This invention relates to a combination reflector and showcase frame member, and particularly to means for mounting fluorescent or other elongated light tubes for lighting the interior of a showcase.

The present invention comprises a new showcase structure in which the reflector is secured to the end walls of the showcase and made a more or less permanent part thereof, to provide a substantial support for the glass plate forming the top wall of the showcase, and the cornice structure or rail is detachably secured to the reflector. The present arrangement makes it unnecessary to disturb the reflector if the top glass plate and/or the front glass plate are to be replaced. In one form of the invention, the cornice structure is detachably secured to the reflector in such a manner as to make it unnecessary to disturb the top glass plate if the front glass plate is to be replaced.

The cornice structure of the showcase of the present invention provides a safe conduit for concealed electrical wiring that is readily accessible for inspection and repair of the wiring without disturbing the reflector. Additionally, the reflector cooperates with the cornice to hold the top edge of the vertically disposed glass wall securely in position.

The structure by which the various results and advantages of the present invention are attained will be described in connection with the accompanying drawings, in which:

Figure 1 is a front perspective view of a showcase embodying the invention;

Figure 2 is a top view, partly in elevation and partly in section, showing the cornice removed from the showcase and the mortise plate structure by which the reflector is secured to the end walls of the showcase;

Figure 3 is a cross sectional view, taken along the line 3—3 of Figure 2;

Figure 4 is a cross sectional view, taken along the line 4—4 of Figure 1; and

Figure 5 is a view, similar to Figure 4, showing a modified embodiment of the invention.

In the drawings, the reference numeral 2 indicates a showcase having a front wall 3, a top wall 4, and a pair of end walls 5. End walls 5 may be metal, wood or any other suitable material, wood being the usual material, and are each provided adjacent its front edge with a vertically disposed channel or groove 6 in which the edges of the glass plate forming front wall 3 are slid and retained. The front edge of each end wall 5 may be notched or recessed slightly, as indicated at 7, for a purpose hereinafter described. A mortise plate 8 is secured to the inside of each end wall 5 by means of screws 9. Plates 8 fit in shallow recesses 10 so as to be flush with the inner surfaces of end walls 5. If end walls 5 are made of thin metal, instead of wood, plates 8 may be welded or riveted thereto. Plates 8 are each provided with a plurality of threaded apertures 11.

The reflector 12, of any suitable material but preferably of a metal which can be extruded or drawn, has an end plate 13 welded or brazed to each end. Plates 13 are apertured to register with apertures 11 in mortise plates 8 and are secured thereto by metal screws 14, thereby making the reflector an integral part of the showcase structure at the corner where projections from the top glass plate and front glass plate intersect.

The inside surface of the reflector may be finished in any desirable manner to provide maximum light reflection. In addition to providing adequate light reflection the reflector is utilized to cooperate with the cornice to support the top edge of glass plate 4, and is therefore shaped with due consideration for the dual purpose it performs.

Both outer edges 15 and 16 of the reflector are curved or otherwise shaped to fit around opposite sides of an elongated light tube 17 at a proper distance to reflect the light rays downwardly into the showcase. Preferably the light tube is of small diameter, such as the fluorescent tube sold under the trade-mark “Slimline,” for example, so the sides of reflector 12 are substantially concealed by the cornice from the showcase. It will be obvious that if the showcase is of sufficient length a plurality of light tubes 17 may be mounted in the reflector in axial alignment.

Starting from the top of curved edge 15, as seen in Figure 3, reflector 12 has a horizontal section 18 which extends outwardly into contact with the rear surface of front glass 2 adjacent its upper edge. The reflector then extends upwardly in a plane parallel to the inside surface of front glass 2 to form a vertical section 19 curved at 20 to extend horizontally towards curved edge 16. This horizontal section, designated by the numeral 21, lies in a plane parallel but spaced below the plane of top glass plate 4. Curved edge 16 merges into a horizontal section 22 parallel to and engaging the bottom surface of glass plate 4. A short vertical section 23 connects horizontal sections 21 and 22.
Section 22 of the reflector extends forwardly of section 23 so as to provide a space or recess 24 between sections 21 and 22, closed at one side by vertical section 25 and open at the opposite entrance side. The portion of section 22 extending forwardly of section 23 is provided with a threaded aperture 26 and section 21 has a counterbored aperture 25 aligned therewith.

