

[54] LAMP SOCKET MOUNT

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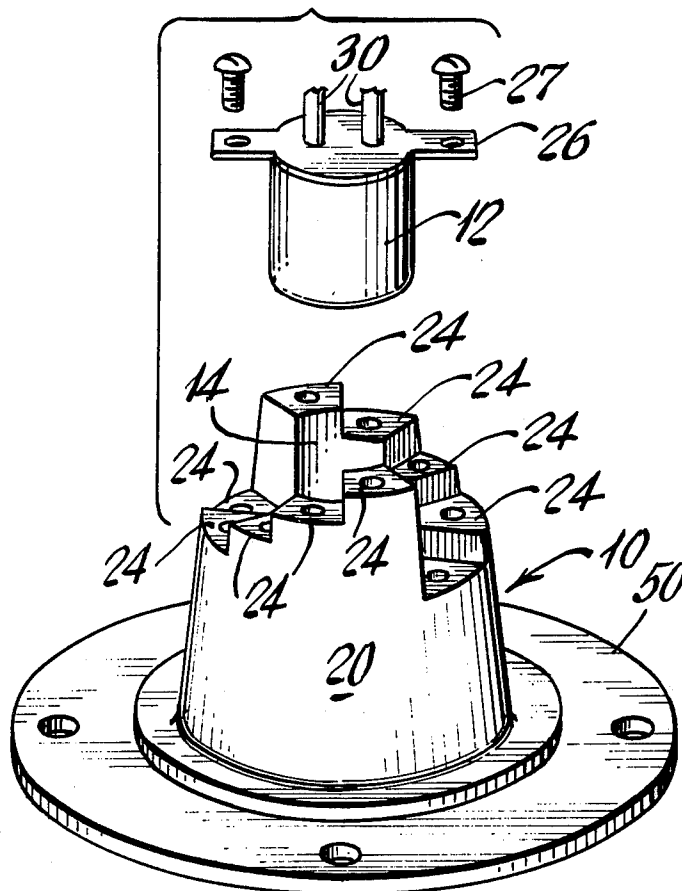
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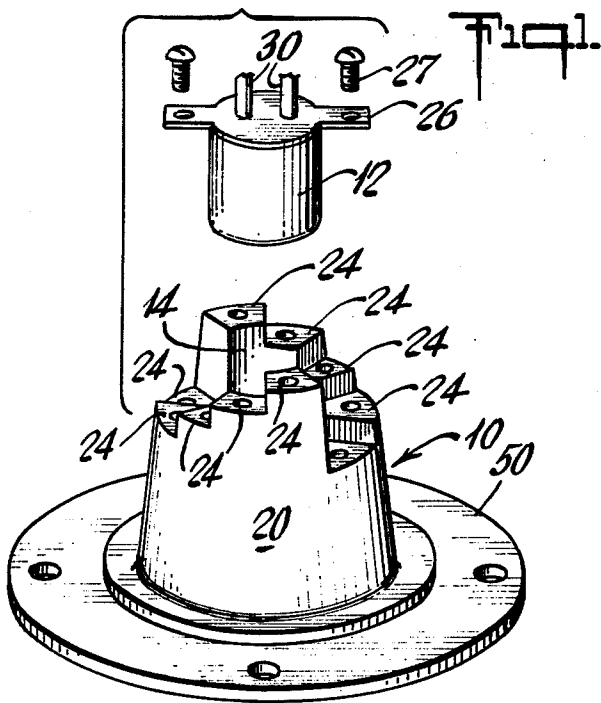
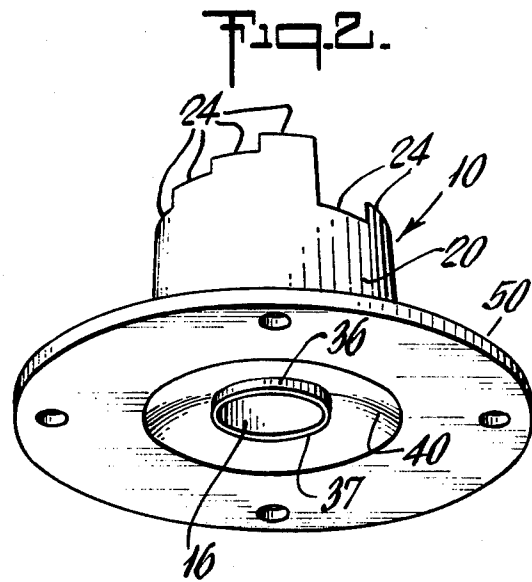
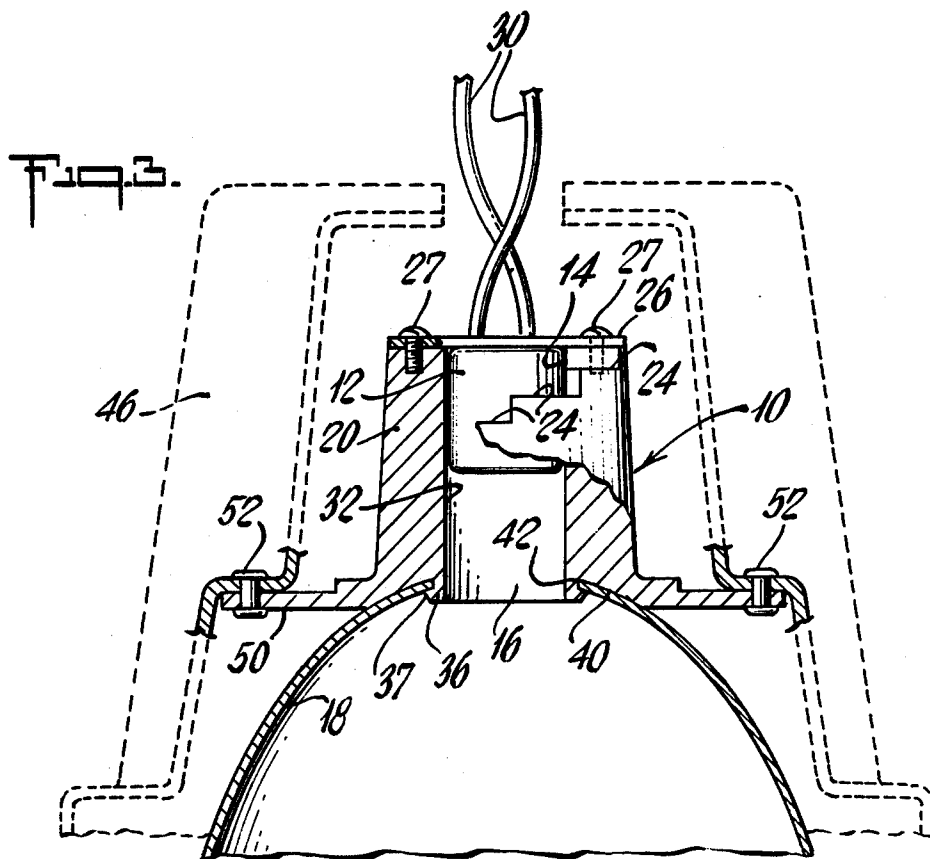
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ABSTRACT

