June 5, 1956 R. T. DORSEY 2,749,432

INCANDESCENT LAMP AND ATTACHMENTS THEREFOR

Filed Dec. 26, 1952

Fig. 1

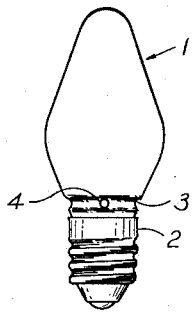


Fig. 2

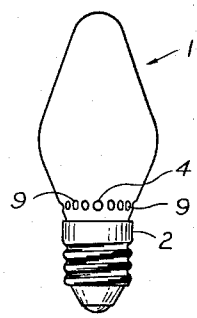


Fig. 3

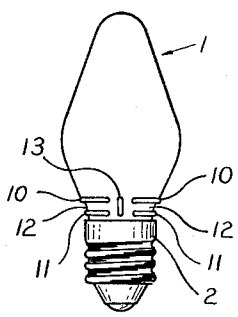


Fig. 4

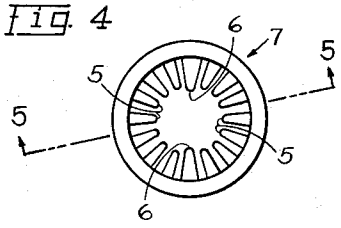


Fig. 5

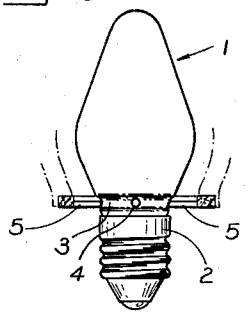


Fig. 6

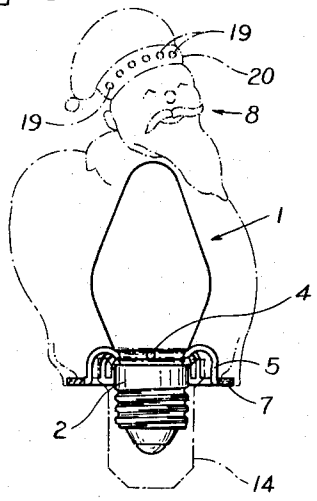
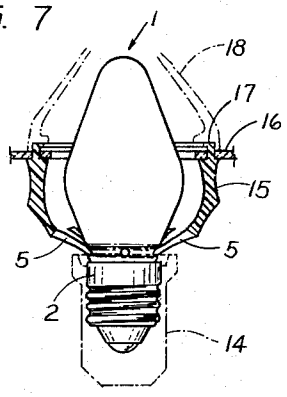


Fig. 7



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INCANDESCENT LAMP AND ATTACHMENTS THEREFOR

Robert T. Dorsey, South Euclid, Ohio, assignor to General Electric Company, a corporation of New York; patent dedicated to the Public insofar as it relates to lamps and lamp parts to the extent stated in document recorded in the United States Patent Office, January 4, 1954, Liber U–238, page 394

Application December 26, 1952, Serial No. 328,078

8 Claims. (Cl. 240—10)

The present invention relates to incandescent lamps comprising a metal base and a glass bulb and to attachments, such as ornaments, for the lamps. The principal object of the invention is to provide a simple means for firmly mounting attachments, such as ornaments of various shapes, on Christmas tree lamps, for example, which provides for ventilation of the lamp and which eliminates the usual cementing of the attachment to any part of the lamp. Still further objects and advantages of the invention will appear from the following detailed description of species thereof and from the accompanying drawing in which:

Fig. 1 is an elevational view of an incandescent lamp made in accordance with the invention.

Fig. 2 is a similar view of another lamp embodying the invention.

Fig. 3 is a similar view of still another lamp embodying the invention.

Fig. 4 is a top plan view of a collar for attachment to lamps of the type shown in Figs. 1 to 3.

Fig. 5 is an elevational view of the lamp shown in Fig. 1 with the collar shown in Fig. 4 mounted thereon and shown in section taken along the line 5—5 of Fig. 4.

Fig. 6 is a similar view of the lamp shown in Fig. 1 with another collar embodying the invention mounted thereon and shown in section, a light transmitting ornament indicated in broken lines and enclosing the lamp and mounted on the collar and a socket for the lamp base also shown in broken lines.

Fig. 7 is a similar view of an assembly of the lamp of Fig. 1, socket, ornament and another species of collar mounted on and partially enclosing the bulb of the lamp.

Referring to the drawing the lamps illustrated each comprises a light transmitting glass bulb 1 of generally conventional shape used for Christmas tree lighting. The bulb 1 is ovoidal in shape and the screw base 2 of the lamp is cemented to the larger end of the bulb 1 in the usual manner. Lamps having this structure have been sold under the commercial designation of the C7½ lamp for many years and have been used extensively in strings for Christmas tree decoration.

