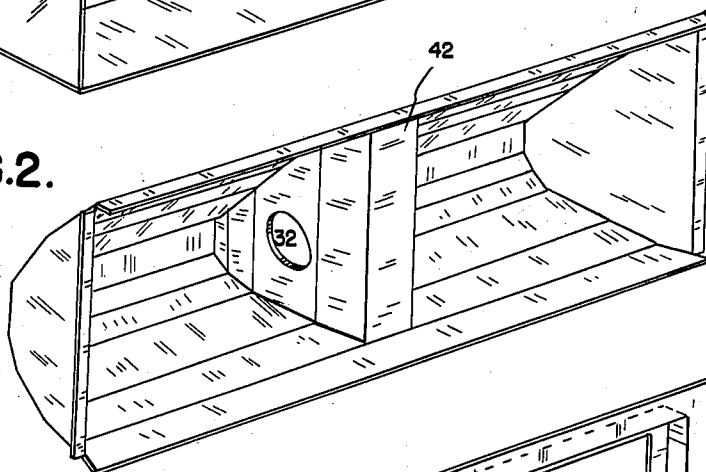
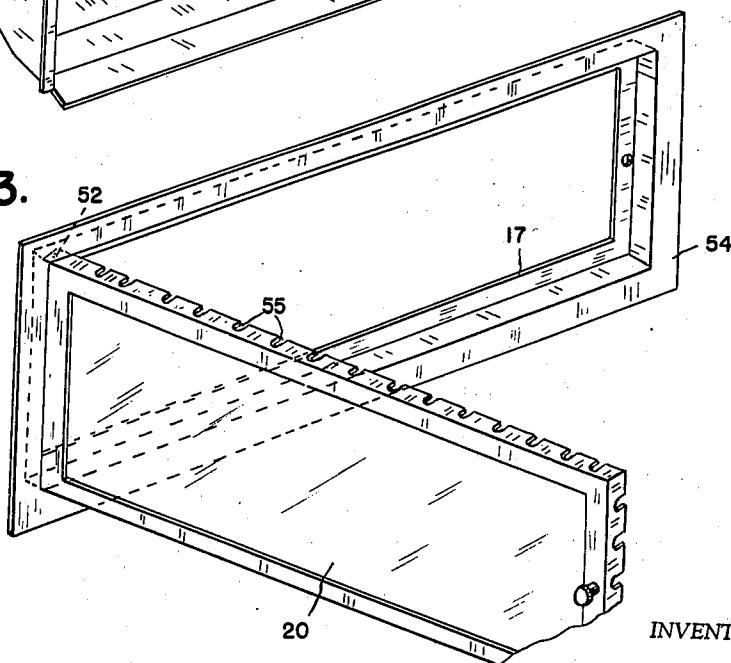


FIG. 3.



