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2,190,283

CHRISTMAS TREE REFLECTOR

Filed Jan. 14, 1938

Fig. 1

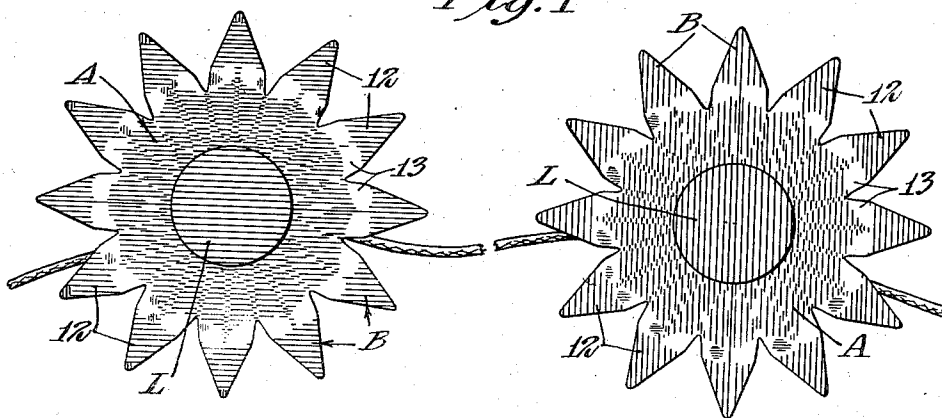


Fig. 2

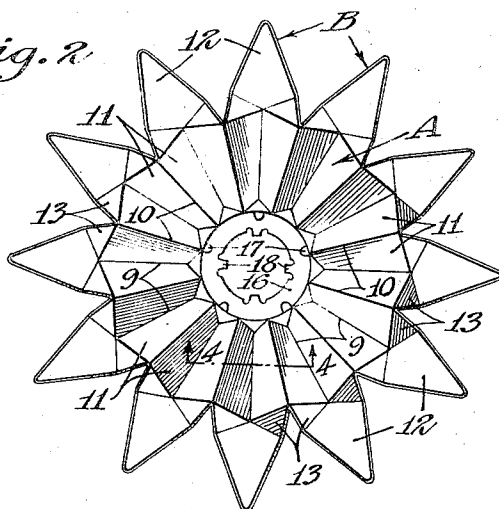


Fig. 6

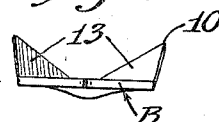


Fig. 7

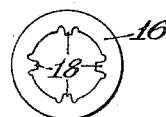
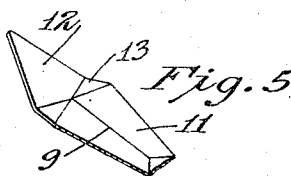
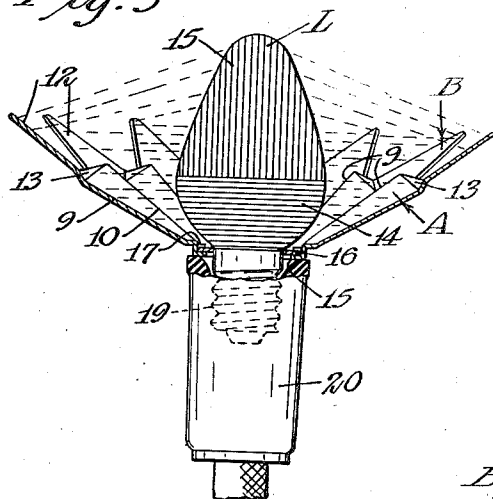


Fig. 3



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CHRISTMAS TREE REFLECTOR

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3 Claims. (Cl. 240—103)

This invention relates to light reflecting devices and more particularly to that type of device which is used to reflect the light of electric lamps used for illuminating Christmas trees and for other decorative purposes.

One of the objects of my invention is to provide a light reflector which, when its cooperating lamp is illuminated, will give the appearance of a main or central zone of reflected light and in addition a plurality of auxiliary zones of reflected light which are substantially separated from the main reflection zone.

