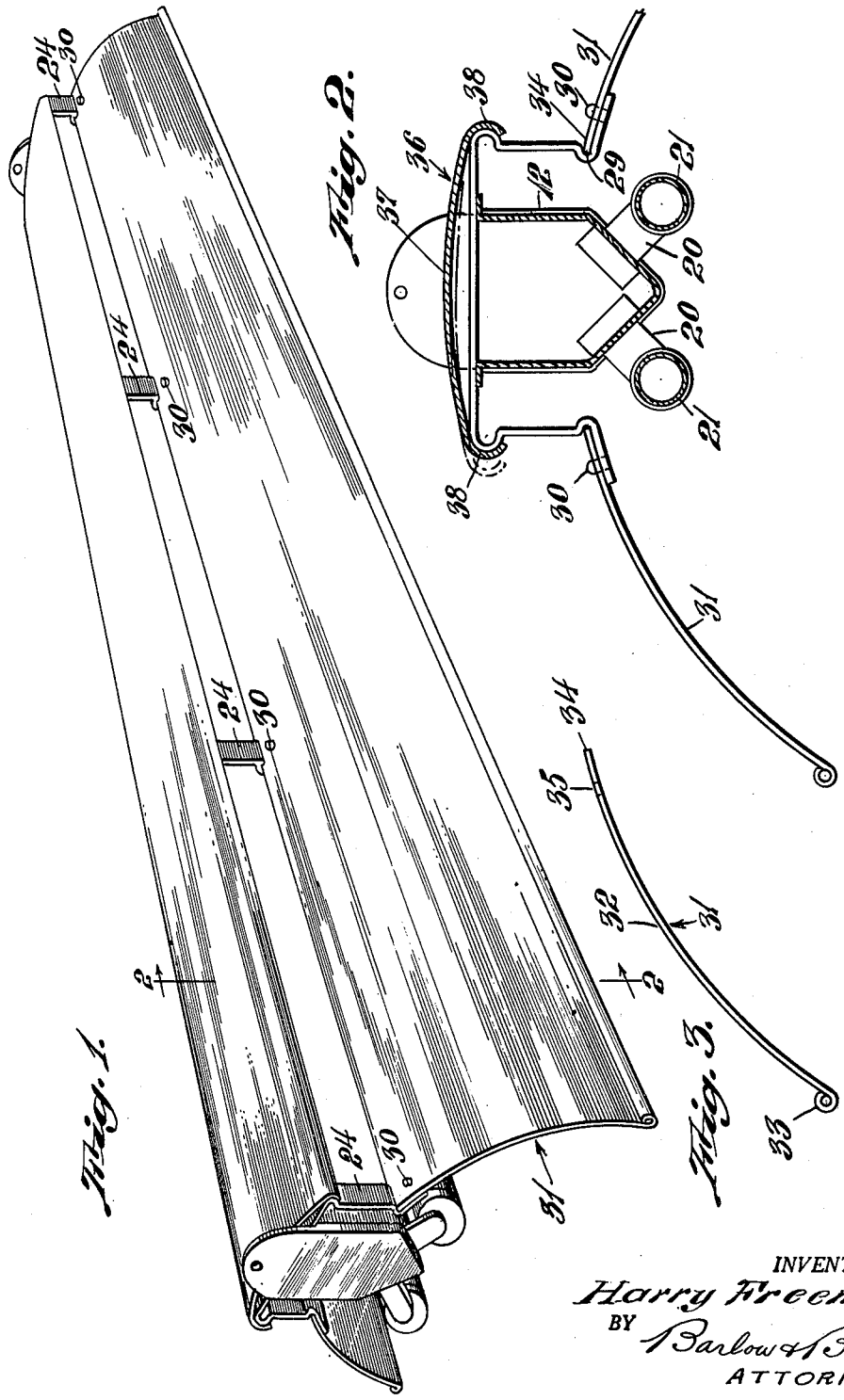
May 20, 1947. H. FREEMAN 2,420,943

LIGHTING EQUIPMENT

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Fig. 4.

