Oct. 30, 1956 E. B. SINUTKO 2,769,081

REFLECTING ENCLOSURE FOR CHRISTMAS TREE LIGHTS

Filed April 27, 1953

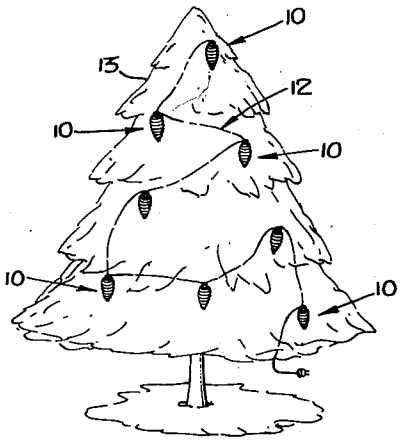


FIG. 1.

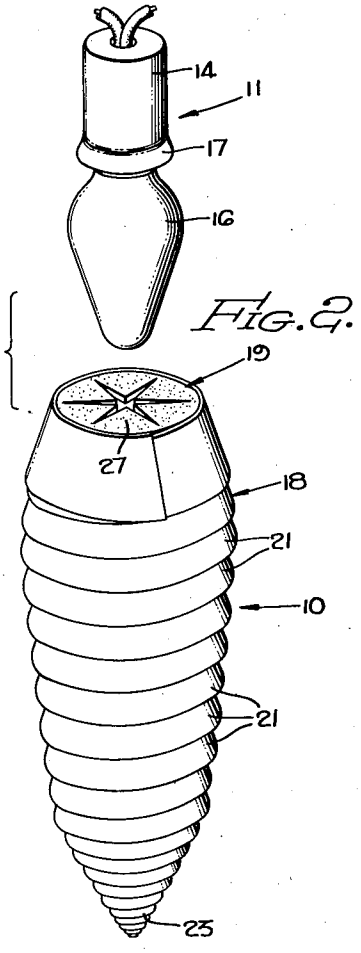


FIG. 2.

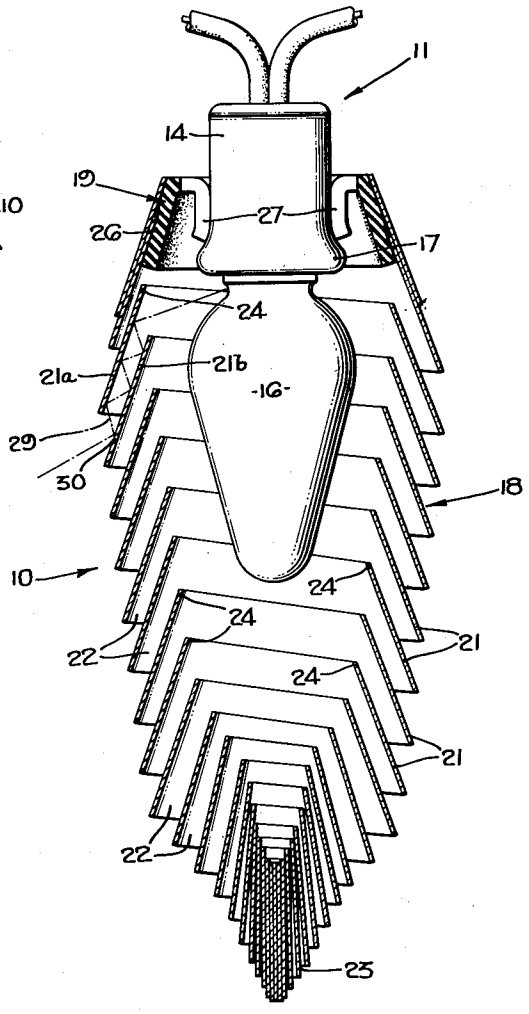


FIG. 3.

ELIZABETH B. SINUTKO,
INVENTOR.

BY

ATTORNEY

United States Patent Office 2,769,081 Patented Oct. 30, 1956

2,769,081

REFLECTING ENCLOSURE FOR CHRISTMAS TREE LIGHTS

Elizabeth B. Sinutko, Altadena, Calif.

