Nov. 12, 1929. L. L. RAYMOND 1,735,181

REFLECTOR ATTACHING DEVICE

Filed March 30, 1927

Fig. 1.

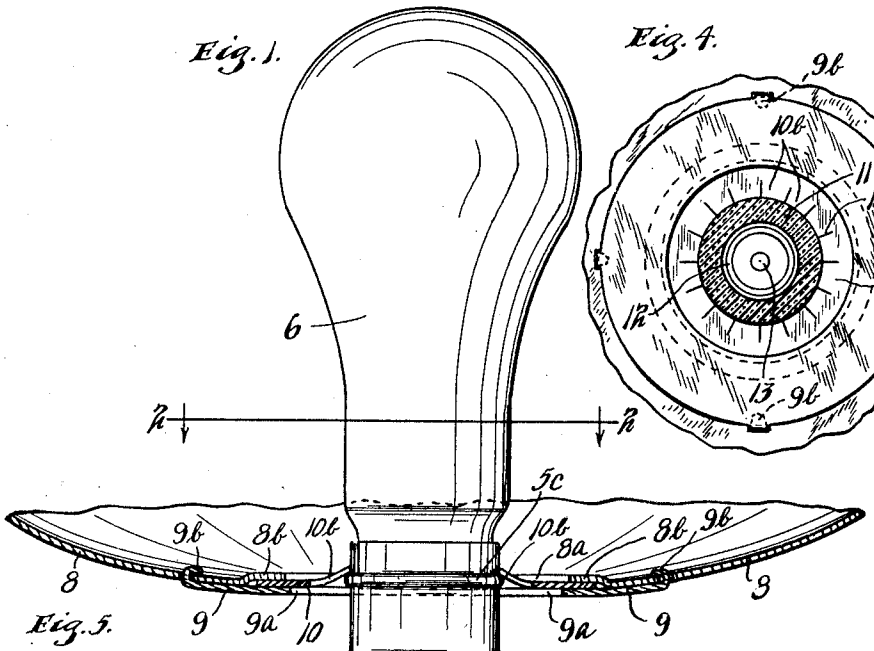


Fig. 4.

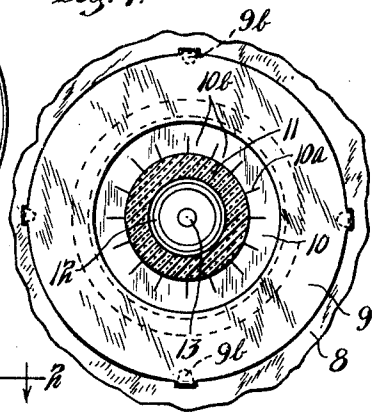


Fig. 5.

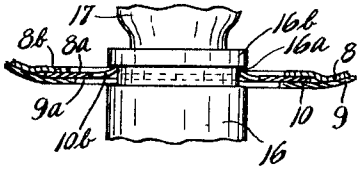


Fig. 3.

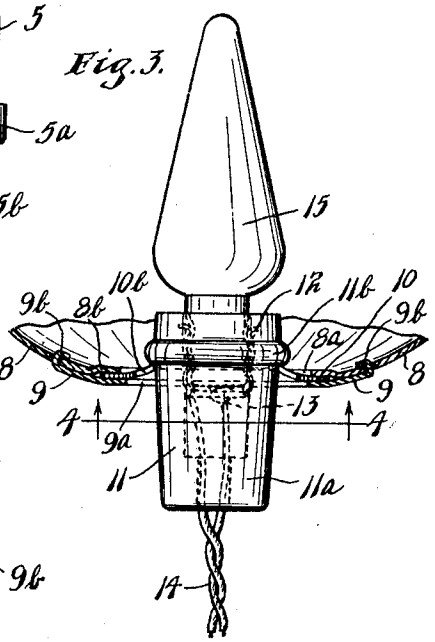
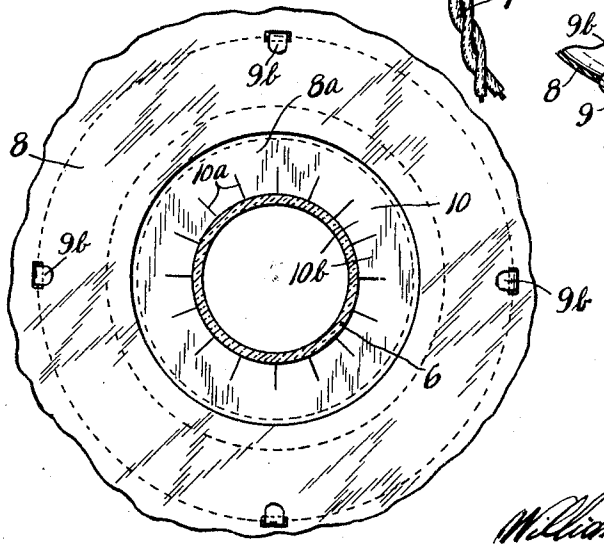


