

Jan. 14, 1941.

D. H. CROSSER

2,228,691

ORNAMENT

Filed April 5, 1938

2 Sheets-Sheet 1

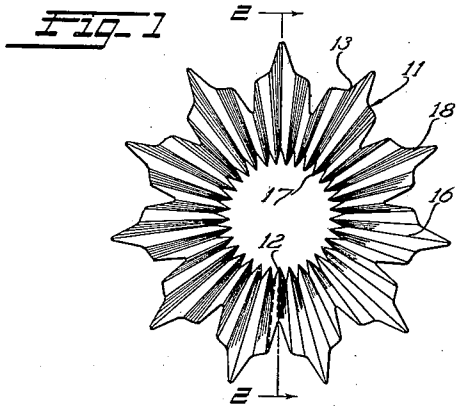
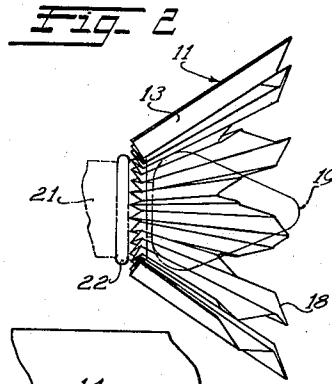
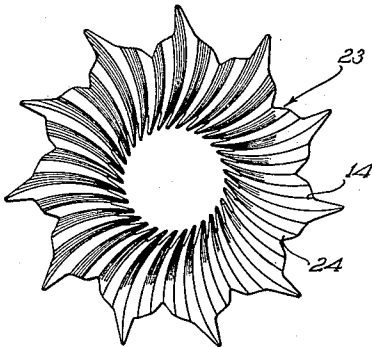
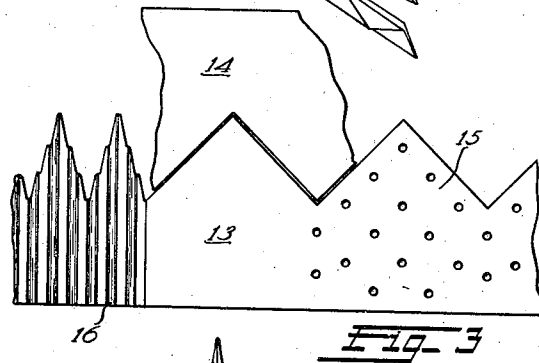
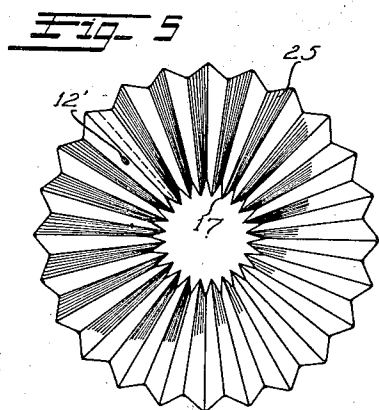
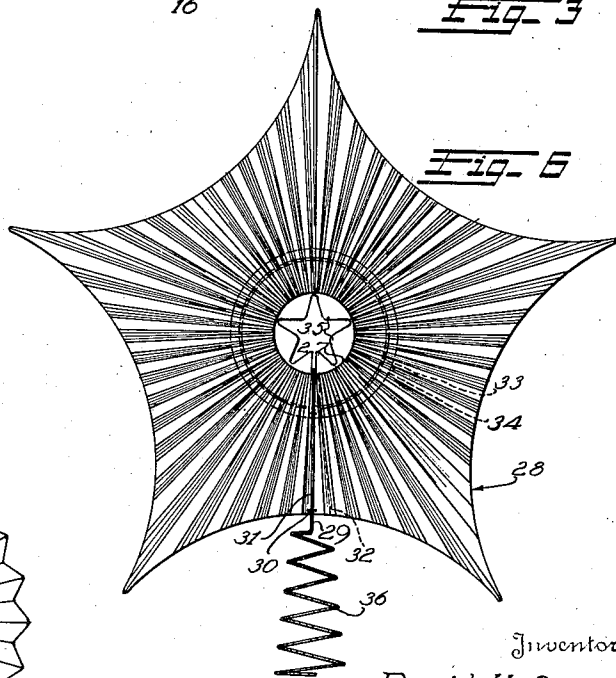