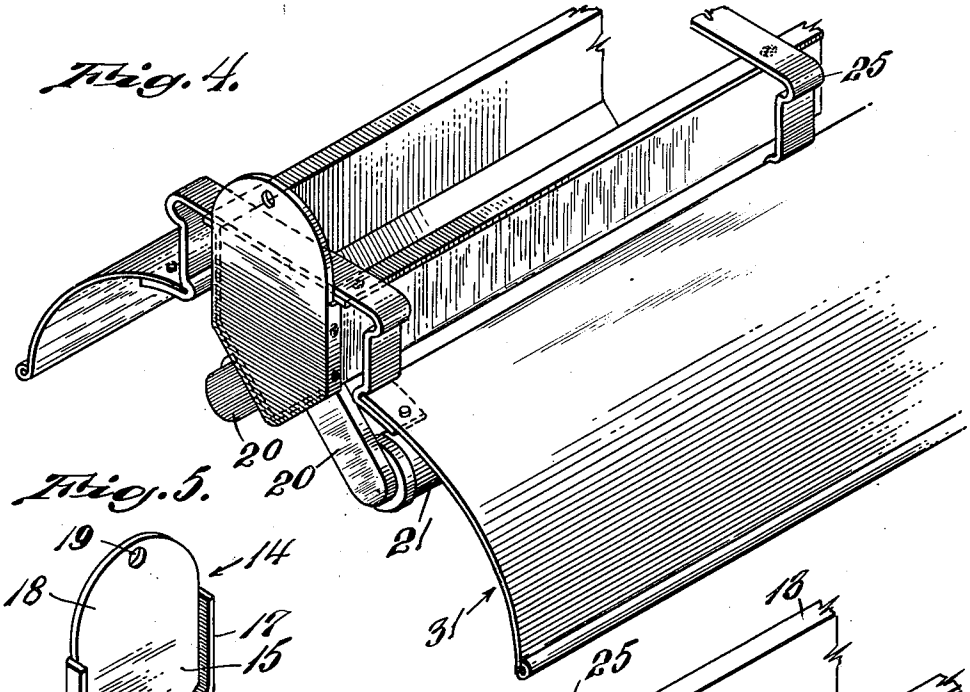


Fig. 5.

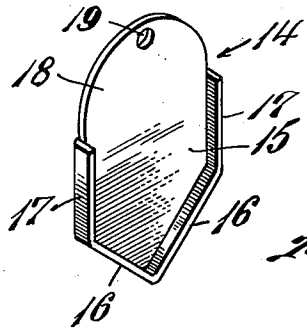


Fig. 6.

Fig. 7.

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LIGHTING EQUIPMENT

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6 Claims. (Cl. 240—78)

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This invention relates to lighting equipment and more particularly to a chandelier for supporting a tubular lamp.

Lighting equipment, such as fixtures or chandeliers for mounting lamps are provided with reflectors which are so arranged as to direct the light downwardly. Many of these fixtures have no means whatsoever of lighting the ceiling of a room above and from the standpoint of lighting engineering, certain high contrasts are provided which are undesirable. It has long been advocated that some light be directed upwardly so as to be reflected from the ceiling above, that a better distribution of light may be had. Reflectors have at times been provided with slots or openings so that the light may be directed upwardly, but difficulties occur in such a chandelier or fixture because of its becoming foul with dirt. Many times the lamps or part of the fixture must be removed to gain access to the interior of the fixture for repairs or replacements. Such removal usually requires the handling of many nuts and bolts, which is a time consuming task.

One of the objects of this invention is to provide a chandelier or fixture which will direct some of the light upwardly without exposing the fixture to the catching of dirt within.

Another object of this invention is to provide a fixture which may have its parts assembled or removed for access to the interior without the use of nuts and bolts.

Another object of this invention is to provide a container for wires which will be easily accessible and which will be protected from the accumulation of dirt therein.

Another object of the invention is to provide a fixture, the parts of which may be accessible without removing the lamps from the frame.

Another object of this invention is to provide a fixture so that several of them may be mounted in tandem relation or which may be mounted singly as occasion may arise.

Another object of the invention is to provide a fixture which may be made from an assembly of a minimum number of parts with those parts detachable without the use of nuts or bolts to permit access to the interior.

Another object of this invention is to provide the parts which carry the ballast or transformers of a rugged construction which will withstand the strains to which they are subjected.

Another object of this invention is to provide a fixture which may be well ventilated so that heat which may be generated from operation of the parts may be readily disbursed.

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With these and other objects in view, the invention consists of certain novel features of construction, as will be more fully described and particularly pointed out in the appended claims.

In the accompanying drawings:

Fig. 1 is a perspective view of the fixture or chandelier assembled;

Fig. 2 is a fragmental sectional view substantially on line 2—2 thereof;

Fig. 3 is an edge view of one of the reflectors;

Fig. 4 is a perspective view showing the reflectors in place but with the cover removed;

Fig. 5 is a perspective view of one of the ends;

Fig. 6 is a fragmental perspective view with the cover removed but showing one of the reflectors in place and the other reflector removed;

Fig. 7 is an end view showing the cover in place but with the reflectors removed and with an end removed.

In proceeding with this invention I provide a trough shaped construction suitable for containing wires, the ballast or transformer or such parts as may be necessary in the operation of fluorescent tubes. Upon this trough, brackets are mounted, which brackets serve the dual purpose of removably mounting a cover for the trough and also removably mounting reflectors on either side of the trough. The arrangement is such that an opening is provided between the trough and the reflectors. The lamps are so arranged as to be substantially below the space between the trough and the reflectors so that light will be directed upwardly and be reflected by the cover out through this space so that the outer surface of the fixture will be illuminated and in turn light so disseminated out of the top of the fixture will be reflected to the ceiling above for better diffusion of light. This opening also provides for ventilation so that the air contacting the tubes and becoming heated will by convection circulate upwardly through the fixture and outwardly so as to disseminate such heat as might be otherwise accumulated and as this air is circulated outwardly from the fixture, dust will be prevented to a large extent from settling on the fixture while it is in operation.

