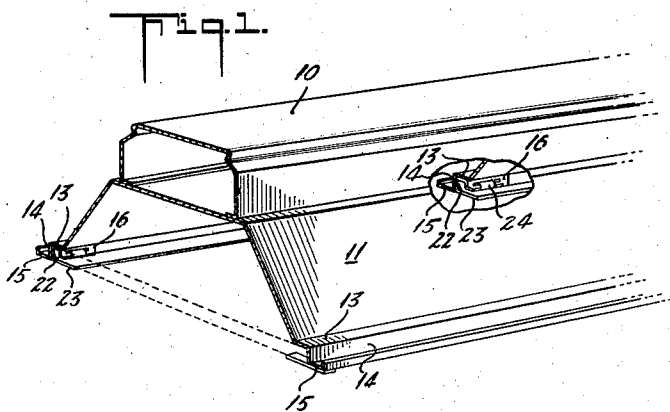
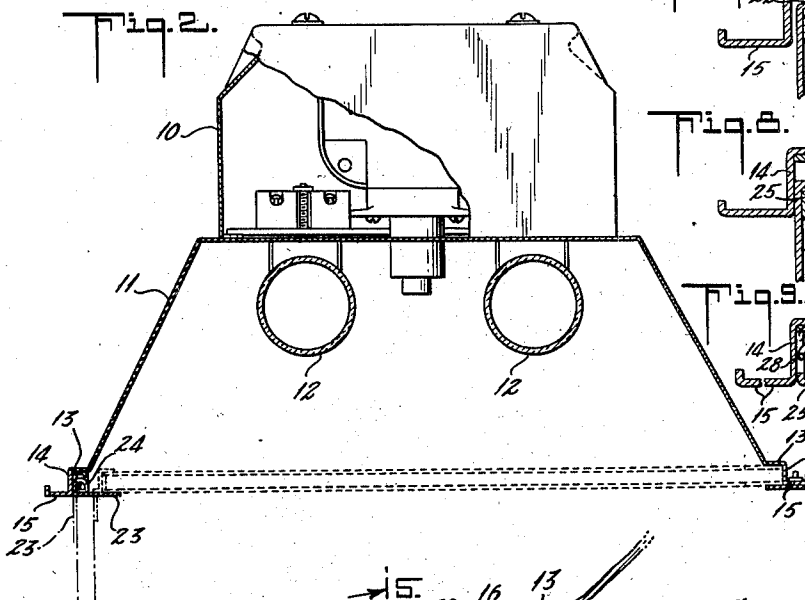
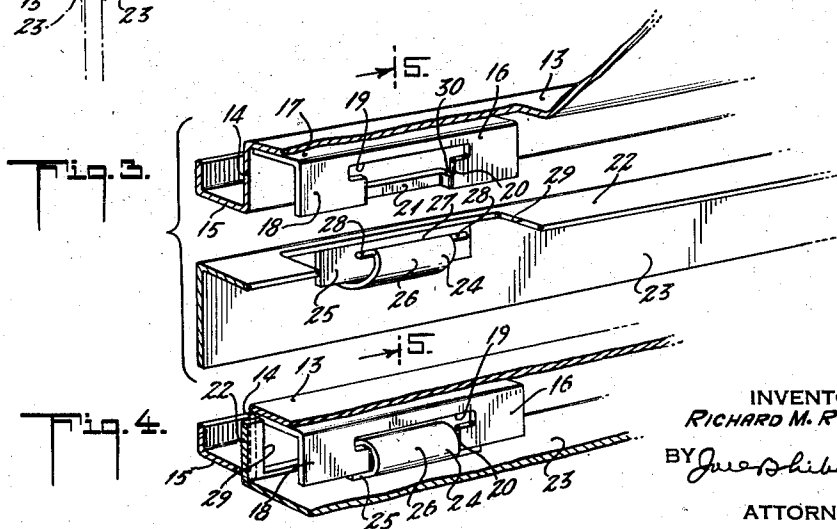
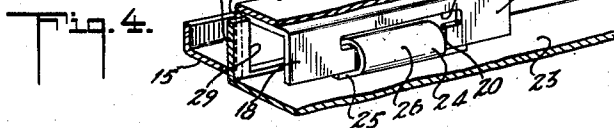
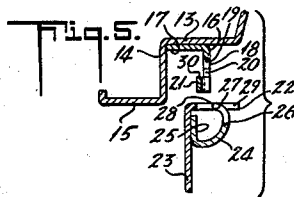
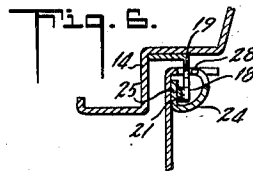
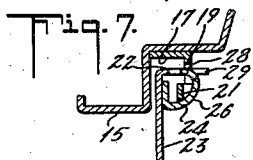
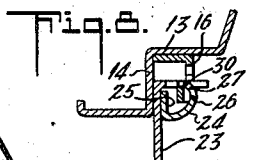
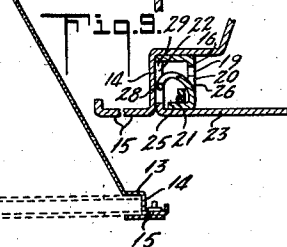