Reflector 12 may be extruded or drawn as a unit, or it may be formed of sheet metal bent to shape. In the latter case, curved edge 16 may be formed separately and welded to vertical section 22. Section 22 may be provided with one or more apertures 27 so that the electrical wiring (not shown) can enter the space above section 21.

The cornice 28 comprises a rounded section 29 having its top extending horizontally and flush with the top surface of top glass plate 4. Rounded portion 29 has a lateral extension 30 at each end fitting into notches 7 in end walls 5, to cover the tops of channels 6. The depth of notches 7 is equal to the thickness of extensions 30 so that the top surface of the extensions will be flush with the adjacent surfaces of the showcase.

The rear edge of rounded section 29 terminates in a downward extending horizontal section 31 which engages the front edge of top glass plate 4 when cornice 28 is assembled with the showcase. A flange 32 extends horizontally from the bottom of vertical section 31 and fits into space 24. Flange 32 is provided with an elongated aperture 33 that is aligned with apertures 29 and 26 when cornice 28 is in its proper position. A metal screw 34 may then be inserted in apertures 32 and 33 and screwed into aperture 29 to hold cornice 28 in place.

The lower edge of rounded section 29 of the cornice terminates in a horizontal section 35. A vertical flange 36 extends downwardly from section 35 in contact with the front surface of the upper edge of front glass plate 3. Figure 4 shows how flange 36 and vertical section 19 of reflector 28 cooperate to hold the top edge of front glass plate 3 firmly in proper position.

When cornice 28 is secured to the showcase the space between the inner surface of rounded section 29, vertical section 31, and sections 6, 20, and 21 of reflector 12, forms a safe conduit for carrying the electrical wires from the current source to light tubes 11. If the wiring has to be inspected or repaired it is accessible by merely loosening screw 34 and pulling cornice 28 outwardly to remove flange 32 from the recess 24 in reflector 12.

When front glass plate 3 must be replaced, cornice 28 is removed in the manner described in the preceding paragraph. Section 22 of the reflector furnishes adequate support to top glass 4 because the reflector is rigidly supported at its ends by mortise plates 3. Accordingly, it is not necessary to disturb top glass plate 4 in any manner when the front glass plate 3 is to be replaced. The edges of the new glass plate 3 are inserted in channels 5 and the glass is then slid downwardly into position. Cornice 28 is then replaced and screw 34 tightened to hold it in place.

In the embodiment illustrated in Fig. 5, the shape of reflector 37 follows generally the shape of reflector 12 and the reflector is secured to ends 5 of the showcase in the same manner as previously described. The lower curved edge 38 terminates at its upper portion in a horizontal section 39 provided with a threaded aperture 40. Section 39 is bent at right angles to form a vertical section 41 provided with a threaded aperture 42. Section 41 is curved to meet a horizontal section 43 having a threaded aperture 44. Horizontal section 45 merges into the upper curved edge 46.

The rear surface of the top edge of front glass plate 3 is held in place by a wooden stop 46 secured to the underside of section 38 by a screw 47 threaded through the wooden stop and into aperture 40. An angle iron 48 has one upwardly directed leg secured to section 41 by a screw 49 threaded thereby and into aperture 42. The other leg 50 of angle member 48 is downwardly directed in offset relation with respect to the first mentioned leg, and is in contact with the front surface of front glass 3. Tightening screw 45 pulls leg 50 towards stop 46 to hold the top edge of front glass plate 3 rigidly therewith.