Fig. 2.



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UNITED STATES PATENT OFFICE

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REFLECTOR-ATTACHING DEVICE

Application filed March 30, 1927. Serial No. 179,488.

This invention relates to a reflector and lamp socket and while the invention might have various applications, it particularly is designed for holding an ornamental reflector on a lamp socket. Ornamental reflectors are now used in large numbers for decorative purposes and on such lamps as the ornamental lamps used on Christmas trees. Such ornamental reflectors, however, are also now being used on electric signs and other electric displays. It is desirable to have an insulating member on the reflector adjacent the lamp socket and it is also desirable to have some simple and inexpensive means for holding the reflector in proper position on the lamp socket and which will fit different sizes of sockets.

It is an object of this invention, therefore, to provide a reflector having simple and efficient means thereon for holding the same on a lamp socket, which means is adapted to fit lamp sockets of different sizes.

It is also an object of this invention, to provide a reflector having an insulating means at its central portion constructed and arranged to be easily disposed on and held on a lamp socket.

It is a further object of the invention to provide an ornamental reflector having a central opening therein with an insulating disk surrounding said opening, said disk being constructed and arranged to engage and grip a lamp socket to hold the reflector thereon.

It is more specifically an object of the invention to provide an ornamental reflector having a central opening therein, a disk of insulating material surrounding said opening, a member for securing said disk to the reflector, said disk having radially extending slits cut therein whereby a lamp socket of somewhat larger diameter than said opening may be pushed therethrough and the reflector held on said socket.

These and other objects and advantages of the invention will be fully set forth in the following description made in connection with the accompanying drawings, in which like reference characters refer to similar parts throughout the several views and in which:—

Fig. 1 is a view in side elevation of the lamp socket and lamp bulb therein showing the reflector in vertical section thereon;

Fig. 2 is a horizontal section taken on line 2—2 of Fig. 1, as indicated by the arrows;

Fig. 3 is a view similar to Fig. 1 showing the reflector applied to one type of Christmas tree lamp socket; and

Fig. 4 is a horizontal section taken on line 4—4 of Fig. 3, as indicated by the arrows.

Figure 5 is a fragmentary view in side elevation of a lamp and a slightly different form of socket, showing the reflector in vertical section on the socket.

Referring to the drawings, particularly Figs. 1 and 2, a lamp socket 5 is shown of the type now commonly used for holding ordinary electric lamp bulbs such as shown at 6. While the lamp socket 5 may be made of various materials, in the embodiment of the invention illustrated it is shown as of the usual metal type comprising a cylindrical shell having a cap 5^a thereon and a bushing 5^b at its rear end through which extend the usual conductors 7 for conveying current to the lamp 6. Lamp socket 5 is provided adjacent its forward end with a circumferentially extending rib 5^c and while this rib may be of various forms, in the embodiment of the invention illustrated it is shown as substantially semi-circular in cross section.