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LIGHTING FIXTURE HINGE
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LIGHTING FIXTURE HINGE

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The present invention relates to lighting fixture hinges and is more particularly directed toward hinge mechanism suitable for use with the closures of fluorescent lighting equipment.

Fluorescent lighting equipment is typically made up in four foot sections with the reflectors one foot wide. The same reflector equipment may be used recessed or exposed and with or without closures. It may be desirable to add closures to existing equipment and the present invention contemplates hinge mechanism which is adaptable for use under the various conditions which arise in practice.

According to the present invention, the hinge mechanism employs, in addition to the reflector and door or closure proper, a sheet metal member permanently secured to the reflector and a second sheet metal member permanently secured to the door. As the doors are long, each reflector will carry two of these sheet metal members and each door two sheet metal members. These members are so shaped that one can readily insert the door in place and hook the members together so that they can function as a hinge to thereafter support the door, yet the door can be readily removed at any time it is desired. These operations may be carried out without the use of tools.

Other and further objects will hereinafter appear as the description proceeds.

The accompanying drawings show, for purposes of illustrating the present invention, an embodiment 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:

Figure 1 is a perspective view illustrating fluorescent lighting equipment with which the closure is employed;

Figure 2 is an enlarged transverse sectional view through the fluorescent lighting equipment showing the closure closed in full lines and hanging open in dot and dash lines;

Figure 3 is an exploded perspective view showing the parts forming the hinge and disposed in position preliminary to assembly;

Figure 4 is a perspective view showing the parts in final position; and

Figures 5 to 9, inclusive, are vertical sectional views through the parts showing them at succeeding stages in assembly, Figure 5 being taken on line 5-5 of Figure 3.

The lighting equipment illustrated in Figures 1 and 2 has a wiring channel 10, reflector 11 and carries the usual wiring, ballast, and controls for operating two fluorescent lamps indicated at

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12. The lower portion of the reflector is flanged outwardly at each side as indicated at 13-13, is bent downwardly as indicated at 14-14, and then outwardly as indicated at 15-15.

The portions 13 and 14 of the reflector provide a framed opening which may be opened or may receive the closure where one is to be used. The long flat portion on one side of the reflector carries two sheet metal flange members or brackets 16. These members are generally angle shaped and have an upper outwardly extending portion 17 welded to the reflector stamping and a dependent portion 18 of a depth preferably slightly less than the depth of the flange 14. The portion 18 of the reflector bracket is slotted as indicated at 19 and 20. The upper portion 19 of the slot is longer than the lower portion 20, and the wall 21 forming the bottom of the slot 20 is offset from the general plane of the front 18 of this bracket member.