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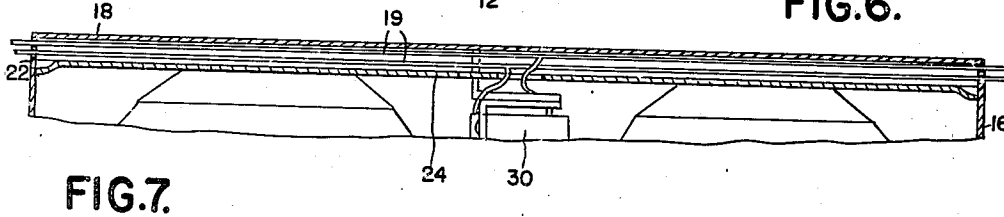
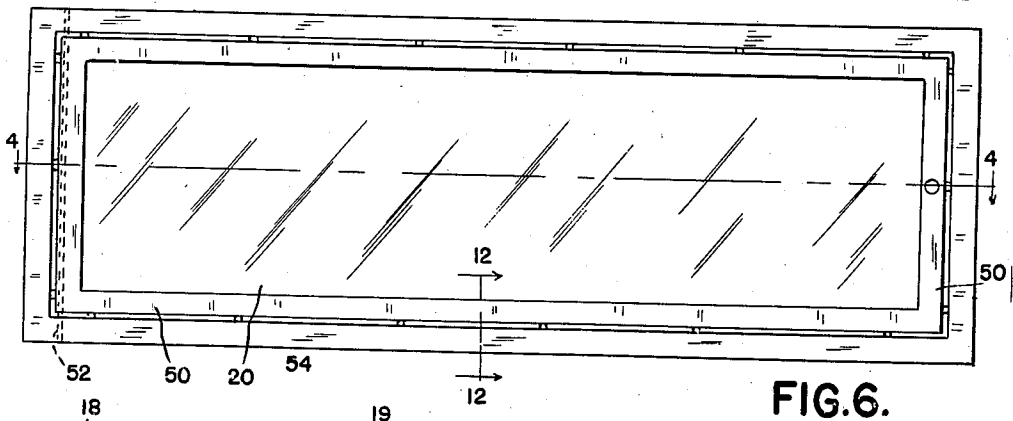
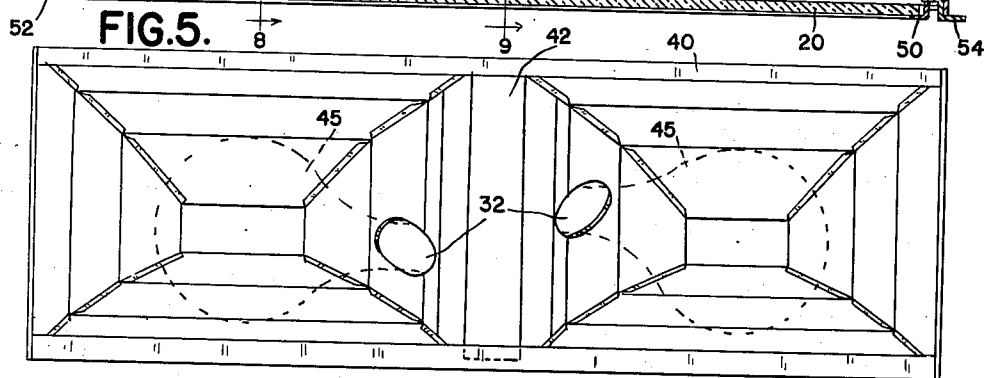
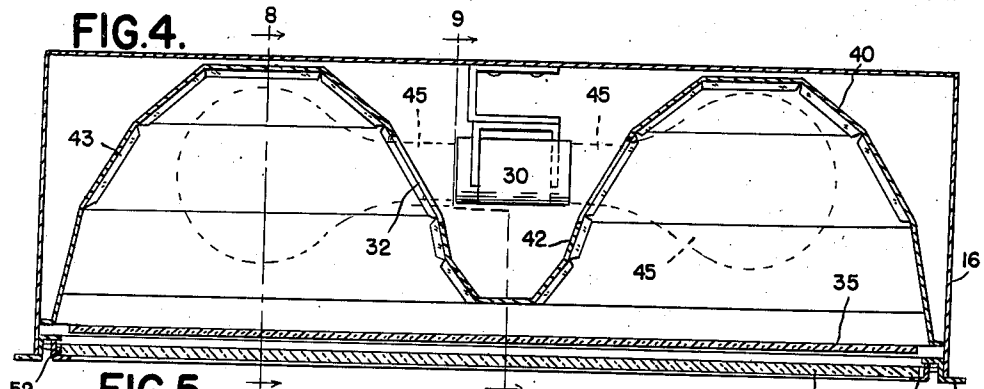
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3 Sheets-Sheet 2



