Sept. 14, 1937. A. STECHBART 2,092,785

DECORATIVE LIGHT STRUCTURE

Filed March 16, 1936

Fig. 1

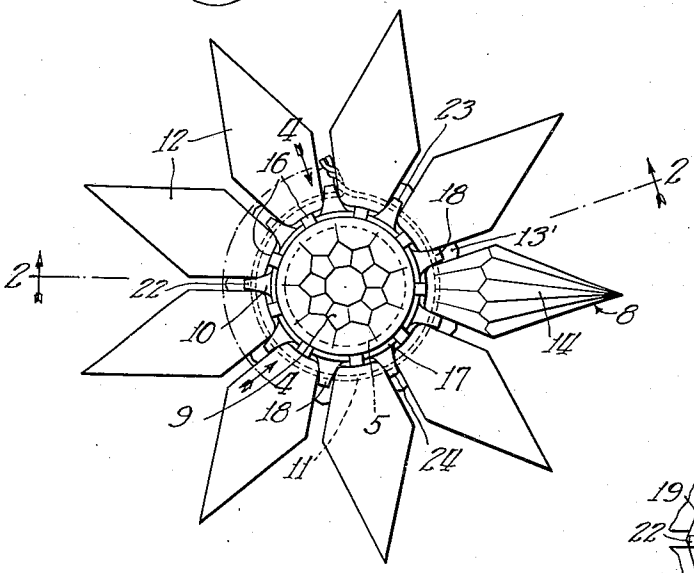


Fig. 3

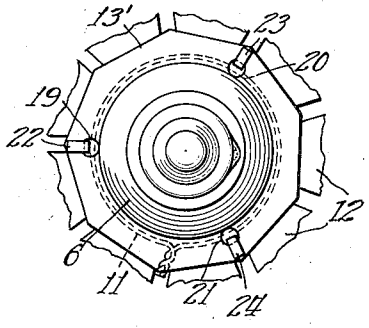


Fig. 2

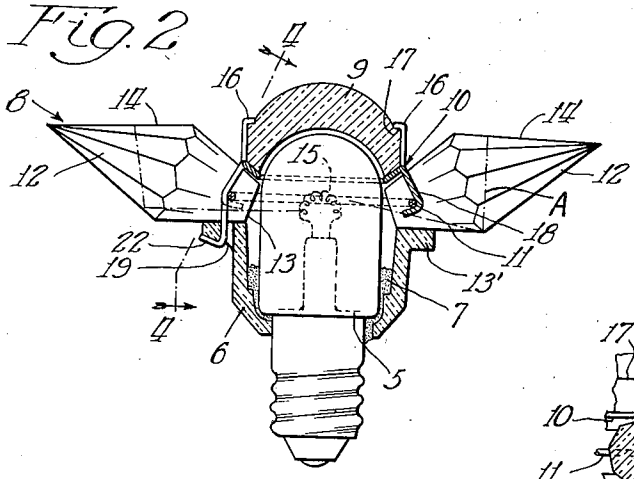
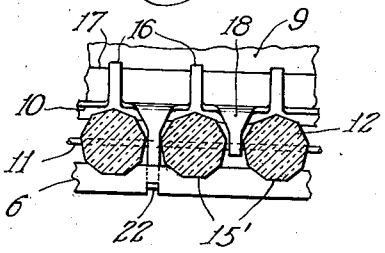


Fig. 4



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DECORATIVE LIGHT STRUCTURE

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Application March 16, 1936, Serial No. 69,090

4 Claims. (Cl. 240—10)

This invention relates to decorative light fixtures of the character shown in the copending application of Paul C. Dittman, Serial No. 19,417, filed May 2, 1935, now Patent No. 2,063,153.

The present invention is directed to an improvement in devices of this character calculated to facilitate the dispersion of light in the crystals of which this structure is composed.

The invention further contemplates a novel combination of a single row of elongated pointed crystals with a central ornament and means for mounting the same upon a light bulb.

In devices of this character, the ornament to produce its best decorative effect is viewed from the front so that the various points of the crystals appear as radially disposed. The attractiveness of the structure is greatly enhanced by increasing the light display in a direction in which the device is to be viewed. The light, however, is sent into the crystals in a direction which approaches a perpendicular to the line of vision.

least one face of the crystal before it can be directed outwardly from the crystal. In other words, the faces of the crystals are so cut that light entering the crystals from the light source 15 first strikes a face at an angle of less than 41 degrees. Preferably the angles of the several faces, except the cut off face 13, with respect to the long axis of the crystal are made substantially 20 degrees. Thus nine of these crystals may be arranged around a central point with their adjacent sides substantially parallel out to the largest cross sectional diameter of the crystal.