The closure member to be employed may take various forms. For example, it can carry plastic sheets, glass plates, plastic dishes, or plastic louvers. Whatever type of closure is employed, however, it is provided with a peripheral band or frame of angle cross-section as indicated at 22-23 in the drawings. The portion 23 is in a horizontal plane when the closure is in closed position as indicated in full lines in Figures 1, 2, 4, and 9.

The closure frame is provided with brackets 24 also made of sheet metal and having bottom portions 25 welded to the band. Each bracket 24 has a generally curving portion 26. This portion starts at right angles to the plane of the band 23 and curves through substantially 90° as will be clear from the drawings. At its end it has a re-entrant portion 27 which carries laterally extending elements 28-28. The other face 22 of the band is provided with slots 29 (only one of which appears in the drawings) of a length to receive the dependent portion 18 of the bracket 16. The re-entrant portion of the bracket 24 extends into the space provided by the cut-out 29. The length of the narrower portion of the bracket 24 is slightly less than the length of the shorter portion 20 of the slot in bracket 16 and the lengths of the extensions 28-28 are slightly less than an over-all length of the upper elongated portion 19 of the slot in the bracket 16.

When the device is to be assembled the closure is turned to the position indicated in Figures 3 and 5 in which the plane of the closure is substantially vertical. The closure is then brought under the brackets 18-18, in the positions indi-

cated in Figures 3 and 5. It can then be moved upwardly as indicated by the arrow in Figures 5 and at this time the extensions 28—28 will ride along the front face of the bracket 16 beyond the ends of the shorter portion of the slot 20. This movement is continued until the bottom of the bracket 16 engages the upper face of the lower portion of the bracket 24, as indicated in Figure 6. The parts are so proportioned that when they are in this position, the extensions 28 are opposite the elongated portion 19 of the slot. The closure can then be moved outwardly, or to the left as indicated in Figure 7, so as to pass the portions 28—28 through the elongated part of the slot. The extent of this movement is limited by engagement of the parts 24 and 21.

The closure may then be lowered, the extensions 28 then passing down outside the portions of the bracket 16 and coming against the shoulders 30 provided by the offsetting of the portion 21 of the bracket 16. At this time the weight of the closure can be taken by the reflector and the closure can hang free as indicated in Figure 8 or the dot and dash position of Figure 2.

Thereafter, the closure can be moved back and forth between closed and open positions, as desired. When it is in the closed position the parts are located as indicated in Figures 4 and 9. The width of the closure is such that when it is moved up in place, the flange 22 on the closure is pushed out tightly against the flange 14 on the reflector and the curving portion 26 of the closure brackets 24 will cause the closure to move upwardly and outwardly so that the closure is pushed up into position with its lower face substantially flush with the lower face of the outer flange 15.

The brackets carried on the reflector are small and inconspicuous and may be provided on reflectors irrespective of whether or not closures are to be supplied later. This makes it possible to employ the same reflectors in open fixtures and in fixtures having closures and to supply closures of any desired type which will fit the reflectors. The entire assembly and disassembly of parts can be accomplished without any tools whatsoever. Furthermore, the same structure using a single bracket on the reflector and a single bracket on the closure may be employed as a hinge in annular lighting equipment.

Since it is obvious that the invention may be embodied in other forms and constructions within the scope of the claims, I wish it to be understood that the particular form shown is but one of these forms, and various modifications and changes being possible, I do not otherwise limit myself in any way with respect thereto.

What is claimed is:

1. A lighting fixture having a reflector carrying a pendent elongated member provided with a horizontally elongated slot longer at the top than at the bottom, the portions of the member forming the ends and top of the slot being in one plane, the portion forming the bottom of the slot being in an outwardly offset parallel plane, and a reflector closure having a frame which is horizontal when the closure is closed and vertical when open, and a support secured to the inner face of the frame, the support extending laterally from the frame and curving upwardly and outwardly through substantially 90°, and having its upper portion re-entrant and longer than the curving portion, the curving portion being narrower than the lower portion of the slot, the longer portion being of a length to pass outwardly laterally through the longer portion only of

the slot and when moved downwardly to engage with the reflector carried member at the ends of the lower portion of the slot and support the weight of the closure when open, the narrow portion of the support engaging the bottom of the slot to support the closure when swung to closed position.