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ILLUMINATING DEVICE

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3 Sheets-Sheet 3

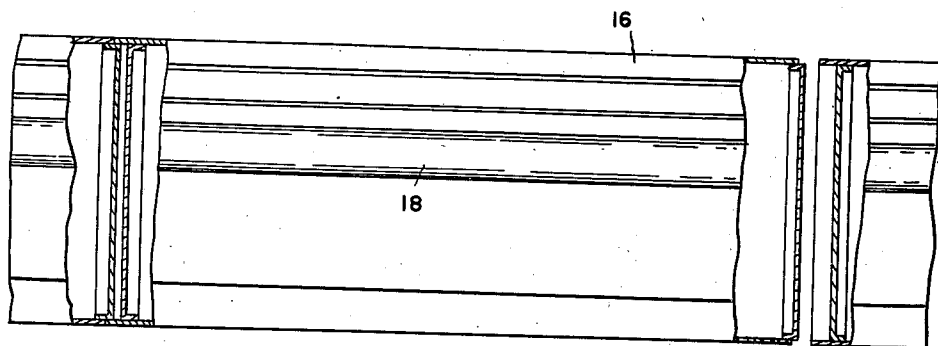
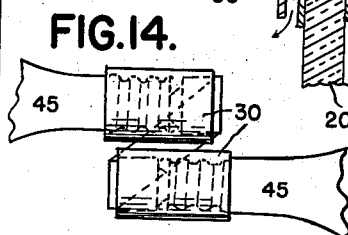
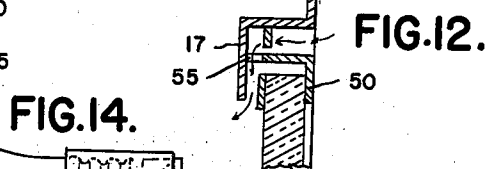
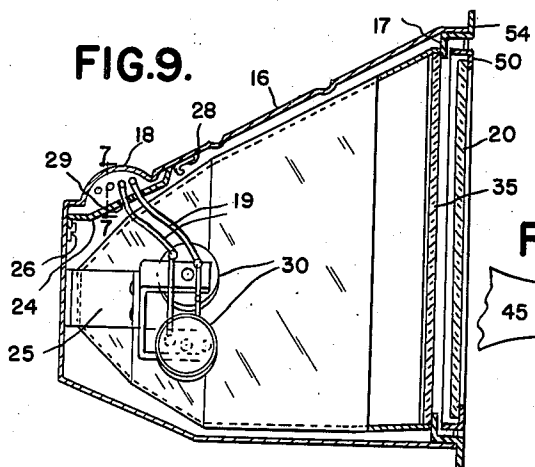
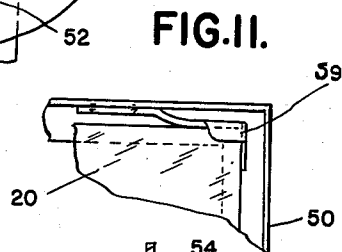
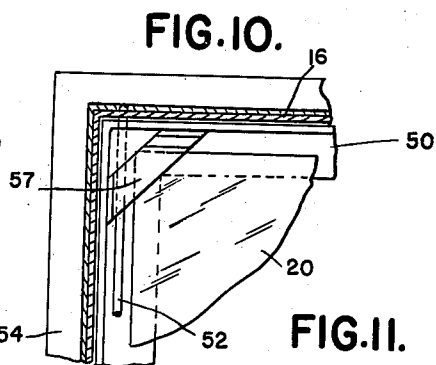
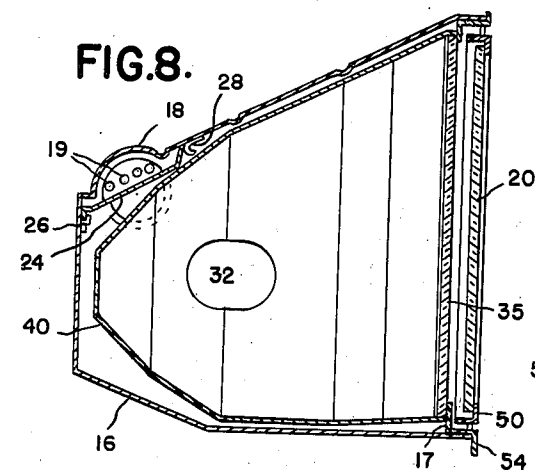


FIG. 13.