Application April 27, 1953, Serial No. 351,104
12 Claims. (Cl. 240—10)

This invention relates to a Christmas tree ornament, and particularly to an ornament of the type adapted to enclose a Christmas tree light in a manner providing ornamental light patterns on surrounding objects.

Conventional ornaments of the type adapted to be mounted adjacent the bulbs of Christmas tree lights, in order to reflect light from the bulb and provide a more striking effect, are generally characterized by the fact that no predetermined light patterns are provided on surrounding objects. With mirror-type reflector shields, for example, the shield merely reflects light in a generally forward direction or parallel to the bulb axis. There is thus no sharply defined pattern of light, but only a brilliance in the eyes of the observer. Other characteristics of conventional Christmas tree ornaments of the type indicated are their bulk, which makes shipping difficult, and their fragility, the latter not only increasing shipping hazards but increasing the danger of breakage after the ornaments have been mounted on a Christmas tree. In addition, such ornaments are not pleasing to the eye during the daytime, when the lights are off, since the unlighted bulb remains exposed to view.

In view of the above factors characterizing the field of Christmas tree ornaments of the type indicated, it is an object of the present invention to provide a Christmas tree ornament which when mounted around a Christmas tree bulb will provide a predetermined spiral light pattern on surrounding objects.

Another object of the invention is to provide an ornament of the type described which is substantially unbreakable, is flexible, and is readily collapsed into small space for shipping purposes.

A further object is to provide a Christmas tree decoration which is highly ornamental even when the enclosed bulb is in an unlighted condition.

A further object is to provide an ornament which shields the enclosed bulb from view, and which protects the bulbs of outdoor-type lights from the effects of rain, snow, etc.

These and other objects and advantages of the invention are more fully set forth in the following description of an embodiment of the invention, considered in connection with the attached drawing to which they relate.

In the drawing:

Figure 1 is a view of a Christmas tree, illustrating a string of Christmas tree lights provided with the present ornament;

Figure 2 is an elevational view of the ornament just prior to its mounting on a conventional Christmas tree light; and

Figure 3 is a vertical central sectional view illustrating the ornament in mounted condition.

Referring to the drawing, the ornaments are indicated generally by the reference character **10**, and are mounted one on each light unit **11** of a string **12** of Christmas tree lights, the latter being positioned on a Christmas tree **13**. The light unit **11** is illustrated as being of a standard variety, embodying an insulating base **14** and a generally conical light bulb **16**. Base **14** is cylindrical except where it merges with a flange or boss portion **17** adjacent bulb **16**, the boss **17** normally serving as the means for retaining a reflecting shield in position.

As shown in Figures 2 and 3, each ornament **10** is formed with a light-enclosing or reflecting portion **18**, and with a mounting portion **19** adapted to be mounted over

light base **14** to retain portion **18** in position enclosing the light bulb **16**. According to the invention, the reflecting and light-enclosing portion **18** comprises a convoluted spring formed of a single strip of aluminum or other material having reflecting surfaces and the desired qualities of lightness, resilience, etc. Although the light-enclosing element **18** may be described as a convoluted spring, the individual convolutions **21** are not cylinders but instead are frusto-conical in shape. The convolutions **21** are axially offset so that each convolution overlaps the adjacent one but is spaced laterally therefrom to provide light passages **22** which are inclined so as to be generally in line with the light bulb **16**. The passages **22** combine to form a continuous helical or spiral passage adapted to transmit light rays from bulb **16** and form a sharply defined spiral pattern on any obstructing object. The width of the various portions of the spiral is largely determined by the spacing between the convolutions **21**, the spacing being relatively great at the upper portion of the ornament and tight at the lower portion or end indicated at **23**. At the extreme end **23**, the convolutions **21** are shown as being in surface contact.