Cornice 51 has a rounded section 52 that terminates at its lower edge in a horizontal section 53 and at its upper edge in a horizontal section 54. Section 55 fits beneath the forwardly extending edge of the horizontal section of angle iron 48 which joins legs 50 and the other leg. Section 54 of cornice 51 terminates in a vertical section 55 which extends downwardly into engagement with the top surface of section 43 of reflector 37. A flange 56 extends rearwardly in a horizontal plane from the bottom of section 55. Flange 56 rests on the top surface of section 43 of reflector 37 and is secured thereto by a screw 57 which extends through an aperture in flange 58 and is threaded into aperture 44.

The front edge of top glass plate 4 rests on flange 56 and is supported thereby. In this embodiment the top glass must be removed before access may be had to screw 57 which must be removed before cornice 51 can be removed. A conduit for carrying electrical wires is provided by the space between cornice 51 and reflector 37.

Section 41 is provided with an aperture 59 to permit the wiring to pass from the light socket to the conduit. The front glass plate 3 may be replaced and wiring may be inspected or repaired, after cornice 51 has been removed, without disturbing the reflector 37.

Although I have described two preferred embodiments of the invention in considerable detail, it will be understood that the description is illustrative, rather than restrictive, as many details of construction may be modified or changed without departing from the spirit or scope of the invention. Accordingly, I do not desire to be restricted to the exact structure described.

I claim:

1. A showcase comprising a front wall, a top wall and two end walls, the forward edge of said top wall being spaced from the top edge of said front wall so as to leave a gap therebetween, a light reflector secured at its ends to said end walls, said reflector having longitudinal edge portions disposed within the showcase and an intermediate portion spanning said gap, an angle iron removably secured to said reflector, said angle iron having one leg positioned adjacent one surface of the top edge portion of said front wall, a stop member secured to said reflector adjacent the opposite surface of the top edge portion of said front wall, said leg of the angle iron and said stop member cooperating to support the top edge of said front wall, and a cornice removably secured to said light reflector, said cornice having one longitudinal edge secured to said reflector adjacent the forward edge of said top wall and its opposite longitudinal edge positioned adjacent the upper edge of said front wall.
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5. A showcase comprising a front wall, top wall and two end walls, the forward edge of said top wall being spaced from the top edge of said front wall so as to leave a gap therebetween, plates permanently secured to said end walls, a light reflector having a plate permanently secured to each end, said last mentioned plates being each secured to one of said first mentioned plates, said reflector having its opposite longitudinal edge portions disposed within the showcase and an intermediate portion spanning said gap, and a cornice extending from the top edge of said front wall to the front edge of said top wall above said reflector, said cornice being removably secured to said reflector.

6. A showcase comprising a front wall, a top wall and a pair of end walls, the forward edge of said top wall being spaced from the top edge of said front wall so as to leave a gap therebetween, a reflector rigidly secured to said end walls, said reflector having an intermediate portion spanning said gap and opposite longitudinal edge portions positioned within the showcase, the forward edge of said top wall being positioned on one of said longitudinal edge portions of said reflector and supported thereby, a cornice having one portion secured to said one longitudinal edge portion of said reflector, said cornice having another portion spaced outwardly from the intermediate portion of said reflector and cooperating therewith to form a conduit for carrying electrical wiring, said cornice being removable from said reflector to provide access to said wiring without disturbing said reflector or said top wall.

7. A showcase including a pair of end walls, a reflector secured at its ends to said end walls, said reflector having a longitudinal edge portion comprising a pair of vertically spaced sections having a longitudinally extending recess therebetween and a cornice having a longitudinal edge portion fitting in said recess and secured to said longitudinal edge portion of said reflector.

8. A showcase including a top wall and a pair of end walls, a reflector secured at its ends to said end walls, said reflector having a longitudinal edge portion comprising a pair of vertically spaced sections having a longitudinally extending recess therebetween, and a cornice having a longitudinal edge portion fitting in said recess and secured to said longitudinal edge portion of said reflector.