In accordance with the present invention the portion of the glass lamp bulb 1 adjacent the base 2, that is, the larger end of the bulb, is provided, in the embodiment shown in Fig. 1, with an annular indentation 3 and at least one, but preferably two individual and diametrically opposed deeper indentations 4 in the annular indentation 3. These indentations 3 and 4 provide a seat for the ends of the shorter fingers 5 and the longer fingers 6, respectively, of the inwardly extending spring fingers of the collar 7 shown in Fig. 4 and support the collar, together with its attached ornament 8 (Fig. 6) against axial or rotational displacement relative to the lamp.

The indentations 3 and 4 may be and preferably are molded in the glass bulb 1 at the time the seal between the glass bulb and the current inlead wires of the lamp is made and molded to a size and shape suitable for

fitting into the metal base 2 of the lamp. Thus, the annular indentations 3 and 4 may be provided in the glass bulb 1 at the cost merely of substituting new molds, to shape the usual seal and the indents 3 and 4 at the same time, for the present molds used for shaping the seal only. In view of the high volume production of such lamp bulbs this cost per lamp is nominal.

The indentations in the glass bulb 1 of the lamp shown in Fig. 2 may be similarly formed at the time the seal is molded. In Fig. 2 the indents 9 are individual, spaced depressions positioned in a ring around the base end of the bulb and spaced from the base 2. The depressions 9 have the same depth as the annular indentation 3 of the bulb 1 of Fig. 1. The spring fingers of the collar 7 shown in Fig. 4 may then be made equal to each other in length to engage by seating in the depressions 9 and thus support the collar 7 and its attached ornament on the bulb 1.

Instead of indentations molded into the wall of the bulb projections may be similarly formed thereon as shown in Fig. 3 in which each pair of annular projections 10 and 11 extend only partially around the bulb 1 and are spaced apart axially of the bulb to define a groove 12 therebetween. A pair of linear projections 13 extend axially of the bulb 1 and are positioned between the terminations of the projections 10 and 11. The fingers of the collar 7 may be suitably modified in length and spacing to fit into the groove 12 and engage protuberances 13 to prevent longitudinal and rotational displacements of the collar 7 with respect to the lamp bulb 1.

Other suitable forms of indents and protuberances and combinations thereof may be used by those skilled in the art to provide a seat on the bulb 1 for the ends of the fingers of the collar 7 and, of course, the shape and size of the collar 7 may be modified to engage the shaped base end of the bulb 1 and support various sizes and shapes of ornaments.

In Fig. 6, for example, the fingers 5 and 6 of the collar 7 shown in Fig. 4 are curved so that the solid ring portion of the collar 7 is around the bulb end of the base 2 and the ornament 8 attached to the collar 7 thus conceals the part of the lamp exposed from the socket 14.

In Fig. 7 the solid ring of the collar is cylindrical as shown at 15 and partially houses the lamp bulb 1 with its fingers sloping downwardly to engage the indentations 3 and 4 in the bulb. The cylindrical part 15 of the collar terminates in the region of maximum brightness of the lamp. An annular disc 16 of light transmitting material is attached to the end portion of the collar by spaced lugs 17 in position to receive light from the lamp through its inner edge. A conical shaped light transmitting ornamental part 18 is attached to the disc 16 to complete the enclosure for the lamp bulb 1. The disc 16 and the ornamental part 18 may have different light transmitting characteristics to provide color contrasts therebetween.

The ornaments, such as the ornament 8 of Fig. 6, may be secured directly to the collar 7 in any conventional manner, as by being cemented or clamped thereto, or the collar may constitute an integral part of the ornament.

An important feature of the combination of the lamp, ornament and collar of the present invention is the ventilation provided for the enclosed lamp by the collar and the ornament. The space between the fingers 5 and 6 of the collar constitutes air passages and the ornament is provided with openings, such as the holes 19 in the cap band 20 in the ornament 8 shown in Fig. 6. Air may flow through these spaces and openings and over the enclosed parts of the lamp to prevent overheating thereof which would shorten the useful life of the lamp.

The fingers of the collar 7 are made thin so as to be resilient and the collar is made of electrically insulating

material, such as a temperature resistant impregnated press-board or an organic plastic. A suitable plastic is a condensation product of phenol and formaldehyde known as Bakelite.

The collar is slipped over the base end of the lamp for mounting the collar and its attached ornament on the bulb **1**. After the spring fingers of the collar have engaged the indents **3**, **4** and **9** or the groove **12** defined by the protuberances **10** and **11** the ornament, such as the ornament **8** of Fig. 6, may be attached, as by cementing it to the solid ring portion of the collar. The opening in the ornament is, of course, larger in diameter than the maximum diameter of the bulb **1** so that the ornament may be slipped over the said bulb **1** for attaching it to the ring portion of the collar **7** which is also of larger diameter than the bulb **1** so as to engage the aforesaid opening in the ornament.

