Sept. 18, 1928. 1,684,847

L. L. RAYMOND

CHRISTMAS TREE REFLECTOR WITH PROJECTIONS

Filed June 21, 1926

Fig. 1.

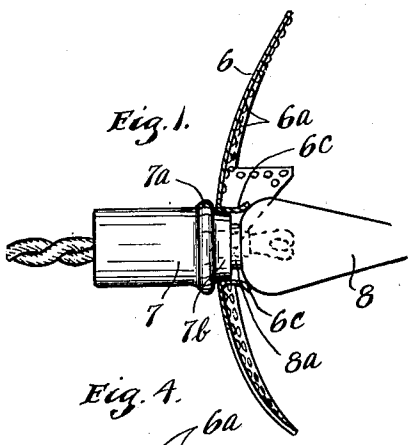


Fig. 2.

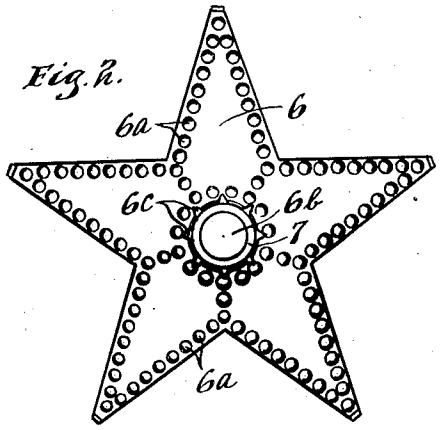


Fig. 4.

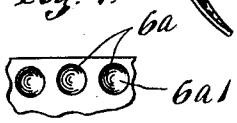


Fig. 3.

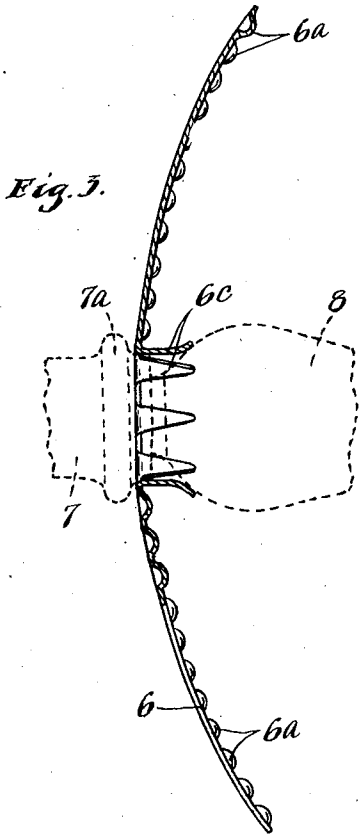
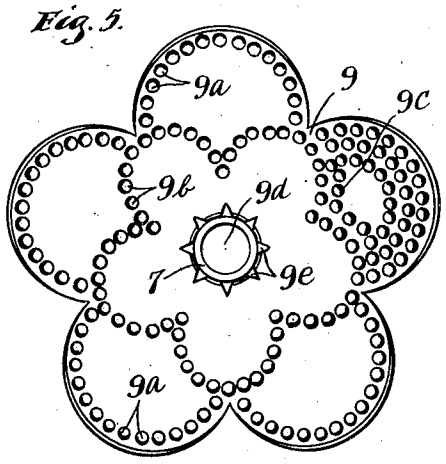


Fig. 5.



INVENTOR.
LAMBERT L. RAYMOND.
BY HIS ATTORNEYS.
Williamson Reif & Williamson

Patented Sept. 18, 1928. 1,684,847

UNITED STATES PATENT OFFICE.

LAMBERT L. RAYMOND, OF MINNEAPOLIS, MINNESOTA.

CHRISTMAS-TREE REFLECTOR WITH PROJECTIONS.

Application filed June 21, 1926. Serial No. 117,377.

This invention relates to a reflector and particularly to an ornamental reflector such as now commonly used in Christmas tree decoration. With such a reflector it is desirable to have a highly illuminative and ornamental effect and it has been considered desirable to have a multiplicity of distinct reflecting portions in the reflector.