Referring to Figure 3, the inner edges **24** of the convolutions **21** combine to form a geometric cone, and are preferably spaced a substantial distance from the corresponding conical wall of light bulb **16**. The outer portions of the convolutions **21** are, on the other hand, not truly conical in shape but instead give the general appearance of a pine cone when viewed from the outside as shown in Figure 2. To enhance this pine cone effect, for example in daylight when the bulb **16** is not lit, the outer surface of a strip which forms the convoluted spring may be coated with a reflecting tan or brown substance. However, the inner surface of the strip need not be ornamental since it is not normally viewed by the observer although it is adapted to reflect light as previously indicated.

The base or mounting portion **19** of ornament **10** is shown as being a rubber element shaped as a frusto-cone **26** with an upper wall **27**. The outer surface of the frusto-cone **26** is secured to the inner surfaces of the adjacent convolutions **21**, two convolutions being brought together for this purpose, and the upper wall **27** is cut into pie-shaped segments as shown in Figure 2. With this construction, it is merely necessary to push the upper end of the ornament **10** over the pointed lower end of bulb **16** and over the flange or boss portion **17** of base **11**, the resiliency of the downwardly bent pie-shaped segments of wall **27** then holding the ornament in position as shown in Figure 3.

In the manufacture of the ornament **10**, the light-enclosing portion **18** may be made by spirally winding a strip of metal into a coil or preferably by forming a shaving formed on a lathe from aluminum stock by simple lathe operations. After the portion **18** is wound or turned, the rubber mounting portion **19** is cemented in position and the manufacture completed. As previously indicated, however, the outer visible surface of the portion **18** may be coated with a colored reflecting substance, this operation being preferably performed prior to positioning of the base element **19**. After the ornament is manufactured, it is compressed or inwardly telescoped to form a compact mass of tightly spaced convolutions **21** in all regions not occupied by the frusto-conical portion **26** of mounting **19**. After shipping, the natural resilience of the ornaments causes them to resume the shape shown in Figures 2 and 3 upon their mere removal from the shipping container. In ornaments formed of aluminum, the individual strips which make up the portion **18** are brittle and are easily broken when bent in a direction transverse to the length of the strip. Nevertheless, the light-enclosing portion **18** is extremely resilient and may be readily

stretched and compressed when shaped as described in connection with Figures 2 and 3. A convoluted spring thus results where the ornament portion **18** is formed of aluminum or similar substance, but it is not necessary to the invention that the ornament be resilient or even formed of metal so long as the desired light-enclosing and reflecting properties are present.

In the use of the ornament, a pine cone effect is created during the daytime and when the string of lights is in an unlighted condition. This is to be distinguished from conventional reflectors which are not pleasing to the eye except when the lights are turned on. When the lights **16** are in a lighted condition, particularly at night and in a darkened room, a spiral light pattern is created through passage of light beams through the various passages **22** between the individual convolutions **21**. Referring again to Figure 3, an illustrative light beam **29** is indicated as emanating from the base of bulb **16**, then reflecting back and forth between the walls of convolutions **21***a* and **21***b* until the outer edge of convolution **21***a* is reached. Due to the axial spacing between the convolutions **21***a* and **21***b*, the light beam is last reflected in the region indicated at **30** at the outer portion of convolution **21***b*. Accordingly, the region of convolution **21***b* generally outwardly of point **30** does not reflect any light and forms a darkened region separating the individual whorls of the light spiral. The whorls of the spiral are thus separated by sharply defined dark regions, the dark regions being relatively narrow toward the center of the light spiral which corresponds to the closely spaced convolutions at the lower end **23** of the ornament.

The invention thus provides an unbreakable, collapsible, and readily packed ornament which provides a distinct and novel appearance during the daytime, and a distinctive and predetermined light pattern at night when the lights **16** are in lighted condition. Furthermore, the overlapped convolutions **21** shield the light itself from view, and from the harmful effects of rain, etc., when the lights are used outdoors.

While the particular device herein shown and described in detail is fully capable of attaining the objects and providing the advantages hereinbefore stated, it is to be understood that it is merely illustrative of the presently preferred embodiments of the invention and that no limitations are intended to the details of construction or design herein shown other than as defined in the appended claims.