What I claim as new and desire to secure by Letters Patent of the United States is:

1. An illuminated unit comprising in combination, an incandescent lamp having a glass bulb of substantially ovoidal shape and a base secured to the larger end of said bulb, a body of light transmitting material shaped to receive the lamp bulb and a collar supporting said body around said lamp bulb, the wall of the larger end portion of said bulb being irregular, the irregular portion of said wall extending circumferentially of the bulb at a region closely adjacent the said base thereon and comprising a recess which is annularly discontinuous around the bulb to provide transversely facing locking shoulders thereon, said irregular wall portion providing a seat for said collar around the said end portion of the bulb, said collar having spaced spring fingers extending inwardly from a solid ring and engaging the irregular wall portion of the bulb and within the said recess thereof to lock the collar in place on the bulb against both rotative and axial movement relative thereto, said body being attached to the solid ring part of said collar whereby said light transmitting body is supported by said lamp bulb.

2. An illuminated decorative unit comprising in combination, an incandescent lamp having a glass bulb of substantially ovoidal shape and a base secured to the larger end of said bulb, an ornament of light transmitting material shaped to receive the lamp bulb and a collar supporting said ornament around said lamp bulb, the wall of the larger end portion of said bulb being irregular, the irregular portion of said wall extending circumferentially of the bulb at a region closely adjacent the said base thereon and comprising a recess which is annularly discontinuous around the bulb to provide transversely facing locking shoulders thereon, said irregular wall portion providing a seat for said collar around the said end portion of the bulb, said collar having spaced spring fingers extending inwardly from a solid ring and engaging the irregular wall portion of the bulb and within the said recess thereof to lock the collar in place on the bulb against both rotative and axial movement relative thereto, said ornament being attached to the solid ring part of said collar whereby said ornament is supported by said lamp bulb, said ornament having openings spaced from the part thereof secured to said collar, said openings providing with the spaces between the fingers of said collar passages for the flow of air through said ornament for cooling said lamp bulb.

3. An illuminated decorative unit comprising in combination, an incandescent lamp having a glass bulb of substantially ovoidal shape and a base secured to the larger end of said bulb, an ornament of light transmitting material shaped to receive the lamp bulb and a collar supporting said ornament around said lamp bulb, the wall of the larger end portion of said bulb having irregularities therein arranged circumferentially of the bulb at a region closely adjacent the said base thereon and constituted by indented portions which are annularly discontinuous around the bulb to provide transversely facing locking shoulders thereon, said indented portions providing a seat for said collar around the said end portion of the bulb, said collar having spaced spring fingers extending inwardly from a solid ring and engaging the indented wall portions of the bulb and the said locking shoulders to lock the collar in place on the bulb against both rotative and axial movement relative thereto, said ornament being attached to the solid ring part of said collar whereby said ornament is supported by said lamp bulb.

4. An illuminated decorative unit according to claim 1 characterized in that the said circumferentially extending irregular portion of the wall of the larger end portion of the bulb has an annular indentation and a deeper indentation in said annular indentation and that the fingers of said collar fit into said annular indentation with one of said fingers engaging said deeper indentation to support the ornament in fixed axial and rotational position with respect to the lamp bulb.

5. An illuminated decorative unit according to claim 1 characterized in that the said circumferentially extending irregular portion of the wall of the larger end portion of the bulb has a multiplicity of individual depressions positioned in a ring around the bulb and spaced from the base and that the spring fingers of the collar correspond in number to the number of said depressions and engage the depressions to support the ornament in fixed axial and rotational position with respect to the lamp bulb.

6. An illuminated decorative unit according to claim 1 characterized in that the said circumferentially extending irregular portion of the wall of the larger end portion of the bulb has annular projections spaced apart axially of the bulb to define an annular groove around the said end portion of the bulb and that the spring fingers of said collar engage the sides of the said groove to support the said ornament on said bulb.

7. An incandescent lamp comprising a glass bulb of substantially ovoidal shape and a metal base attached to the larger end of said bulb, the wall of the larger end of said bulb being irregular, the irregular portion of said wall extending circumferentially of the bulb at a region closely adjacent the said base thereon and comprising a recess which is annularly discontinuous around the bulb to provide transversely facing locking shoulders thereon, said irregular wall portion providing a seat around the said end of the bulb for supporting decorative devices around said bulb.

8. An incandescent lamp comprising a glass bulb and a metal base attached thereto, the wall of said bulb adjacent said base being irregular, the irregular portion of said bulb wall extending circumferentially of the bulb at a region closely adjacent the said base thereon and comprising a recess which is annularly discontinuous around the bulb to provide transversely facing locking shoulders thereon, said irregular wall portion providing an attachment supporting seat around the bulb.

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