

Feb. 11, 1930.

L. C. DOANE

1,746,340

DUSTPROOF COVER FOR REFLECTORS

Filed April 14, 1928

2 Sheets-Sheet 1

FIG. 1.

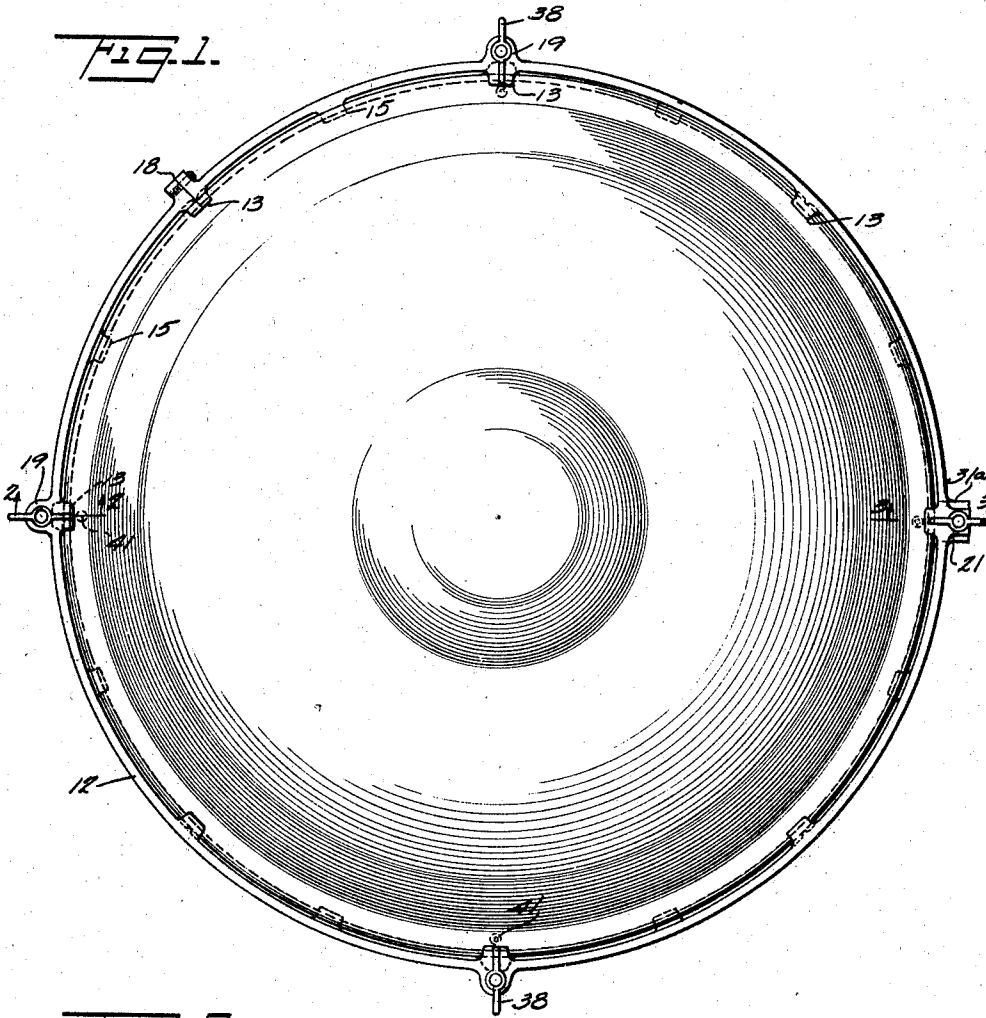


FIG. 2.

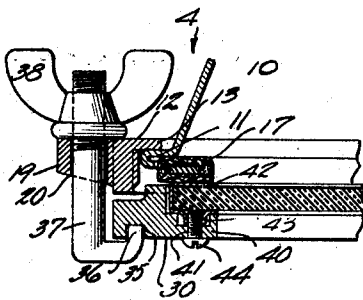
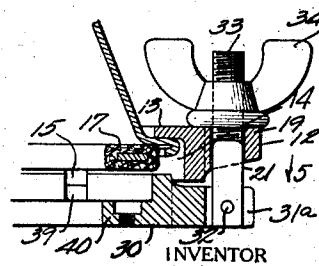


FIG. 3.



INVENTOR
Leroy C. Doane
BY
Jesse Sherman
his ATTORNEY

Feb. 11, 1930.

L. C. DOANE

1,746,340

DUSTPROOF COVER FOR REFLECTORS

Filed April 14, 1928

2 Sheets-Sheet 2

FIG. 4.