The crystal structure when viewed from the front, as shown in Fig. 1, must be so arranged that the several points of the crystals appear to extend outwardly to a sufficient degree to give a pleasing star appearance. This means, however, that light entering at the inner ends of the crystals will be directed outwardly as well as forwardly if the axes of the crystals are arranged in a common plane about the light source as a

the light rays travel from the light source through the cut off end of the crystal and how they are reflected from one of the outer faces of the crystal so as to escape from an opposite face. The line indicated at A in Fig. 2, it will be noted, is reflected almost parallel to the line of vision so that it is directed straight forward from the face of the crystal 14. Owing to the tilting of the crystals 12 in the row 8, it is obvious that a greater number of light rays, or in other words, a greater amount of light, will be directed against the back or rearwardly facing half of the crystals for reflecting in a forward direction than will be directed toward the front half of the crystals for reflecting in a rearwardly direction.

Thus the light rays are not only directed toward the observer of the ornament, but also a greater number of light rays are directed toward the observer as a result of the tipping of the crystals out of a plane at right angles to the line of vision. That portion of the crystal between where the line A intersects the front face 14 and the inner end of the crystal does not appear illuminated when the ornament is viewed from the front. This is because practically no light rays are being projected from the faces of the crystal over this area. The resultant effect, therefore, is to cause the crystals to appear to have illuminated tips.

The central ornament 9 is also preferably cut with suitable faces, but it, of course, merely acts to transmit light without any control by reflection. The mounting ring 10 has a series of fingers 16 formed thereon and extending forwardly to engage over a shoulder 17 which extends around the central ornament 9. The ring 10 has its body portion substantially frusto conical in shape. The ring 10 also has a series of crystal holding fingers 18 which fingers extend between the several crystals and are adapted to be hooked around the wire 11 as illustrated in Fig. 2, the free end portions of the fingers 18 being substantially hook shaped. In order to secure the row 8 of crystals and the central ornament 9 to the base 6, I provide in the flange 13' a series of holes 19, 20, and 21 arranged approximately 120 degrees apart around the flange 13'. I then extend three of the fingers 18 to provide elongated securing strips 22, 23, and 24. These securing strips are projected through the openings 19, 20, and 21 and bent out as shown best in Fig. 2 to hold the crystals securely upon the base 6.

From the above description, it is believed that the construction and operation of this device will be readily apparent to those skilled in this art. It is also believed to be obvious that various minor modifications may be made from the exact details shown and described without departing from the scope of the invention as defined in the claims.

Having thus described one specific form of my invention, what I claim as new and desire to secure by Letters Patent is:

1. A decorative light structure comprising in combination, a light bulb, a light transmitting and display structure comprising a plurality of elongated pointed crystals arranged in a ring about said bulb with their long axes extending in a general radial direction with respect to the bulb as a center, means for securing said crystals in position on said bulb, said means comprising a member supporting a central ornament and having securing strips thereon projecting between the crystals, and a base on said bulb to which said securing strips are detachably connected.

2. A decorative light structure of the character described comprising a light bulb, a supporting base thereon having a radially directed flange, a row of elongated pointed crystals resting on said flange and arranged circumferentially about said light bulb, a central ornament over the top of said light bulb and the inner ends of said crystals, and a securing ring having fingers disposed between said crystals and spacing the same, certain of said fingers also extending through said base flange for securing the crystals to the base.

3. A decorative light structure comprising in combination a light bulb, a crystal supporting base encircling said bulb and having an annular flange, an annular row of crystals resting on said flange, said crystals having their inner ends adjacent to the bulb and increasing in cross section outward through a substantial portion of their length, and having outwardly extended portions decreasing in cross section substantially to points at their outer ends, means securing said crystals to each other and to said flange, said crystals being tipped to bring one edge of each outwardly extended portion into a common plane, said light bulb having at least the major light-giving portion of its filament between said plane and the inward extensions of the longitudinal axes of said crystals.

4. A decorative light structure comprising a plurality of elongated crystals tapered from the central portion toward both ends, said crystals being arranged in an annulus adapted to encircle a light bulb, with the long axes of the crystals extending in a generally radial direction with respect to the center of the annulus, means securing the inner ends of said crystals together, and a central ornament adapted to extend over the end of a light bulb encircled by said annulus, a rigid mounting ring having means thereon for holding said central ornament and having fingers extending between said elongated crystals, said fingers being engaged with said securing means, whereby to attach the crystals to said ring, certain of said fingers being extended between the crystals and beyond them on the opposite side from said ring to provide fastening means for fastening said light structure upon a light bulb.

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