2. A lighting fixture as claimed in claim 1, wherein the lower edge of the elongated member on the reflector is engageable with the upper face of the support to align the upper end of the support opposite the upper portion of the slot and facilitate insertion of the support through the slot.

3. A lighting fixture as claimed in claim 1, the frame and reflector having elements which, when the frame is swung away from the vertical position, interengage and prevent lifting the frame upwardly to place the elongated portion of the support opposite the elongated portion of the slot.

4. A lighting fixture as claimed in Claim 1, wherein the reflector has a horizontal flange immediately above the elongated member and the frame has a peripheral flange extending at right angles to it, the width of the second flange being such that it swings underneath the reflector flange, the second flange being cut away to accommodate the elongated member.

5. A reflector having an outwardly extending flange with a downwardly facing seat, an elongated angle member of right angle cross-section having an upper portion extending lengthwise of the seat and secured to it and a lower portion extending downwardly from the seat, the lower portion having a slot, the material forming the lower wall of the slot being out of the plane of the material forming the upper part of the slot, the slot being elongated and longer at the top than the bottom, and a reflector cover having a supporting member having a narrow lower portion and an upper long portion, the longer portion being movable transversely through the upper part of the slot and downwardly behind the end walls of the narrower portion of the slot.

6. A lighting fixture having a normally horizontal fixed member forming a framed opening and having a pendent fixed sheet metal bracket extending lengthwise thereof and a lengthwise extending slot with a narrow lower portion and upper portion elongated in both directions, the bottom wall of the slot being displaced laterally to provide upwardly facing shoulders, and a movable closure having a sheet metal bracket fixedly secured to it, the portion of the bracket adjacent the movable member being of a length slightly less than the length of the shorter portion of the slot and extending through an angle of substantially 90°, the portion of the bracket therebeyond having a length greater than the spacing of the shoulders and less than the length of the longer portion of the slot, and extending back toward the closure member, the longer portion of the second bracket being insertable through the longer portion of the slot only when aligned therewith and normally resting on the shoulders.

7. A lighting fixture having a horizontal frame with a horizontal seat and depending outer wall to form a framed opening, and a closure having a peripheral band of right angle cross-section and slightly smaller than the opening in the frame, the frame carrying a longitudinally extending member below the seat and spaced from its depending wall, the outer wall of the band being cut away opposite the frame carried mem-

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ber, the other wall of the band opposite the cut away portion of the outer wall thereof carrying a bracket, the frame carried member having a slot with a long upper portion and a shorter lower portion, the bracket on the closure having an upper portion longer than the lower portion and insertable through the upper portions of the slot, and a narrow lower portion receivable in the lower portion of the slot.

8. A hinge mechanism comprising a fixed horizontal member having a downwardly facing seat and a downwardly extending flange, a door member which when closed has a horizontal upwardly facing band and an upwardly extending flange receivable inside the flange of the fixed member, the flange on the door member having a cut-out portion, the band carrying a hook member opposite the cut-out portion, the hook member being elongated but shorter than the cut-out portion and having its lower portion secured to the band and spaced from the flange, the hook member extending upwardly and outwardly to have its free end enter the space provided by cutting out the flange, the free end having extensions so as to be longer than the attached end, the fixed member carrying a depending member having a slot with a lower portion through which the shorter portion of the

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hook member passes to afford support for the door member and an upper portion of a length to pass the longer portion of the hook member, but at an elevation above that of said longer portion of the hook member, so as to prevent lateral separation of the door member from the fixed member, the door member being swingable downwardly on the extensions as pivots, and when pendent being movable upwardly to bring the extensions opposite the longer portion of the slot so that they may be moved through the slot to permit removal of the door.

RICHARD M. RUNGE.

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