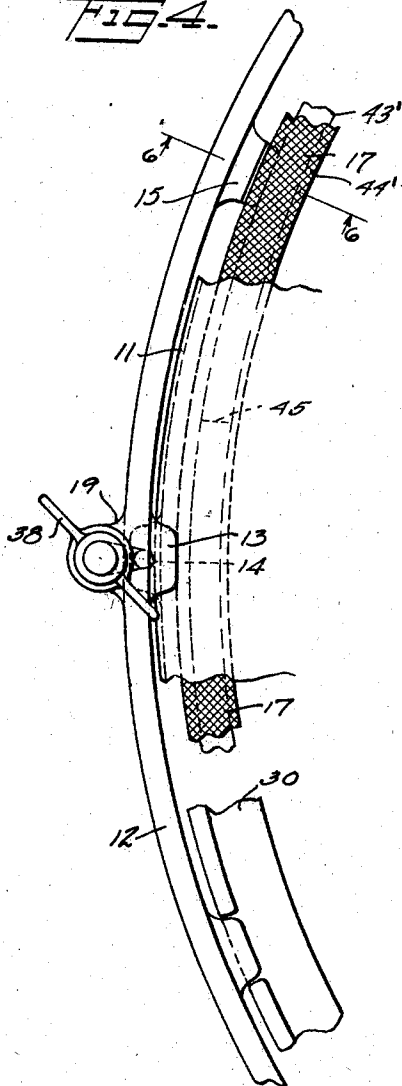


FIG. 5.

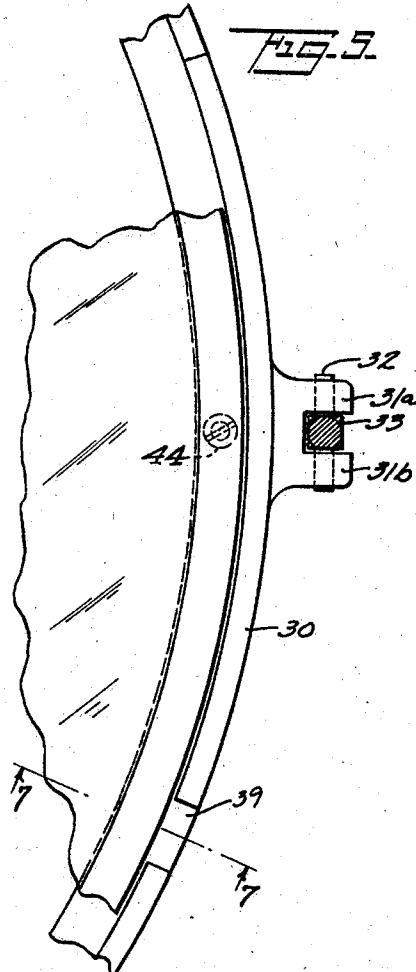


FIG. 6.

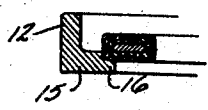
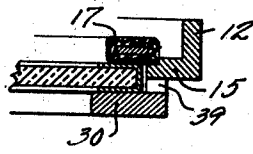


FIG. 7.



INVENTOR
Leroy C. Doane
BY
Jesse Shuberman
his ATTORNEY

UNITED STATES PATENT OFFICE

LEROY C. DOANE, OF MERIDEN, CONNECTICUT, ASSIGNOR TO THE MILLER COMPANY,
OF MERIDEN, CONNECTICUT, A CORPORATION OF CONNECTICUT

DUSTPROOF COVER FOR REFLECTORS

Application filed April 14, 1928. Serial No. 270,081.

The present invention relates to dust proof covers for reflectors and is more particularly directed toward a form of dust proof cover for use with large reflectors used in industrial lighting where the reflector is exposed to unfavorable conditions.

The present invention contemplates a dust proof cover for large reflectors wherein the open mouth of the reflector is effectively closed by a glass cover or panel associated with means for preventing the entrance of dust, smoke, fumes, moisture or other foreign matter, thereby maintaining the lighting unit at high efficiency and preventing deterioration of the reflecting surfaces.

An object of the present invention is to provide an improved form of closure which would be effective in preventing the entrance of such foreign matter into the interior.

A more particular object of the invention is to provide a reflector with a gasket supporting ring which ring also supports a removable cover member.

A further object of the invention is to so arrange the gasket supporting ring and reflector that the ring may be held in place adjacent the mouth of the reflector by lugs carried by the ring.

A further object of the invention is to provide a dust proof closure for reflectors wherein the glass cover member is secured in a ring detachably carried by a ring associated with the reflector and wherein the last mentioned ring is preferably not permanently fastened to the reflector.

A further object of the invention is to provide a closure member for reflectors wherein a ring surrounding the mouth of the reflector and a second ring surrounding the cover member are arranged to interlock so as to effectively hold the parts in alignment.