Fig. 4

Fig. 6



Inventor
David H. Crosser

334

Strauch & Hoffman
Attorneys

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2 Sheets-Sheet 2

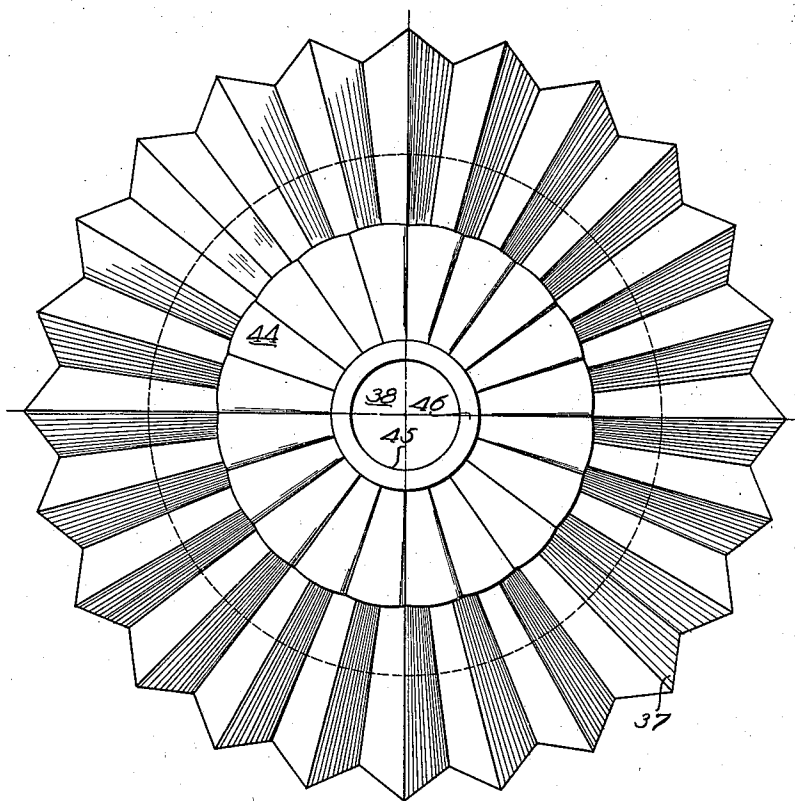


Fig. 7

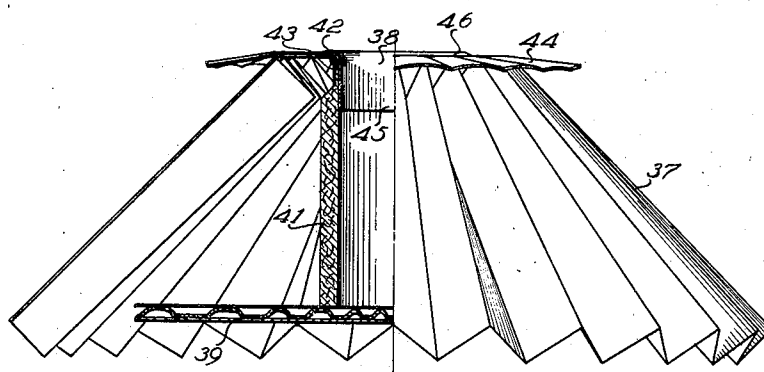


Fig. 8

Inventor
David H. Crosser

334

Strauch & Hoffman
Attorneys

UNITED STATES PATENT OFFICE

2,228,691

ORNAMENT

David H. Crosser, Chicago, Ill., assignor to National Tinsel Manufacturing Company, Manitowoc, Wis., a corporation of Wisconsin

Application April 5, 1938, Serial No. 200,272

2 Claims. (Cl. 240—103)

My invention relates to ornaments and more particularly to ornaments of the type adapted to be associated with light sources for deflecting and distributing the light therefrom in an attractive and pleasing manner.