I claim:

1. An ornament adapted to be mounted around a Christmas tree light, which comprises a conically coiled strip wound in the general shape of a hollow cone with individual convolutions spaced from each other, said strip being adapted at the wide end of said cone to be supported about the base of a Christmas tree light to form the sole support for said strip, said strip having reflecting surfaces to aid in the transmission of light rays from the Christmas tree light concealed therewithin outwardly through the spaces between said individual convolutions.

2. The invention as claimed in claim 1, in which said individual convolutions are partially overlapped and generally frusto conical in shape.

3. The invention as claimed in claim 2, in which the wide portion of each of said frusto conical individual convolutions is relatively remote, as compared to the narrow portion thereof, from the base of said light.

4. The invention as claimed in claim 1, in which said strip has reflecting surfaces on both of its sides, and is formed of resilient metal permitting telescoping thereof during storage and shipment.

5. The invention as claimed in claim 4, wherein said strip is formed of aluminum.

6. The invention as claimed in claim 1, in which said strip is a metal shaving formed on a lathe.

7. An ornamental reflecting enclosure for mounting around a Christmas tree light having a base and a bulb, which comprises a resilient metal strip wound in the general shape of a hollow conical convoluted spring and with individual convolutions spaced from each other to form light passages while concealing the light bulb therewithin, said strip being formed with reflecting surfaces on both of its sides to aid in the transmission of light through said passages, and means at one end of said strip to mount the same on said light base in enclosing relation relative to said bulb, whereby light rays from said bulb are directed through said light passages to provide various ornamental effects depending upon the color of said bulb.

8. The invention as claimed in claim 7, wherein said mounting means is at the wide bore end of said conical convoluted spring, and said strip is a shaving formed on a lathe and having loosely wound frusto conical partially overlapped convolutions adjacent said base and tightly wound resiliently supported end convolutions remote from said base.

9. A decorative ornament adapted to be supported solely from the base of a Christmas tree light so as to surround and enclose the light bulb, said ornament comprising a conelike reflector formed by a spirally wound strip of resilient material having the edges of consecutive convolutions overlapping and with its inner rim edges adapted to cooperate with a lamp base to form an enclosure for the end and side walls of a lamp and spaced outwardly from contact with the lamp, said ornament providing a spiral opening for light between the reflective surfaces of said spirally wound strip.

10. A decorative ornament as defined in claim 9 which is readily collapsible into a closely wound roll for shipment and packaging, and having a resilient collar secured to its larger-diameter end adapted to stretch over and firmly seat about the base of a lamp to be supported thereby with its smaller-diameter end hanging pendant fashion below the lamp.

11. A decorative reflector ornament for use as an enclosure for an electric light of the type employed in decorating Christmas trees, said ornament comprising a coiled strip of resilient light-reflective material having its inner end adapted to remain coiled as the other end is extended axially therefrom to provide a convoluted enclosure for a Christmas tree type light and having an unobstructed interior chamber somewhat larger than a Christmas tree type light, and means on the extended end of said ornament for detachably supporting the same about the base of the light, the weight of said coiled strip being adapted to hold said ornament extended free of contact with the light when said light extends downwardly from its base.

12. A decorative ornament formed from a coiled strip of resilient material having at least an exterior light-reflective surface, said coiled strip having a tightly wound inner end which is not readily extendable axially and a plurality of larger-diameter conically-wound layers which are readily extendable in one direction axially of said coil, and inwardly tanged means at the large-diameter end of said coil adapted to be snapped about a support for said ornament and providing the means for supporting the same in a resiliently-suspended manner and held extended under the influence of its own weight.

References Cited in the file of this patent

UNITED STATES PATENTS

D. 145,583	Lolli	Sept. 10, 1946
1,042,979	Seessle	Oct. 29, 1912
1,333,033	Navodick	Mar. 9, 1920
1,581,997	Flautt	Apr. 20, 1926
1,864,418	Ehlers	June 21, 1932
1,978,251	Doane	Oct. 23, 1934
2,673,285	Buschi	Mar. 23, 1954

FOREIGN PATENTS

833,679	Germany	Mar. 10, 1952