It is also now desirable and in some places required, that the reflector be so constructed and arranged and mounted that there is no danger or probability of the lamp bulb being short circuited by contact with the reflector. The reflector must be held in secure and proper relation to the lamp socket and lamp bulb.

It is an object of this invention, therefore, to provide a reflector having a multiplicity of formations thereon giving distinct reflecting effects, which formations preferably are in the shape of projections of semi-spherical shape.

It is another object of the invention to provide a reflector having an opening at its central portion adapted to receive a portion of a lamp socket having portions projecting therefrom adapted to engage the lamp bulb whereby the reflector is securely held in proper position.

It is a further object of the invention to provide a reflector having a portion adapted to receive and be seated on the lamp socket and having a plurality of means projecting therefrom adapted to engage the lamp bulb and hold the reflector in proper position.

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 of a lamp socket and lamp bulb showing a reflector with the invention applied thereto;

Fig. 2 is a view in front elevation of the reflector shown in Fig. 1;

Fig. 3 is a vertical section through the reflector shown on an enlarged scale and showing portions of the lamp socket and lamp bulb in dotted lines;

Fig. 4 is a partial view in front elevation illustrating the projections on the reflector; and

Fig. 5 is a view in front elevation of a modified form of the reflector.

Referring to the drawings, a reflector 6 is shown, which preferably is formed of sheet material such as metal. While said reflector may be made of many shapes and designs, in the embodiment of the invention shown in Figs. 1 and 3 the same is shown as in the shape of a five pointed star. Said reflector is also illustrated as curved slightly forwardly from the center, so that its reflecting surfaces is concave.

The reflecting surface of the reflector is provided with a multiplicity of projections 6^a and as shown, these projections are formed as semi-spherical in shape. While the projections might be variously formed, they are illustrated as pressed out of the material of the reflector from the rear. The projections 6^a are arranged in regular order on the reflector and while this order may be varied, in Fig. 2 said projections are shown as following the outline of the reflector, forming a circle about the central aperture therein and extending in radial lines to the angles of the star. It will be noted that the projections 6^a are separate and that the flat surface of the reflector extends between the same.

The reflector 6 has an aperature 6^b at its center, preferably circular in form and adapted to fit over the front of the lamp socket 7. The lamp sockets 7 as now made, usually have a circumferentially extending projection or rib 7^a adjacent their front end, and a front projecting portion 7^b in front of the rib 7^a. The aperture 6^b is arranged to receive the portion 7^b so that the rear of the reflector will engage the front portion of rib 7^a. In the form of the invention illustrated the reflector is formed with a plurality of spaced projections 6^c shown as tapered toward their front ends and as extending forwardly substantially at right angles to the plane of the reflector at the opening 6^b. The projections 6^c are spaced at their rear ends and are turned slightly outwardly at their forward ends.

In operation the reflector will be placed on the socket 7 as shown in Fig. 1 and the lamp bulb 8 then screwed into the socket in the usual manner. As illustrated, the lamp bulbs 8 flare outwardly adjacent the plug portion 8^a thereof, and this flared portion of the bulb engages the projections 6^c and pushes the reflector back on the socket 7 so that the same is held firmly on said socket. The points 6^c will separate sufficiently to allow the lamp bulb 8 to be securely and properly seated in the socket 7. The projections 6^c, of course, ex-

tend around the entire portion of the lamp bulb 8 and thus hold the reflector in position at all circumferential points thereof. With the reflector so mounted and held in place, the same is kept away from the plug portion 8^a of the bulb 8 and there is no danger of said plug portion 8^a coming in contact with the reflector 6, so that the reflector could form a short-circuit between the shell and tip of said plug portion.