A further object of the invention is to provide a closure for the purposes above referred to which is capable of inexpensive manufacture and assembly and which does not require the use of tools when changing lamps or cleaning on the inside of the reflector.

A further object of the invention is to provide an improved form of gasket made out

of a metallic ring and a covering of asbestos or the like.

The accompanying drawings show, for purposes of illustrating the invention, one of the many possible embodiments in which it 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 top plan view of a reflector and cover taken from the upper or rear side of the reflector;

Figure 2 is a fragmentary sectional view taken on the line 2—2 of Figure 1;

Figure 3 is a fragmentary sectional view taken on the line 3—3 of Figure 1;

Figure 4 is an enlarged fragmentary plan view with parts broken away to show interior construction; and taken in the direction of the arrow 4 of Figure 2;

Figure 5 is an enlarged plan view of the lower ring and glass cover member taken in the direction of the arrow 5 of Figure 3;

Figure 6 is a fragmentary sectional view taken on the line 6—6 of Figure 4 showing the upper ring and gasket and omitting the lower ring; and

Figure 7 is a view similar to Figure 6 showing both rings, gasket and glass cover.

In the drawings the invention is shown as being applied to a metal reflector 10 having a flanged lower edge or rim 11 merely shown for purposes of illustration. Reflectors of this nature are generally made round and are of comparatively large size.

An outer cast ring 12 is placed about the open mouth of the ring. This ring is slightly larger in diameter than the reflector and is provided as here shown with eight inwardly directed lugs 13 adapted to overlies the rim of the reflector as more clearly indicated in Figures 2, 3 and 4. To space the edge of the reflector from the body of this ring 12 small spacers such as indicated by the dotted lines 14 in Figure 4, are provided. These inwardly projecting lugs 14 are adapted to support the ring on the upper edge of the reflector and to align the ring and reflector. The ring 12 is also provided with a plurality of inwardly directed lugs 15 placed between the

lugs 13. The lugs 15, however, project inwardly from the lower edge of the ring 12 and are stepped as indicated more clearly at 16 in Figure 6. They are adapted to support a gasket 17 holding the gasket adjacent the lower face of the reflector as shown in Figures 6 and 7. The ring 12 is split as indicated at 18 so that it may be sprung open to pass downwardly over the edge of the reflector.

The ring 12 is also provided, as here shown, with four lugs 19. Three of these lugs are provided with drilled holes 20, and the other lug is provided with a square hole 21. A lower cover-supporting ring 30 is provided underneath the mouth of the reflector. This cover ring 30 is provided with two lugs 31^a and 31^b which carry a hinge pin 32 on which a bolt 33 is pivoted. This bolt is a square at its lower end and extends up through the hole 21 in the outer ring 12. A wing nut 34 is threaded on to the upper end of the bolt. The lower ring 30 is also provided with three counterbored holes 35 adapted to receive the tip 36 of the hook 37. The hooks 37 pass upwardly through the round holes 20 in the upper ring 12 and are provided with wing nuts 38 as indicated.

The lower ring 30 is notched as indicated at 39 to receive the downwardly and inwardly extending lugs 15 carried by the upper ring. The lower ring is also provided with an inwardly extending flange 40 having holes 41 as indicated. A glass cover plate is provided with a spun copper band 42 having downwardly drawn threaded bushings 43 to receive screws 44 which pass up through the holes 41 in the lower ring. These screws and the copper ring serve to provide a support and protection for the glass plate.

When the reflector and cover are assembled as indicated in the drawings, the wing nuts are tightened up so as to bring the copper ring 42 tightly against the gasket 17 and to bring the upper edge of the gasket tightly against the lower front face of the reflector. These parts are held tightly together and the entrance of dust, dirt, moisture and foreign matter is effectively prevented. When one desires to gain access to the interior of the reflector, it is merely necessary to loosen the wing nuts 38 sufficiently to release the tips 36 of the hooks 37 from the counterbored holes in the lower ring whereupon the lower ring may be allowed to swing downwardly on the hinge pin 32. The gasket member 17 does not fall out of place for it is held up against the reflector by means of the inwardly projecting lugs 15 which extend underneath the gasket.

The preferred form of gasket 17 is composed of a metal core 43' and an asbestos cover 44'. The metal core may be made of a hard brass ring, split as indicated at 45, or a spiral may be cut to provide the ring.

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 form shown is but one of the many forms. Various modifications and changes being possible, I do not otherwise limit myself in any way with respect thereto.

I claim:

1. In combination, a reflector having a normally horizontal rim, a ring outside the rim resting on the upper side thereof, and having inwardly directed lugs spaced below the reflector rim, and a gasket supported on the lugs adjacent the rim.

