

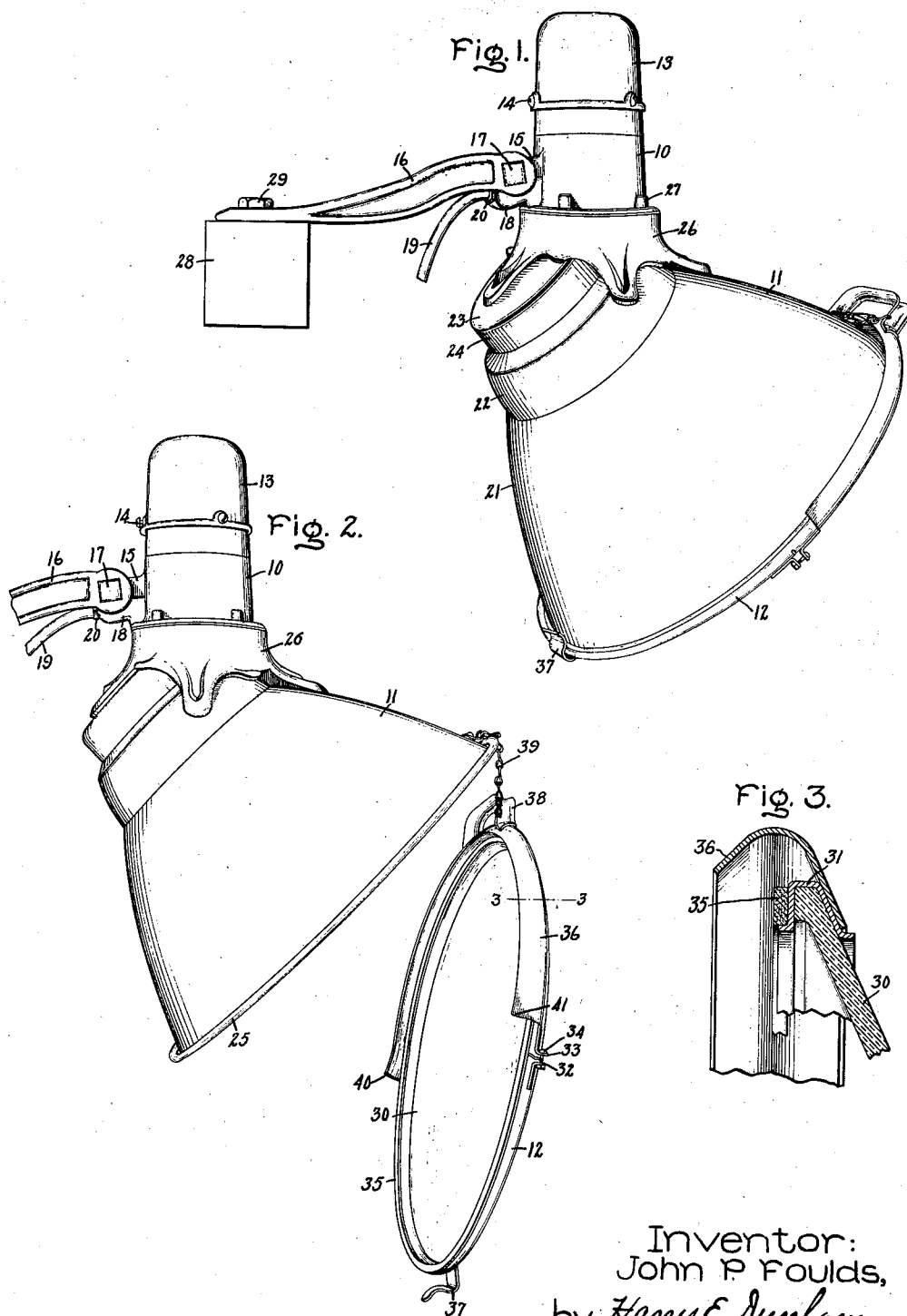
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FLOODLIGHT PROJECTOR

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FLOODLIGHT PROJECTOR

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1 Claim. (Cl. 240—41.55)

My invention relates to light projectors, and more particularly to floodlight projectors provided with relatively large conoidal reflectors closed by a removable cover.

One object of my invention is the provision of an improved cover fastening means for such reflectors.

For a better understanding of my invention together with other and further objects thereof, reference is had to the following description taken in connection with the accompanying drawing, and its scope will be pointed out in the appended claim.

In the accompanying drawing, Fig. 1 illustrates, in perspective, a floodlight projector provided with a cover which is equipped with my improved cover fastening means; Fig. 2 illustrates, in perspective, the cover and fastening means, and Fig. 3 is an enlarged cross sectional view along line 3—3 in Fig. 2.

Referring to the drawing in detail, Fig. 1 illustrates a floodlight projector comprising a lamp socket housing 10, a conoidal reflector 11, and a cover 12. The lamp socket-housing is a cylindrical housing, the upper end thereof being closed by a cup-shaped cover 13 attached to the housing 10 by screws 14. A suitable supporting lug 15 is provided at the lower end of the socket housing and is attached to a projector supporting arm 16 by means of bolt 17. A cable channel 18, for a supply cable 19, is attached to the under side of the lug 15, a bushing 20 being provided at the entrance to this channel to prevent water entering the housing through this channel.