9. A showcase including a front wall, a top wall and a pair of end walls, the forward edge of said top wall being spaced from the top edge of said front wall so as to leave a gap therebetween, a reflector rigidly secured to said end walls, said reflector having an intermediate portion spanning said gap and opposite longitudinal edge portions positioned within the showcase, the forward edge of said top wall being positioned on one of said longitudinal edge portions of said reflector and supported thereby, said intermediate portion forming a stop against which the upper edge portion of said front wall is positioned, and a cornice having one longitudinal edge portion secured to said one longitudinal edge portion of said reflector, an intermediate portion spaced outwardly from the intermediate portion of said reflector and spanning said gap, and an opposite longitudinal edge portion positioned against the upper edge portion of said front wall, said last mentioned longitudinal edge portion of said cornice cooperating with said stop to clamp said upper edge portion of said front wall in position.

10. A showcase including a front wall, a top wall and a pair of end walls, the forward edge of said top wall being spaced from the top edge of said front wall so as to leave a gap therebetween, a reflector rigidly secured to said end walls, said reflector having an intermediate portion spanning said gap and opposite longitudinal edge portions positioned within the showcase, the forward edge of said top wall being positioned on one of said longitudinal edge portions of said reflector and supporting thereby, said intermediate portion forming a stop against which the upper edge portion of said front wall is positioned, and a cornice having one longitudinal edge portion secured to said one longitudinal edge portion of said reflector, an intermediate portion spaced outwardly from the intermediate portion of said reflector and spanning said gap, and an opposite longitudinal edge portion positioned against the upper edge portion of said front wall, said last mentioned longitudinal edge portion of said cornice cooperating with said stop to clamp said upper edge portion of said front wall in position.
the upper edge portion of said front wall is positioned, and a cornice having one longitudinal edge portion secured to said one longitudinal edge portion of said reflector, an intermediate portion spaced outwardly from the intermediate portion of said reflector and spanning said gap, and an opposite longitudinal edge portion positioned against the upper edge portion of said front wall, said last mentioned longitudinal edge portion of said cornice cooperating with said reflector to support said upper edge portion of said front wall, said cornice being removable to permit replacement of said front wall without disturbing said reflector or said top wall.

11. A showcase including a front wall, a top wall and a pair of end walls, the forward edge of said top wall being spaced from the top edge of said front wall so as to leave a gap therebetween, a reflector rigidly secured to said end walls, said reflector having an intermediate portion spanning said gap and opposite longitudinal edge portions positioned within the showcase, the forward edge of said top wall being positioned on one of said longitudinal edge portions of said reflector and supported thereby, said intermediate portion forming a stop against which the upper edge portion of said front wall is positioned, and a cornice having one longitudinal edge portion secured to said one longitudinal edge portion of said reflector, an opposite longitudinal edge portion positioned against the upper edge portion of said front wall, and an intermediate portion spanning said gap, said last mentioned longitudinal edge portion of said cornice cooperating with said stop to support the upper edge portion of said front wall, the intermediate portion of said cornice being spaced outwardly from the intermediate portion of said reflector to form a conduit therebetween for carrying electrical wiring, said cornice being removable to provide access to wiring carried in said conduit without disturbing said reflector.

12. A showcase including a front wall, a top wall and a pair of end walls, the forward edge of said top wall being spaced from the top edge of said front wall so as to leave a gap therebetween, plates permanently secured to said end walls, a light reflector having a plate permanently secured to each end, said last mentioned plates being each secured to one of said first mentioned plates, said reflector having a longitudinal edge portion comprising a pair of vertically spaced sections having a longitudinally extending recess therebetween, the forward edge of said top wall being positioned on said longitudinal edge portion and supported thereby, and a cornice having a longitudinal edge portion fitting in said recess, said cornice being removable without disturbing said top wall.

CHARLES KENNETH KURTZON.

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