July 6, 1937. W. E. WUELKER 2,086,108

REFLECTOR

Filed March 20, 1936

Fig. 1.

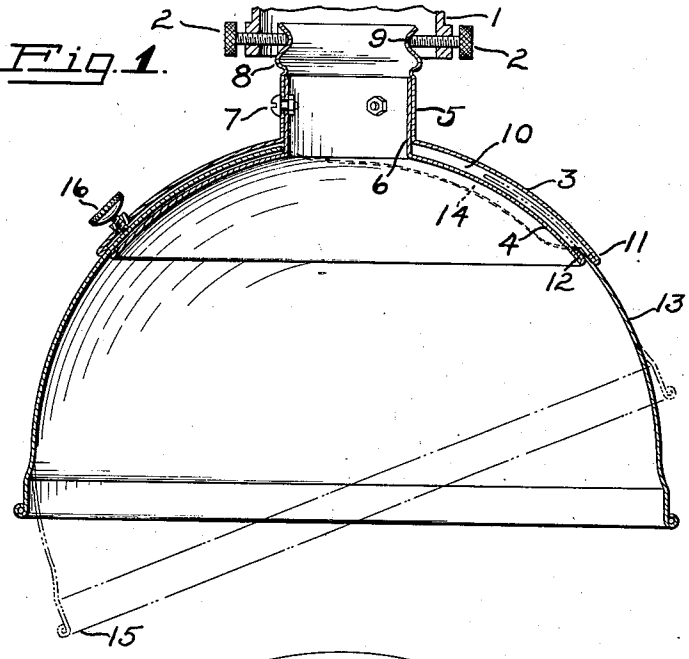
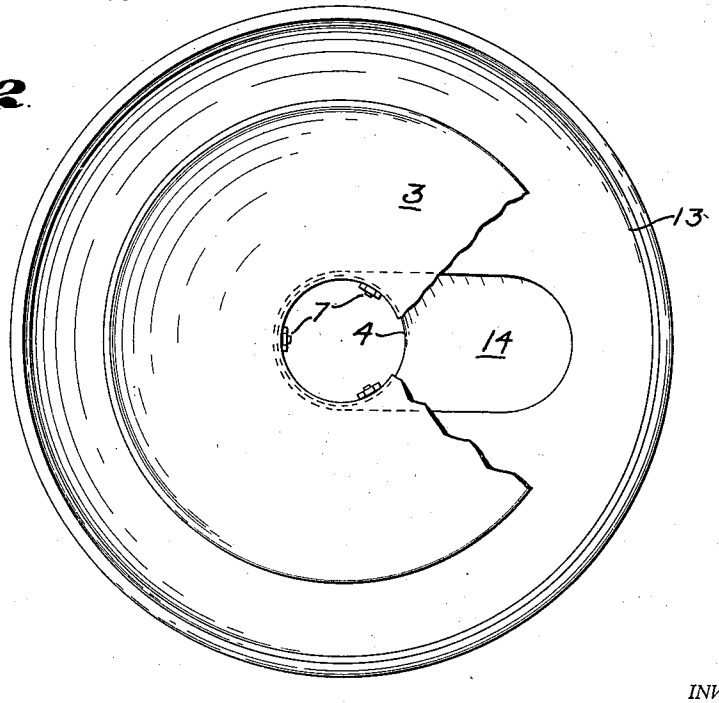


Fig. 2.



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REFLECTOR

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5 Claims. (Cl. 240—103)

My invention relates to reflectors, and more particularly to an adjustable reflector which can be utilized in combination with an electric lamp so that light may be directed into various paths without moving the lamp.

The main object of my invention is to provide a reflector assembly which may be utilized to direct light in various directions from a fixed lamp.

Another object of my invention is to provide an adjustable reflector.

Still another object of my invention is to provide a reflector which may be utilized to direct light in different directions without the necessity of changing reflectors.

Other objects of my invention will be apparent or will be specifically pointed out in the description forming a part of this specification, but I do not limit myself to the embodiment of the invention herein described, as various forms may be adopted within the scope of the claims.

Other objects of my invention may be more fully understood by direct reference to the drawing, wherein:

Figure 1 is a sectional view of the reflector of a preferred embodiment of the reflector of my invention.

Figure 2 is a top plan view of the portion of a retaining member, cut away to show the adjusting slot.

In many cases, show windows and the like are provided with fixed conduit outlets, terminating in lamp sockets, and if spot-lighting of any particular portion of the window is necessary, either special spot lights are necessary or special directive reflectors must be placed on each lamp. If the scene in the window is changed, lighting requirements change, and in many instances it is necessary to completely replace the reflector arrangement.