The light from the bulb 8 will be reflected from the front surface of the reflector and each of the projections 6^a will have a bright illuminated spot 6^{a1} thereon. Each of the projections 6^a, therefore, has a separate reflecting effect and gives the effect of a diamond or jewel set in the reflector. This reflecting effect of the projections 6^a is distinct and very visible even when the lamps 8 are extinguished and in ordinary daylight, so that the reflector is highly ornamental whether the lamps on the tree are illuminated or not. The curved shape of the reflector insures that all of the projections will reflect light from the lamp bulb, and the reflecting effect described will be present in each projection. A very pleasing and highly ornamental effect is thus produced.

In Fig. 5 a reflector 9 of different shape is shown, which, however, is made of sheet material, the same as the reflector shown in Figs. 1 to 4. The form shown in Fig. 5 comprises a symmetrical figure having five lobes of substantially semi-circular shape, said reflector 9 being provided with projections 9^a formed similarly to and in all respects similar to the projections 6^a already described. The projections 9^a are illustrated as arranged in rows about the edge of the reflector and also arranged in a row 9^b comprising five semi-circular lobes forming a figure similar in shape to the reflector, said row 9^b being within the angles of said reflector. If desired, a multiplicity of the projections 9^a may be formed between the two rows described as shown in the lobe 9^c. The reflector 9 is also provided with a central aperture 9^d and with a plurality of circumferentially spaced substantially pointed projections 9^e surrounding the same, which project forwardly and are similar to the projections 6^c already described.

The reflector shown in Fig. 5 will be held on the socket by the lamp bulb in the same manner as already described for the reflector 6. The light will be reflected from the projections 9^a and a very pleasing and highly ornamental effect will be produced.

From the above description it is seen that applicant has provided a very efficient and beautiful decorative reflector. The decorative effect is much heightened by the colored lights now commonly used for Christmas trees. The color is reflected from the surface of the reflector and the high spots 6^{a1} appear to be of a different color than the color of the main body of the reflector. The colored lights also give a pleasing effect in the daytime even when extinguished, as the color from the lamp bulb is reflected in the reflector and a different effect is given on the projections and on the portion of the reflector between the same.

The reflectors are made as stated of sheet metal and highly polished. There is no coating to chip off or become damaged. The projections 6^a and 9^a described not only function to produce a novel reflecting effect, but add greatly to the strength and rigidity of the reflector. The reflectors are non-breakable, are easily packed for shipment and do not warp out of shape when heated. The reflectors are easily and inexpensively made and the same have 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 claims.

What is claimed is:—

1. The combination with a lamp socket having a cylindrical front end with a shoulder thereon and a lamp bulb therein, of a reflector comprising a sheet metal member formed on a slight curve and having an aperture therein adapted to fit over said end of said lamp socket and abut said shoulder, said reflector having a plurality of spaced members projecting from its front surface about said aperture, the front portions of which are adapted to be engaged by said lamp bulb, whereby said reflector is pushed back against said shoulder and held firmly on said socket by said lamp bulb.

2. The combination with a Christmas tree lamp socket having a cylindrical front portion with a circumferential shoulder thereon and a lamp bulb therein, of an ornamental reflector comprising a sheet metal member slightly concave in shape and having an aperture therein adapted to fit over said portion of said socket, said reflector having a plurality of circumferentially spaced prongs disposed about said opening and extending forwardly from its front surface adapted to be engaged by said lamp bulb, said prongs extending at a different angle to the axis of said socket than the surface of said lamp bulb, whereby said bulb presses on the front portions of said prongs and holds said reflector against said shoulder and firmly in position on said socket.

3. The combination with a Christmas tree lamp socket having a front terminal portion with a shoulder extending about the same a

short distance from its front end and a lamp bulb in said socket having a rear end tapering toward said socket, of an ornamental reflector comprising a sheet metal member having an aperture therein adapted to fit over said front portion of said socket and abut said shoulder, said reflector having a plurality of circumferentially spaced prongs extending forwardly substantially parallel to the axis of said socket and adapted to be engaged at their front ends by said rear tapered surface of said lamp bulb whereby said reflector is held against said shoulder and firmly in position on said socket, by said bulb.

In testimony whereof I affix my signature.

LAMBERT L. RAYMOND.