2. In combination, a reflector having a normally horizontal rim, a split ring outside the rim, said ring having lugs resting on the upper side thereof, and inwardly directed lugs spaced below the reflector rim, and a gasket supported on the lugs adjacent the rim, the ring being capable of being spread to permit placing it about the reflector.

3. In combination, a reflector having a normally horizontal rim, a ring outside the rim, resting on the upper side thereof, and having inwardly directed lugs spaced below the reflector rim, and a gasket supported on the lugs adjacent the rim, the lugs being stepped to hold the gasket centered.

4. In combination, a reflector having a normally horizontal rim, a ring outside the rim, resting on the upper side thereof, and having inwardly directed lugs spaced below the reflector rim, and a gasket supported on the lugs adjacent the rim, the ring being further provided with spacers to separate the body of the ring from the rim of the reflector to permit drainage.

5. In combination, an open mouth metal reflector having a normally horizontal rim, an upper ring outside the rim of the reflector, said rim having inwardly directed upper lugs overlying the rim of the reflector and inwardly directed lower lugs spaced underneath the rim of the reflector and a plurality of outwardly extending lugs, a gasket ring supported on the lower lugs adjacent the rim of the reflector, a lower ring being smaller in diameter than the upper ring and provided with outwardly extending lugs opposite the outwardly extending lugs on the upper ring, a glass cover carried in the lower ring, and clamping bolts carried by the outwardly extending lugs for clamping the parts together.

6. In combination, an open mouth metal reflector having a normally horizontal rim, an upper ring outside the rim of the reflector, said rim having inwardly directed upper lugs overlying the rim of the reflector and inwardly directed lower lugs spaced underneath the rim of the reflector and a plurality of outwardly extending lugs, a gasket ring supported on the lower lugs adjacent the rim of the reflector, a lower ring being smaller in diameter than the upper ring and provided

with outwardly extending lugs opposite the outwardly extending lugs on the upper ring and notches to accommodate the lower lugs on the upper ring, a glass cover carried in the lower ring, and clamping bolts carried by the outwardly extending lugs for clamping the parts together.

7. In combination, a reflector having a rim, an upper ring carried by the rim, a lower ring carrying a glass cover, a gasket between the reflector and cover ring, a supporting bolt pivoted on the lower ring and passing through a hole in the upper ring, a plurality of pairs of outwardly extending lugs carried by the rings opposite one another, bolts having hooked ends engaging the lugs on the lower ring and shanks passing through apertures in the upper ring lugs, and nuts carried on all the bolts for clamping the parts together.

8. In combination, a reflector having a rim, an upper ring carried by the rim, a lower ring carrying a glass cover, a gasket between the reflector and cover ring, a non-circular supporting bolt pivoted on the lower ring and passing through a non-circular hole in the upper ring, a plurality of pairs of outwardly extending lugs carried by the rings opposite one another, bolts having hooked ends engaging the lugs on the lower ring and shanks passing through apertures in the upper ring lugs, and nuts carried on all the bolts for clamping the parts together, the rings having interlocking lugs and notches to maintain them in alignment.

9. In combination, a reflector having a rim, an upper ring carried by the rim, a lower ring carrying a glass cover, a gasket supported by the upper ring and carried between the reflector and cover ring, a supporting bolt pivoted on the lower ring and passing through a hole in the upper ring, a plurality of pairs of outwardly extending lugs carried by the rings opposite one another, bolts having hooked ends engaging the lugs on the lower ring and shanks passing through apertures in the upper ring lugs, and nuts carried on all the bolts for clamping the parts together.

10. In combination, a reflector, a ring supported about the rim of the reflector, a second ring carrying a glass cover plate, a gasket interposed between the lower ring and reflector rim, the upper ring having means for supporting the gasket in position independent of the lower ring, and clamping means for securing the rings together with the gasket clamped between the lower ring and reflector rim.

11. A dust proof cover for reflectors comprising two rings, one fitting the rim of the reflector and the other carrying a glass cover plate, an interposed gasket ring supported from the first ring, and means to clamp the two rings together with a gasket ring be-

tween the reflector ring and the second ring.

12. A dust proof cover for reflectors comprising two rings, one fitting the rim of the reflector and the other carrying a glass cover plate, an interposed gasket ring supported on lugs carried by the first ring, and means to clamp the two rings together with the gasket ring between the reflector rim and the second ring, the second ring having notches to receive the lugs and maintain the rings in alignment.

13. A dust proof cover for reflectors comprising an upper ring which overlies the rim of the reflector, the ring having inwardly directed lugs, a gasket carried on the lugs adjacent the reflector rim, and a cover ring and glass cover hingedly supported from the first ring, the lugs holding the gasket in place when the cover ring is lowered.

Signed at Meriden, in the county of New Haven and State of Connecticut, this 11th day of April, 1928.

LEROY C. DOANE.