Another object of the invention is to provide a reflector in which certain portions thereof are bent or otherwise formed so that their angular position provides non-reflecting surfaces with respect to the lamp to which the reflector is secured, but which will provide surfaces which will reflect light rays from other sources of light such as those rays from adjacent differently colored lamps and reflectors.

Another object of the invention is to provide a lamp in combination with a reflector of this general type, said lamp being divided into differently colored light zones whereby different portions of the reflector will reflect only certain colored rays from the lamp, and other portions of the reflector will reflect differently colored rays from the lamp.

Still a further object of the invention is to provide safe and effective means for securing the reflector to the base of the lamp which is used to illuminate said reflector.

These and other objects and advantages of the invention will more fully appear in the following description made in connection with the accompanying drawing, in which like reference characters refer to similar parts throughout the several views, and, in which:

Fig. 1 is a plan view of two of my reflectors showing them illuminated by lamps of different colors;

Fig. 2 is a plan view of a reflector detached from the lamp;

Fig. 3 is a section through one of my reflectors showing some of the mechanical structure thereof;

Fig. 4 is an enlarged section taken approximately on the line 4—4 of Fig. 2;

Fig. 5 is a perspective view of one segment of the reflector;

Fig. 6 is an end view of one of said segments; and

Fig. 7 is a plan view of the insulator with which the reflector is secured to a lamp base.

The reflector is preferably formed of some

light sheet metal which has a specially finished light reflecting surface, such as is commonly known in the art. The reflector comprises generally a main reflecting area A which is preferably generally circular in shape, and which has extending from its edge a plurality of tips or auxiliary reflecting portions B. The center of the main portion A is apertured, as shown, so that a base of a lamp can be inserted therein. Radiating outwardly from a central aperture is a plurality of V-shaped grooves 9 which, of course, are separated by a plurality of ridges 10. As shown in the drawings, the bottoms of the grooves are in alignment with the centers of each of the auxiliary reflecting portions or tips B, and the ridges 10 extend in lines between said tips or auxiliary reflecting portions. Thus the main body of the reflector is substantially angularly corrugated leaving slanting surfaces 11 which cooperate with the grooves and ridges to reflect light from the lamp to which the reflector was applied.

The tips or auxiliary reflecting portions B have their main surfaces 12 formed substantially flat, and at the bases of the flat portions 12 there are substantially triangular outwardly bent portions 13, which as best shown in Fig. 3, are so positioned that they face away from the lamp L so that these small triangular portions will not reflect light from the lamp. Therefore, when the lamp is illuminated the main reflector portion A and the tips or auxiliary reflecting portions B will reflect light from the lamp, but the non-reflecting portions 13 will provide dead spots and give the tips B the appearance of being substantially separated from the main reflector portion A. When illuminated the reflector has the general appearance of the popular conception of a "twinkling" star. To describe it in another manner it might be said that the reflector gives the appearance of a snowflake formation.

While the triangular facets or so-called dead spots 13 will not reflect light from the lamp L, they will reflect light from other sources which they may face, either directly or at an angle. Therefore, if a lamp of a different color is located adjacent one of these illuminated reflectors, the dead spots 13 will reflect this other color and tiny dots of this differently colored light will be distributed in varying degrees around the main reflecting portion A between it and the tips or auxiliary reflecting portions B. This effect is indicated in Figure 1, wherein the left-hand lamp is shaded with horizontal lines to indicate a blue color and the reflector is similarly shaded. There

are also small areas of vertical line shading to indicate a red color, the latter being reflected by some of the "dead" areas 13 and the extreme points of some of the tips B. The lamp and reflector at the right in Figure 1 are shaded vertically to indicate red, and it is from this red lamp and its reflector that the small areas of red are reflected by the reflector at the left. It will be noted that certain similar points on the right-hand reflector show the reflection of some of the blue light from the lamp and reflector at the left. Both reflectors are shaded in their central portions to indicate reflection of different intensity from their respective lamps along the bottoms of the grooves 9 and the ridges 10, thus creating radiating lines or points of light.