It is a major object of my invention to provide a novel, simple, inexpensive ornament in which a plurality of reflecting surfaces are arranged to present to the eye of the observer the appearance of light rays traveling from an area within the ornament toward the outer periphery of the ornament.

A further object of my invention is to provide a novel corrugated reflector made of flexible material capable of retaining a given shape.

It is a further object of my invention to provide a novel apertured ornament made of flexible material capable of retaining a given shape and having corrugations extending from the aperture toward the periphery of the ornament. The ornament may be generally flat or dish-shaped and the corrugations may be straight, curved or zig-zag and may extend radially or in any desired direction along the surface of the ornament between the aperture and the outer periphery of the ornament.

A further object of my invention is to provide a novel ornament which has a resilient mouthed aperture for enabling the ornament to be pushed over an object onto a support beyond the object without removing the object from the support if the object happens to be somewhat larger than the aperture. In specific attainment of this object I propose to provide a reflector having a resilient mouthed aperture for enabling the reflector to be pushed over a lamp bulb of larger dimensions than the aperture to a point where the resilient reflector mouth can grip the lamp socket or a similar member designed to maintain the reflector in position to collect and redistribute most of the light rays issuing from the bulb.

A further object of my invention is to provide a novel ornamental reflector or the like made of a strip of corrugated flexible material capable of retaining a given shape. The strip is manipulated to obtain a desired ornamental form and then the ends are secured together to maintain that form.

It is a further object of my invention to provide a novel method of forming an ornament from a corrugated strip of flexible material capable of retaining a given shape wherein the opposite ends of the strip are secured together with the corrugations gathered along one side edge

of the strip and allowed to expand along the opposite side edge of said strip.

A further object of my invention is to provide a novel light source support wherein the light source is to be disposed in a socket substantially centrally of a corrugated reflector made of flexible material capable of retaining a given shape. The socket may be secured directly to the reflector or may be supported partly or wholly on a base or other member associated with the reflector.

A further object of my invention is to provide a novel, generally annular ornament whose surface walls are resilient to allow expansion of the ornament and subsequent return toward its initial form before expansion.

Further objects of the invention will appear as the description proceeds in connection with the appended claims and the annexed drawings in which:

Figure 1 is an end view looking axially into the interior of an ornamental reflector of generally star-shaped form made according to my invention;

Figure 2 is a side elevation in section taken through the axis of the reflector of Figure 1;

Figure 3 is a plan view of the material generally used in forming the ornament of Figures 1 and 2 illustrating some of the steps in the manufacture of the ornament;

Figure 4 is an end view of an ornamental reflector illustrating an embodiment of the invention somewhat similar to that shown in Figure 1 but in which the generally radial light reflecting surfaces are curved so that the ornament gives a whirling or sunburst appearance;

Figure 5 is an end view of an ornamental reflector constituting a further modification of the invention illustrating a different ornamental form from that of Figure 1. This reflector is made from a rectangular strip of material.

Figure 6 illustrates an embodiment of the invention in which the ornament is star-shaped and is generally flat in form as compared with the dish-shaped or frusto-conical forms illustrated in Figures 1, 2, 4 and 5. In addition, the ornament of Figure 5 is shown as provided with a seat for holding it in upright position and a lamp support;

Figure 7 is a plan of an ornamental stand for supporting a candle or other light source which is associated with a corrugated reflector which may be constructed along the lines of any of the previous embodiments illustrated in Figures 1-6; and

Figure 8 is a side elevation partly in section illustrating the light source socket support structure.

Referring to Figures 1 to 3, inclusive, an ornamental reflector 11 is formed from a strip of corrugated material having its ends secured together by any suitable means such as staple 12. This reflector is preferably manufactured from a single strip 13 of a suitable material which is capable of retaining a given shape. This material may be opaque or translucent and may be paper, stainless steel, tin, aluminum or the like obtainable in sheets of suitable thickness. Preferably a light metal foil or sheet such as aluminum foil is used because such is inexpensive and has inherently a highly reflective surface.