A reflector 8 is shown which may be of any ornamental design or conformation and which preferably is of concavo-convex form. The concave side of the reflector is disposed adjacent the lamp bulb 6. The reflector 8 has a central opening 8^a therein shown as of circular form and adjacent said opening said reflector has an offset portion or flange 8^b. A disk 9 is provided shaped similarly to the reflector 8 and having a central opening 9^a shown as circular in form which is of substantially the same or slightly smaller diameter than the opening 8^a. The disk 9 has a plurality of circumferentially spaced tangs 9^b formed thereon and these extend through the reflector 8 and have their ends clinched on the concave or outer side of said reflector, the disk 9 as shown in Fig. 1 being disposed at the convex or inner side of the reflector. A disk or sheet 10 made of

sheet material such as fiber, hard rubber or other suitable material is provided and tightly clamped between the disk 9 and the flange 8^b, said disk 10 having a central opening therein of considerably smaller diameter than the opening in the member 9. Said disk 10 is provided adjacent said opening with a plurality of radially extending slits 10^a forming therebetween tabs 10^b. The disk 10 as stated, in some cases will be made of insulating material, although in some cases the same may be made of metal, and this disk will be of stiff resilient material.

In operation the lamp bulb 6 is removed and the socket 5 then moved through the opening in the member 10. The socket is of somewhat larger diameter than the opening in the member 10 and when it is inserted therethrough, the tabs 10^b formed between the slits 10^a are moved laterally or out of the plane of member 10 as shown in Fig. 1. This causes the edges of said tabs to engage the socket 5 with quite a great deal of friction. The socket can be moved through the member 10 until the tabs 10^b engage one side of the rib 5^c. The reflector is thus positioned on the socket 5 and is held quite firmly thereon by the friction of said tabs 10^b which are resiliently held against said socket. It is, as above stated, desirable to have an insulating member 10 at the central portion of the reflector, as otherwise the lamps sometimes short-circuit the socket, which insulating members are also required by the underwriters. When this insulating disk is required, the members 10 will be made of insulating material.

Referring to the showing in Figs. 3 and 4, the reflector shown and described in connection with Figs. 1 and 2 is used, the same being shown as disposed upon a common type of Christmas tree socket 11. This socket comprises an insulating casing 11^a having therein a shell 12 and a tip contact 13, the conductors 14 being connected respectively to said shell and tip contact. The casing 11^a which is made of insulating material such as hard fiber or some rubber composition, has a rib 11^b extending circumferentially thereabout adjacent its forward end. When the reflector 8 is positioned on the socket 11, the tabs 10^b are moved into engagement with rib 11^b. A lamp bulb 15 of the common Christmas tree type is shown in the socket 11.

In Fig. 5 a slightly different form of socket is shown, having a cylindrical body portion 16 with a groove 16^a illustrated as of rectangular cross section near its forward end, the groove 6 forming in effect a rib 16^b at the front end of the socket. With such a socket the reflector already described may be inserted over the end of the socket, the tabs 10^b yielding. The socket is pushed through the member 10 and said tabs then spring into place in the grooves 16^a, and the socket can be moved so that they engage the front corner of the groove or the rear side of the rib 16^b. The reflector is thus firmly held in position on said socket by the frictional grip of the tabs 10^b.

From the above description it is seen that applicant has provided a very simple and inexpensive and yet very efficient structure for mounting a reflector on a lamp socket. The reflector as above set forth is effectively insulated from the socket and yet is held thereon with sufficient firmness for all purposes. The device has been amply demonstrated in actual practice and found to be very successful and efficient.

It will, of course, be understood that various changes may be made in the form, details, arrangement and proportions of the parts, without departing from the scope of applicant's invention, which, generally stated, consists in a device capable of carrying out the objects above set forth, in the novel parts and combinations of parts disclosed and defined in the appended claim.

What is claimed is:—

A reflector for a lamp socket having a central portion of resilient sheet metal and disposed in one plane, said portion having a central opening therethrough of slightly smaller diameter than a lamp socket on which the reflector is to be fitted, said portion having a series of radial slits extending from said opening, thus forming resilient tabs disposed in the plane of said portion, said opening being adapted to receive a lamp socket and said tabs being sprung out of the plane of said portion by said socket, said tabs thus frictionally engaging said socket with their ends to hold said reflector in place, said tabs springing back into one plane when said reflector is removed.

In testimony whereof I affix my signature.

LAMBERT L. RAYMOND.