In Fig. 3 the lamp L is shown with two zones of coloring; the lower part of the lamp 14 may be of one color which will be reflected mainly by the slanting faces 11 on the main portion A of the reflector; the upper portion of the lamp 15 may be of a different color and that color will be principally reflected by the tips or auxiliary reflectors B. Since the main reflector and the tips have the appearance of being separated when the lamp is illuminated, this variation of colors on the main reflector and on the tips will create a very striking display.

The apertured central portion of the reflector is defined by a flange 15 against which is placed a ring 16 of fibre or other suitable insulating material. The ring is held against the flange 15 by tabs 17 which are stamped from the metal of the reflector itself. As shown in Fig. 8, the insulating ring 16 is provided with a plurality of inward projections 18. These projections are adapted to fit into the threads 19 which are formed in the base of a conventional lamp, and with lamp bases of certain sizes the projections 18 will so fit the threads that the reflector can be screwed upon the lamp base, just as though the lamp were being fitted into a threaded socket. However, where the base of a lamp is too large to permit the projections to extend inwardly into the threads of the lamp base, these larger lamps within certain limits may be secured to the reflector by pushing the lamp base through the ring 16 and bending the fibre projections 18 backwardly. Thereupon the inherent strength of the fibre projections or tabs 18 will cause them to frictionally engage the base of the lamp and hold the reflector in position thereupon. Of course, when the lamp base is screwed into the socket 20, the reflector will be more rigidly held by pressure of the fibre ring 16 against the lamp L, and also by pressure of the flange 15 against the outer end of the socket 20.

From the foregoing description it will be seen that I have provided a reflector for Christmas tree lamps and the like which is of relatively simple structure, but which at the same time is capable of producing lighting effects of unusual and pleasing appearance. It is a reflector in which the main reflector portion and its auxiliary reflector portions reflect light from one lamp, but have the appearance of being substantially independent reflectors, and in addition the reflector has other portions capable of reflecting differently colored light rays from other sources of illumination. As a result with the use of

solidly colored lamps or lamps having differently colored zones the reflector is capable of creating not only an effective reflection design, but can also be made to create unusual combinations of reflected light.

In addition to the decorative advantages of my reflector it will also be seen that I have provided a highly efficient and safe means of connecting the reflector to the lamp which is capable of accommodating lamp bases of different sizes.

It will, of course, be understood that various changes may be made in the form, details, arrangement and proportions of the various parts without departing from the scope of my invention.

What is claimed is:

1. A decorative light reflector comprising a relatively highly reflective dish-shaped element having an aperture therein adapted to receive a base of a lamp, said reflector having portions thereof shaped to intercept and reflect rays from said lamp, and other portions of said reflector being bent to non-reflecting positions relative to said lamp, said non-reflecting portions mechanically interconnecting said reflecting portions, said reflecting portions and said non-reflecting portions being so related as to give the appearance of reflecting portions visually separated by a definite line of demarcation provided by the non-reflecting portions.
2. A decorative light reflector comprising a one piece body of reflecting material having a central lamp receiving aperture therein, means in said aperture for engaging a lamp to provide a support for said body, a primary portion having a plurality of reflecting surfaces radiating from and entirely surrounding said central aperture, a plurality of secondary portions extending outwardly from said primary portion in spaced relation to each other and providing further reflecting surfaces, and portions of said reflector body constituting the bases of said secondary portions being slanted outwardly and downwardly from the axis of the reflector to provide non-reflecting surfaces; said reflecting portions and said non-reflecting portions being so related as to give the appearance of reflecting surfaces visually separated by a definite line of demarcation provided by the non-reflecting surfaces.
3. A decorative light reflector comprising a sheet metal member having a central opening for receiving a light bulb and including a body portion surrounding said opening and having an undulating surface for intercepting and reflecting the light rays from said bulb, a multiplicity of relatively flat, pointed, auxiliary portions extending from said body at spaced intervals around said body and providing surfaces for intercepting and reflecting other light rays from said bulb and imparting a star-like appearance to said reflector and portions depressed out of the plane of said body portion and interconnecting said auxiliary portions and said body portion, said depressed portions forming non-reflecting surfaces cooperating with the edges of said undulating surface to produce a visual line of demarcation between the rays reflected by said undulating surface and the rays reflected by said surfaces of said auxiliary portions.

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