As shown in Figure 3, strip 13 can be cut along with a similar strip 14 from a single, flat, rectangular strip of the metal sheet. The nature of the line of separation between strips 13 and 14 determines the contour of the outer periphery of the ornament of Figure 1. Hence, the cutting operation indicated in Figure 3 predetermines the eventual form of the ornament, and since strip 14 is a duplicate of strip 13, there is no waste of material during manufacture.

The material comprising strips 13 and 14 may be of any desired surface formation, brightness or color. It may be smooth, crinkled, embossed, perforated with different designs and sizes of holes as indicated at 15 in Figure 3, or roughened in any manner. The surfaces may be of high specular reflexivity or may be diffusive. Lacquers and other coloring materials may be employed on either surface, or both surfaces if desired. The strip material itself may be inherently colored. The preferred material, sheet metal, is usually chosen to be highly reflective along one surface and colored with a suitable lacquer along its other surface.

After strip 13 has been cut to form, it is provided with corrugations which extend laterally of the strip from one side edge toward the other. These corrugations may extend straight across the strip or may be curved or formed in zig-zag manner to produce different optical effects in the final ornament. The corrugations, furthermore, need not be evenly spaced but may be irregular, of different sizes and may even have interposed sections of uncorrugated material therebetween. The corrugations formed in strip 13 used in Figures 1 and 2 extend laterally across the strip in straight lines substantially normal to the length of the strip and are generally equally spaced.

The term "corrugations," as used in this application, applies to any corrugations, folds, wrinkles, plaits or other similar formations, straight or curved, and regular or irregular, which extend from one edge of the strip to the other. Obviously, strip 13 need not be a continuous strip but may be the equivalent of such made by fastening separate strips end to end by any suitable securing means such as an adhesive or rivets.

After corrugation, the strip is manipulated into an ornament of predetermined form. The form illustrated in Figures 1 and 2 is generally dish-shaped or frusto-conical and is made by securing opposite ends of strip 13 together with the corrugations 16 compressed or gathered adjacent one side edge of the strip and allowed to expand freely adjacent the other side edge. The ends of strip 13 may be secured together in any suitable manner such as by an adhesive, stitching,

wires, staples, solder, rivets, welding or the like. A suitable mandrel or form may be used if desired during these operations. Obviously, generally dish-shaped ornaments of this character, ranging in depth from approximately cylindrical form to the substantially flat form of Figure 6, can be made in this manner. Furthermore, the ornament will be expansible and resilient due to the tendency of the distorted corrugations and the strip to return to their original shapes.

Although I have above described the ornament of my invention as provided with corrugations before the ends of the strip 13 are secured together, it is entirely within the scope of my invention to secure the strip ends together in some suitable manner first and then apply the various surface formations and corrugations to the ornament by the use of suitable dies or other similar forming apparatus.

It is also to be understood that the ornaments described herein may be formed from tubing made of metal foil or the like, the tubing being cut in sections of the necessary size to form the desired ornament.

Referring to Figure 2 that side edge of the strip which is adjacent the gathered corrugation portions defines a resilient aperture or mouth 17, the purpose of which will be later described. That side edge of the strip adjacent the expanded corrugation portions defines what will be called the periphery 18 of the ornament. The contour of this periphery is determined by the shape of outer side edge of strip 13 and, as shown in Figures 1-3, a saw-toothed strip will give a substantially star-shaped ornament. Other designs cut along the upper edge of strip 13 will give various ornamental forms such as flowers, sunbursts, whirls, snowflakes and the like. This design is a matter of choice although it is generally chosen to use as much of the strip material as possible without waste.

As illustrated in Figure 2, reflector 11 is designed to be associated with a source of light, such as a Christmas tree bulb 19 by the clamping action of the resilient aperture or mouth 17 about the socket 21 of the lamp. An annular ridge 22, usually formed on such sockets, limits rearward movement of the reflector along the socket, although the reflector may be positioned beyond ridge 22 if desired. The ordinary Christmas tree bulb is generally larger in diameter than its socket. Heretofore in the prior art when it was desired to support a reflector on the Christmas tree lamp socket the reflector was generally provided with an aperture which fitted closely upon the socket. But since the bulb was larger in diameter than the socket, it was necessary to remove the bulb each time such a reflector was placed upon, or removed from, the socket. In fact, many of these prior art reflectors were designed to be held in position by the bulb.