With reference to the drawings, particularly Fig. 6, a trough structure designated generally 10 is provided with a V-shaped bottom 11 having side walls 12 extending upwardly from either edge thereof with these walls bent outwardly as at 13 at their upper ends as will be seen from the various figures in the drawings. End walls designated generally 14 (see Fig. 5) have a lower portion 15 to correspond generally to the shape of the trough,

the same being flanged on a V as at 16, 16, with flanges 17, 17 to extend along the vertical walls 12 of the trough. The upper portion 18 of this wall 14 is arched upwardly and provided with opening 19.

Upon the V-walls 11 I mount the sockets 20 for receiving the ends of a tubular lamp 21 for supporting the same in the lighting equipment.

Brackets designated generally 22 are provided with a bridge portion 23 and depending arms designated generally 24. The arms 24 are formed by bending the bracket to provide a knee 25 which follows the arc of a smooth curve and projects outwardly from the main body portion 26 of the depending arm 24. The lower end of this arm is bent inwardly as at 27 and then outwardly again, as at 28 (see Fig. 7) so as to provide a recess 29 at this inwardly bent portion. A pin or projection 30 extends upwardly from the end portion 28 of the arm for interlocking with a reflector as will be described.

The reflector designated generally 31 consists of a sheet of stock which is arched as at 32 and provided with a rolled lower edge 33 to stiffen the same while its upper edge 34 is left plain so as to fit into the recess 29 in the arms 24. Holes 35 are provided in the reflector adjacent its upper edge for the reception of the pins 30. Thus, in order to mount the reflector in position, it is merely necessary to raise the reflector from its position as shown in Figs. 1, 2, or 4, so as to fit the end 34 into the notches 29 and then allow the reflector to swing downwardly so that the pins 30 will project through the openings 35 and thus the reflector is locked in position.

A cover designated generally 36 is arched upwardly as at 37 and provided with curved edges 38 of a shape substantially the shape of the knees 25 of the arms so as to fit closely about these arms as illustrated in Figs. 1, 2, and 7. This cover may be snapped into position by springing its opposite curved edges 38 outwardly as illustrated in dotted lines in Fig. 2 and dropping the same into position, whereupon the cover, due to its inherent resiliency, will assume its arched shape as shown in Fig. 2 and draw the edges 38 closely about the knees 25. This operation may be easily accomplished by merely pressing downwardly on the top of the cover to force the same in place.

From the assembly of these various parts, it will be readily apparent from Fig. 2 that light from the tube 21 may pass upwardly and be reflected from the side walls 12 of the trough and from the under surface of the cover 36 so that the light will pass outwardly between the arms 24 and illuminate the outer upper surface of the reflectors 31 and be reflected from the outer surface of this reflector upwardly so as to disseminate the light of the fixture in various directions. This same path will also be followed by the heated air from the tubes which will tend to cause circulation away from the upper side of the fixture and maintain the fixture in a clean condition.

If it is necessary to get at a ballast or wiring within the trough, the cover 37 may be removed without removing any of the other parts of the fixture or if it is necessary to get at the tubes or their sockets, either of the reflectors 31 may be removed by merely lifting the outer edge outwardly until it disengages the pins 30 and then pulling the reflectors from the notches 29 in the arms. No bolts or nuts are required in the assembly of this lighting equipment and full access is permitted to all of the operating parts by easy disassembly of the unit.

I claim:

1. Lighting equipment comprising a trough, brackets carried by the trough having arms spaced from the sides of the trough, said arms being shaped at their upper portions to provide knees and provided at their lower portions with one part of a detachable locking means, a detachable cover for said trough having portion to snap over and detachably engage said knees and reflectors having cooperating means to detachably engage said locking means.

2. Lighting equipment as set forth in claim 1 wherein lamps are supported by said trough at a location to direct light upwardly against the overhanging edge of said cover.

3. Lighting equipment as set forth in claim 1 wherein lamps are supported by said trough at a location to reflect light outwardly between said cover and said reflectors.

4. Lighting equipment as set forth in claim 1 wherein said locking means comprises recesses formed in said arms and pins at the ends thereof with the edge of said reflectors fitting said recesses and having holes to receive said pins.

5. Lighting equipment as set forth in claim 1 wherein said knees are smoothly curved bent portions of said bracket and the edges of the cover are correspondingly smoothly bent edges to fit thereover.

6. Lighting equipment as set forth in claim 1 wherein said knees are smoothly curved bent portions of said bracket and said cover is arched with its edges bent to fit said knees and may be snapped over the knees by having its edges spread in the flattening of said arch.

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