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UNITED STATES PATENT OFFICE

2,242,525

ILLUMINATING DEVICE

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Application October 30, 1937, Serial No. 171,880

1 Claim. (Cl. 240—47)

This invention relates to housing and reflecting means for electric flood lights. An important object of the invention is to provide an improved metallic housing and reflector assembly for enclosed flood lights such as are employed in the illumination of showrooms, factories, auditoriums and building interiors generally, the parts of such assembly being of light weight, simple and inexpensive of construction and neat appearance.

Another object is the provision of such an enclosed floodlight which is safe to use and guarded against undue heating by improved ventilating means arranged to allow free air circulation through the interior, whereby heat generated by the illuminating means within the same may be efficiently carried away.

Another object is to provide such an elongated reflector which is adapted to be combined, in a serial arrangement, with a plurality of others of like construction, in such manner that the assembled units appear as a single elongated housing.

A further object of the present invention is to provide improved door supporting means for such devices, and improved means for retaining a glass window or lens in said door.

A further object is to provide an improved removable reflector construction, and improved means for retaining the same in the casing.

Another object is to provide in such a reflector and lamp casing assembly an improved wiring conduit, entirely enclosed in metal yet easily accessible.

Other objects and advantages will be apparent from the following description, wherein reference is made to the accompanying drawings illustrating a preferred embodiment of my invention and wherein similar reference numerals designate similar parts throughout the several views.

In the drawings:

Figures 1, 2 and 3 are perspective views, respectively showing in disassembled relation the casing, reflector and door frame portions of my improved device.

Figure 4 is a longitudinal substantially central cross sectional view of the assembled device.

Figure 5 is a front elevational view of the reflector assembly.

Figure 6 is a front elevational view of the door and door frame assembly.

Figure 7 is a detailed section of the wiring channel portions of the device, taken substantially on the line 7—7 of Figure 9.

Figures 8 and 9 are transverse sections taken

substantially on the lines 8—8 and 9—9 respectively of Figure 4.

Figures 10 and 11 are fragmentary elevational views of interior corners of the door, showing the glass retaining means.

Figure 12 is an enlarged detailed sectional view taken substantially on the line 12—12 of Figure 6, and looking in the direction of the arrows.

Figure 13 is a rear elevational view, partly broken away, showing a plurality of my improved devices, partly assembled to form a continuance extended unit, and indicating the manner in which they are used serially to form an elongated illuminating device.

Figure 14 is a detail elevation of the light supporting socket arrangement.

Referring now to the drawings: reference character 16 designates generally the casing of my improved device. It is provided with a rectangular front opening, while its cross sectional contour, best shown in Figures 8 and 9, is such that it tapers to reduced height from front to back. The sloping top and bottom walls are substantially flat, one thereof, shown as the bottom wall, preferably meeting the front approximately at right-angles. Although these portions are described as "top," "side," etc. in accordance with the positions in which they are shown in the drawings, it will be appreciated that the device may be used in any desired position.

Along the top wall of the casing near the back, a channel 18 is formed for the wires 19, which run to the lamp sockets 30. Knock-out sections 22 are provided in the end walls, in alignment with the channel 18, enabling the formation of an opening at either or both ends of the casing, and it will be apparent that wires may be carried through the channel to other devices or light units beyond, as will presently be explained. The wiring channel is covered interiorly, throughout its entire length, by a sheet metal cover plate 24. One side of the cover plate is removably slipped into a bracket 26, while the opposite edge of the plate is frictionally held by spring means as 28. Through a central opening 29 in the plate 24 the wires emerge from the wiring channel for connection with the sockets 30, the sockets being held by sheet metal bracket means 25 supported upon the back wall of the casing and projecting between the individual reflector sections, which are separated by a re-entrant wall portion 42 shaped to provide individual reflecting portions for the two bulbs as well as to house the sockets and prevent access thereto and to the wiring

when the door is opened, until the reflector is removed. The shown embodiment is adapted to accommodate two bulbs 45. The sockets 30 are so oppositely faced and angularly arranged that the bulb carried by each may have its filament disposed substantially at the center of its reflector, as indicated in dotted lines in Fig. 5, the openings 32 in the re-entrant wall portion 42 through which the bulb projects being appropriately positioned for this purpose.