The expansible and resilient reflector 11 of my invention, however, can be placed on socket 21 without removing the lamp bulb 19 from socket 21. This is accomplished by manually expanding the reflector until aperture 17 is large enough to pass over the largest part of the bulb when the reflector is pushed over the tip end of the bulb toward the socket and then releasing the reflector to allow mouth or aperture 17 to contact and grip the socket whereby reflector 11 supports itself upon socket 21.

From the above it will be apparent that the ornamental reflector of my invention is simple, inexpensive and self-supporting, and can be

quickly and easily attached to or detached from a lamp unit or the like without removing the lamp and without involving expensive complicated attaching mechanisms. The ornament need not be highly reflective and need not be disposed upon a lamp socket. A very useful application of this invention in its broader scope is in the making of artificial flowers where the ornament formed to constitute the petals of the flower may be easily slipped upon a stem or support containing the central portion of the flower.

When the ornament of my invention is used as a reflector, its inner surface is ordinarily more highly reflective than its outer surface which is usually colored. If desired, however, these surface characteristics can be reversed because the resilient nature of the ornament allows it to be turned inside out end for end while retaining the general ornamental form.

An observer looking axially along the open end of a reflector and lamp unit will see a central light area from which a plurality of bright light rays, in a predetermined pattern, appear to be issuing and the effect is pleasing and attractive.

The ornament need not be supported by the clamping action of mouth 17 about a support but may be seated or suspended as desired by hooks, wires, strings or similar means attached to its rim. Preferably, the generally flat form of ornament illustrated in Figure 6 is used in this manner in preference to the dish-shaped type.

In the embodiment of the invention illustrated in Figure 4 a dish-shaped ornament 23 similar to ornament 11 in method of manufacture is provided with corrugations 24 which are curved while extending from one edge of the strip material to the other. When corrugations 24 are all curved in the same general direction as shown in Figure 4, the ornamental effect is that of a sunburst or other form symbolizing rotation.

In the embodiment of the invention illustrated in Figure 5 a corrugated rectangular strip 25 of suitable material is formed, with its ends secured together by some suitable means such as rivet 12', into a generally dish-shaped ornament in the same manner as described above in discussing ornament 11. This is the most inexpensive type of ornament since it is formed directly from a rectangular strip of material without involving special peripheral cutting.

In the modification illustrated in Figure 6 the ornament, constructed in the same general manner as that of Figure 1, is generally flat in that the aperture 27 lies in substantially the same plane as the periphery 28. This type of ornament may be used upon a lamp socket as shown in Figure 2, or may be suspended from a suitable support as described above, or may be used as a final member by providing the seating structure shown in Figure 6.

A bendable, semi-rigid wire 29 extends along the corrugation 31 adjacent the overlapped ends of strip 32 from which the ornament is formed. At its inner end, wire 29 is bent to form a loop 33 substantially concentric with aperture 27. A suitable insulator 34 having spring fingers 35 for accommodating a lamp unit is held over aperture 27 between loop 33 and one side of the ornament. Wire 29 is also secured to the ornament along corrugation 31 by wires or similar suitable fastening means 30 and terminates in a spirally wound generally conical spring socket 36 adapted to fit over the top of a Christmas tree or the like.

When socket 36 is seated on the tip end of a Christmas tree or the like, the reflector is sup-

ported by wire 29 and a suitable lamp unit (not shown) can be supported upon insulator 34 by means of fingers 35. The ornament in Figure 6 gives the same lighting effects as the other ornaments of my invention.

In Figures 7 and 8 is illustrated an embodiment of my invention comprising a generally frusto-conical reflecting member, preferably made from a rectangular corrugated strip of material such as thin metal in the same manner as the ornament of Figure 5. Reflector 37 supports an elongated socket 38 for holding a candle or other suitable light source. If desired, the socket may be wired for electricity.