Reflector 11 is of the conoidal type comprising a paraboloidal surface modified at the focal region to accommodate a large lamp. The reflector illustrated comprises a paraboloidal section 21 having a spheroidal section 22 attached to the focal region. The spheroidal section 22 is closed by a section 23 which is generally spherical but is spaced from the section 22 by a cylindrical section 24. The axis of this reflector is approximately at an angle of 135° to the axis of the lamp socket housing. The reflector is preferably made of sheet metal such as aluminum, for example, and is reinforced at its open end by a flange, or beading 25, which extends outwardly substantially parallel to the plane of the opening and is rounded on its end surface. This flange reinforces the reflector, provides a seating surface for the cover, and is used to support the cover 12. The reflector is attached to the housing 10 through an intermediate spider 26. This spider member 26 is attached to the reflector by weld-

ing although in some cases it may be formed integral with the reflector by extruding the metal of the reflector. It is attached to the housing 10 by suitable screws projecting through lugs 27 attached to the housing 10.

As illustrated in Figs. 1 and 2, the projector so far described is mounted with the axis of the housing 10 arranged vertically and the reflector axis correspondingly arranged at an angle of about 45° to the horizontal. The plane of the reflector opening, which is at right angles to the reflector axis, is therefore inclined to the vertical with the upper side projecting forward of the lower side. The normal use of these projectors is for the illumination of large areas which necessitates the mounting of the projectors on high towers, on pole tops, or on cross arms projecting from the poles. In Fig. 1 the supporting arm 16 is illustrated as being attached to a cross arm 28 by suitable bolts 29. This high mounting necessitates the use of a ladder or similar equipment for severing the projectors, and since the operator needs one hand to steady himself in his precarious position, he has only one hand left to handle the projector cover and the lamp bulb which is to be replaced. I have provided an improved cover supporting and fastening means which will be especially advantageous under these circumstances.

My improved cover fastening means may be better understood by reference to Fig. 3 which is an enlarged cross sectional view along line 3—3 of Fig. 2. The cover itself comprises a spherical glass disk 30 supported in a channel shaped circular collar 31. The collar is split (see Fig. 2) and its ends are provided with lugs 32 and 33. The collar therefore can be expanded to fit over the rim of disk 30 and is then contracted by a screw 34 cooperating with the lugs 32 and 33 until the collar firmly grips the disk. A gasket 35 is cemented to the inside of the collar 31 so that the cover can be fitted to the reflector rim with sufficient accuracy to prevent the entrance of dust and rain into the reflector.

In order to fasten this cover 12 to the reflector, I have attached to the upper half of the collar 31 a sheet metal flange 36. This flange has an arcuate length of substantially 180° and has a tapered channel cross section which is designed to pull, or urge, the upper half of the cover against the reflector rim by engaging the back surface of the reflector rim 25. This flange effectively seals the upper half of the joint against rain and sheds water from the upper half of the reflector so that it does not seep in through

the lower half of the joint, which is unprotected.

In order to keep the lower half of the cover in close contact with the reflector rim, I provide a spring latch 37. This latch is attached to the collar in any suitable manner preferably at a point equally spaced from the ends of the flange 36. It comprises a resilient metal tongue which may be sprung over the reflector rim and exerts a pull upon the cover which firmly seats the flange 36 upon the upper half of the reflector rim and simultaneously effects a close contact between the lower half of the reflector rim and the lower half of the cover. A handle 38 is provided on the flange 36 for lifting the cover off the reflector rim, and a chain 39 attached to the reflector and to the handle holds the cover suspended from the reflector rim at a sufficient distance to give an attendant free access to the inside of the reflector when the cover is lifted off the reflector rim.

When the above described projector is installed as indicated, the flange 36 sheds rain water that might otherwise seep into the projector between the cover gasket and the reflector rim. Although the protecting flange extends over only the upper half of the reflector rim, the lower half of the rim is also weatherproof, since the falling rain is deflected and falls away from the rim. In order to facilitate this shedding of the water, the free corners 40 and 41 of the flange 36 are bent outwardly. In servicing the projector an attendant may remove the cover with

one hand by merely releasing the latch 37 and lifting the cover free of the reflector rim. It then remains suspended at a sufficient distance from the reflector opening to give access to the inside of the reflector for cleaning and also for replacing the lamp bulb if necessary.

The cover fastening means herein described is of general application to light projectors and is of special advantage in floodlighting projectors used in the floodlighting of sports fields and similarly large areas. The fastening means are simple to manufacture and efficiently perform their respective functions.

What I claim as new and desire to secure by Letters Patent of the United States, is:

In a floodlighting projector the combination of a conoidal reflector provided with an opening, a flange extending radially from the surface of said reflector along the edge of said opening, a cover for said opening comprising a lens and a ring attached to the edge of said lens, and means for supporting said ring adjacent said radial flange to close said opening including a flange attached to said ring extending substantially over the upper half of said ring, said flange being formed to cover said radial flange to form a rain shed and to draw said ring against said radial flange when placed thereon, and a resilient catch on the lower half of said ring formed to latch said cover into contiguous relation to said radial flange.

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