The reflector is formed of sheet metal, its angularly disposed parts being held by tongue and slot connections as indicated at 43, while at its open end its edges are trapped behind an inwardly projecting perimetrical flange 17 carried by the casing 16 and forming part of the door frame 54. The corners of the reflector adjacent this opening are not secured together, and being free of each other, are sufficiently flexible so that they may be pulled inwardly to reduce the height of the front of the reflector, thus allowing removal of the reflector from casing. The manner in which the top and bottom edges of the reflector are trapped behind the flange 17 is best shown in Figure 9, while it will be noted upon an inspection of Figure 4 that the securing tongues which hold together the corners of the reflector are not provided near the front, allowing the above mentioned flexing.

A glass cover plate or lens 35 may also be trapped behind the flange 17, and retained between the flexible edges of the reflector. It will be apparent that removal and insertion of the plate may be effected by pushing it upwardly or downwardly sufficiently to free one edge thereof, its length being slightly less than that of the opening defined by flange 17.

If the plate 35 is provided, no glazed door need be used, although this is a matter of choice, and it will be seen that glass may be employed in either or both places. The door 50 is hinged at one end upon a vertical pin 52 which projects through the door frame 54. The door frame will be seen to be formed of Z-section material, the inner flange of which constitutes the reflector holding flange 17 previously mentioned. The door, if used, comprises a glass 20 held in a frame 50 of angular cross section. Its outside dimensions are less than the door opening, and cut-out portions as 55 at the edges of the inwardly projecting parts of the door frame provide communication between the interior and the slot around the door, thus allowing free circulation of air from the exterior to cool the plate 35 and/or the

entire interior. The air travel is indicated by arrows in Figure 12.

At one end the corners of the door glass 20 are slipped under angularly arranged metallic retaining straps 57, carried at the interior corners of the door, while at its other end the corners of the glass are releasably held by spring clips 59.

As best shown in Figure 13, one end wall of the casing 16 projects outwardly beyond the top, bottom and rear walls within which its inbent flanges are secured. At the opposite end of the casing the end wall is correspondingly inset and overhung by the other walls. Adjacent units may be assembled by interfitting such projecting and inset end wall portions, in the manner shown at the left in Figure 13. The manner in which the units are aligned preliminarily to such interfitting is indicated at the right in Figure 13. Absolute registry of a plurality of units disposed in line is thus secured, providing the appearance of a single continuous casing.

What I claim is:

Housing means for an electrical illuminating device, comprising a box-like casing having an opening in one face thereof, a glazed door for closing said opening, said door having a metallic border frame substantially smaller than said opening and movable to and from a closed position in which it lies across said opening and projects into a part of the casing, means locating the border frame in the opening, to allow movement of air around the edges of said frame and into and out of said opening, means permitting circulation of air into and out of said part of the casing comprising a plurality of notched portions formed in said portion of the frame which projects into a part of the casing, whereby air may move around the back as well as the edges of said frame and into and out of the interior of the casing thereabout, the air paths thus provided being sufficiently devious to prevent vision and escape of light therethrough, said border frame having a portion of substantially right angular cross section, including a front flange lying substantially in the plane of the opening, a translucent panel lying against the inner face of said front flange, and outside flange portions extending inwardly of the opening around the edges of said panel and projecting rearwardly therebeyond, said notched portion being formed in said outside flange portion, a portion of said casing extending forwardly around said border frame to substantially coplanar relation with respect to said front flange.

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