My invention comprises an adjustable reflector which can be left permanently on the lamp or socket, and yet be so changed in arrangement that the light can be reflected from the lamp in any direction desired, within the limits of the adjustability.

Furthermore, there are many modern lamps which burn only in one position. Certain of the gas-filled, high intensity lamps must be burned base down; others, base up; and high intensity, mercury arcs, sodium arcs and similar lamps are always used in a fixed, predetermined position. In such cases either a multiplicity of reflectors must be utilized when fixed outlets are provided, or a device provided such as I will describe herein.

Referring directly to the drawing, a lamp socket 1, or an extension thereof, is provided with the usual shade-holding screws 2. The reflector of my invention comprises a pair of spaced retaining members 3 and 4, having a spherical contour, thus placing the members in concentric relation. Outer retaining member 3 is provided with a central cylindrical portion 5, and inner retaining member 4 is likewise provided with a slightly smaller cylindrical portion 6, which fit together, one sliding inside the other, and being locked in position by means of bolts 7, or other fastening means.

Either one of the retaining members may be prolonged into a grooved terminal 8, but in this case I have shown the grooved terminal 8 as being a prolongation of the outer retaining member 3. Screws 2 cooperate with a groove 9 in the terminal 8, and if these screws 2 loosely engage the groove 9, the reflector may be rotated as well as held in position.

The space 10 between the retaining members 3 and 4 is large enough so that the periphery 11 of the outer retaining member, and 12 of the inner retaining member, may be bent to form a bead and yet admit an adjustable reflector portion 13, which is provided with an aperture 14, in order that the cylindrical portions 5 and 6 of the retaining members may pass through it; and I prefer to elongate this aperture 14 so that when the reflector 13 is centrally positioned with respect to the retaining members that the aperture is completely covered by the retaining members. Beads 11 and 12 provide the only bearing of the retaining members on the reflector 13.

In assembling the reflector, the inner retaining member 4 is set up and the reflector portion 13 is placed over it, so that the cylindrical portion 6 of the inner retaining member passes through the aperture 14. The outer retaining member 3 is then slipped over the reflector portion 13 and the inner retaining member, so that cylindrical portions 5 and 6 are engaged, and the retaining members are then fastened together. Thus, the reflector portion 13 is held between the two retaining members but may be moved within the limits of the slot 14, as indicated by the broken lines 15 in Figure 1.

The reflector assembly may then be inserted in the lamp socket, as shown, and the lamp inserted in the reflector through the space enclosed by cylindrical portions 5 and 6. Thereafter, by a combination of turning movements of the entire assembly with relation to the lamp socket, and by the angular relationship of the shade of the reflector portion to the retaining

members, light from the lamp may be directed into a multiplicity of paths without the necessity of moving the lamp.

In case it is desired to completely lock the reflector in any desired position, screws 2 may be tightened to prevent rotational movement, and a reflector lock screw is provided engaging one of the retaining members and also bearing against the reflector portion 13.

Other means of locking the adjustable portion to the fixed portion will be apparent to those skilled in the art.

I claim:

1. In combination with a light source, a reflector comprising a pair of spaced and opposed retaining members having a spherical curvature, a reflecting member of greater extent than said retaining members having a portion thereof of spherical curvature concentric with the curvature of said retaining members, said portion fitting in the space between said retaining members and freely movable therein, all of said members having registrable apertures therein for entrance of said light source, and the aperture in said reflecting member being elongated whereby said reflecting member may be moved to direct light at varying angles from said light source.

2. In combination with a light source, a pair of retaining members having hollow cylindrical connected portions and spaced spherical concentric portions, and a reflecting member having a portion fitting the space between said retaining members and freely movable therein to various relative positions by virtue of having an elongated slot therein to allow passage of one of said cylindrical portions therethrough.

3. In combination with a light source, a pair of retaining members having hollow cylindrical connected portions and spaced spherical concentric portions, a reflecting member having a portion fitting the space between said retaining members and freely movable therein to various relative positions by virtue of having an elongated slot therein to allow passage of one of said cylindrical portions therethrough, and means for locking said reflecting member in any desired relative position.

4. In combination with a light source, a pair of retaining members having hollow cylindrical connected portions and spaced spherical concentric portions, and a reflecting member having a portion fitting the space between said retaining members and freely movable therein to various relative positions by virtue of having an elongated slot therein to allow passage of one of said cylindrical portions therethrough, said slot being totally covered by said retaining members.

5. In combination with a light source, a pair of retaining members having hollow cylindrical connected portions and spaced spherical concentric portions, a reflecting member having a portion fitting the space between said retaining members and freely movable therein to various relative positions by virtue of having an elongated slot therein to allow pasage of one of said cylindrical portions therethrough, and beads on the periphery of said retaining members for contacting said reflecting portion.

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