Socket 38 comprises a flat base 39 which is secured within the reflector over the bottom end of a hollow post 41 whose upper open end terminates in a reduced section 42 extending through the aperture at the top of reflector 37. Base 39 and post 41 are preferably of some light, inexpensive fibrous composition such as cardboard but are substantial in area to reinforce reflector 37. Reduced post section 42 is surrounded by a metal collar 43 and a substantially horizontal annular plate 44 is disposed about the upper edge of collar 43 and held thereupon by a metal collar 45 secured internally of post 41 and having a lateral downwardly extending flange 46 engaging the top surface of plate 44. Plate 44 is preferably corrugated or otherwise decorated to cooperate optically with reflector 37.

The above described ornamental light source support 37 is preferably made of a stiffer material than can be used for the ornaments of the type illustrated in Figure 1 but the method of manufacture is the same. As shown in Figure 8, the ornamental support usually rests upon a flat surface with spaced portions of its periphery contacting the surface, while the socket is wholly supported thereupon. A candle or the like is inserted in socket 38 and reflector 37 distributes light therefrom. The large peripheral extent of reflector 37 prevents accidental overturning of the candle and is a positive safety feature.

The invention may be embodied in other specific forms without departing from the spirit or essential characteristics thereof. The present embodiment is therefore to be considered in all respects as illustrative and not restrictive, the scope of the invention being indicated by the appended claims rather than by the foregoing description, and all changes which come within the meaning and range of equivalency of the claims are therefore intended to be embraced therein.

What is claimed and desired to be secured by United States Letters Patent is:

1. A light weight reflector ornament consisting of a self-supporting, expansible, open-ended, substantially frusto-conical, reversible hollow element made from a single resilient strip of corrugated material which has its opposite ends joined so that its corrugations extend generally radially along the surface of said element, the inner and outer surfaces of said element having materially different light modifying characteristics and said element by reason of its resilient construction being deformable in the general direction of its axis to such extent as to be speedily and easily turned inside out without tearing, unfastening or similarly separating portions of said strip to permit said surfaces to be reversed, and said ornament having substantially identical shape in either of its reversed arrangements, said element being adapted to be mounted speedily and easily upon an illuminated fixture compris-

ing a socket having a portion larger than the smaller open end of said element and a lamp bulb in said socket having a portion appreciably larger than the smaller open end of said element without removing the lamp bulb from its socket; and said corrugations being gathered tightly about the smaller open end of said element so as to provide a highly resilient socket gripping mouth which is appreciably expansible to permit said element to be pushed past the tip of said lamp bulb and over and beyond said large portion of said lamp bulb to said socket and is inherently contractible toward its original shape to firmly grip with its resilient mouth said portion of said socket and thereby support itself firmly upon said fixture with a reflector surface in operative relation to said lamp bulb.

2. A light weight self-supporting reflector ornament consisting of an expansible, open-ended, substantially frusto-conical hollow element having inner and outer surfaces of different light reflecting characteristics, the walls of said element being made of thin sheet material capable of retaining a given shape and formed with a plurality of closely adjacent corrugations which extend generally radially along the surfaces of said element and are curved in the same general direc-

tion to impart an appearance of rotation to said ornament when illuminated and which render said walls extremely resilient circumferentially of said element, said element being adapted to be mounted speedily and easily upon an illuminated fixture comprising a lamp socket having a portion larger than the smaller open end of said element and a lamp bulb in said socket having a portion appreciably larger than the smaller open end of said element without removing the lamp bulb from its socket, and said corrugations being gathered tightly about the smaller open end of said element so as to provide a highly resilient socket gripping mouth which is appreciably expansible to permit said element to be pushed past the tip of said lamp bulb and over and beyond said large portion of said lamp bulb to said socket and is inherently contractible toward its original shape to firmly grip with its resilient mouth said portion of said socket and thereby support itself firmly upon said fixture with a reflector surface in operative relation to said lamp bulb, and said element, by reason of its resilient construction, being deformable and reversible to present either of said surfaces to reflect light from said bulb.

DAVID H. CROSSER.