A double open-ended hollow lamp socket mount adapted to receive a lamp socket at one end and fixedly position it at selected distances from the other end of the mount so that a lamp inserted in the socket can be axially adjusted relative to a reflector adjoining the other end of said mount.

7 Claims, 3 Drawing Figures





LAMP SOCKET MOUNT

This invention relates to an adjustable lamp socket mount for receiving a lamp socket at one end and supporting a reflector at the other in such manner that a lamp inserted in the socket can be adjusted relative to the reflector. The mount also serves as a heat-sink to remove and dissipate heat produced by the lamp.

In the design of lighting fixtures, and specifically recessed down lights, it is important that the light source be precisely positioned relative to the associated reflector and that the heat generated be dissipated effectively to prevent damage to the socket and lamp base. Difficulty has been experienced in achieving this combination of properties in an adjustable device.

It is therefore a general object of this invention to provide a tubular lamp socket mount having means on one end for axially adjusting the socket relative to the mount whereby a lamp carried by the socket and extending from the other end can be adjusted relative to the other end of the mount.

It is another object of this invention to provide for axial adjustment of the lamp socket and a lamp mounted therein relative to the reflector positioned at the opposite end of the mount.

A still further object is to provide a mount suitable for absorbing and dissipating the heat produced by a lamp in engagement with the lamp socket as well as that induced within a reflector secured at the other end of the socket mount.

These and other objects and advantages of the invention will become more apparent from the following description and accompanying drawings forming part of this application.

In the drawings:

FIG. 1 is a perspective view from above of a lamp socket mount in accordance with the present invention, and a lamp socket positioned adjacent thereto.

FIG. 2 is a perspective view from below of the lamp socket mount of FIG. 1.

FIG. 3 is a longitudinal sectional view of the lamp socket mount taken along the lines 2—2 of FIG. 1 and, showing the mount in an illustrative assembly with a reflector, lamp socket and associated housing.

According to this invention and referring more particularly to the accompanying drawings, there is provided a double open-ended hollow lamp socket mount 10 adapted to receive a lamp socket 12 at one end 14 and fixedly position the socket 12 within said one end 14 at variable selected distances from the other end 16 of the mount 10 so that a lamp (not shown) engaging the socket 12 can be axially adjusted relative to the opposite end 16 of the mount 10 and a reflector 18 adjoining said opposite end.

The lamp socket mount 10 includes a generally tubular body 20. The cross-sectional conformation of the body 20 may vary. A generally cylindrical construction is generally preferred for convenience in manipulation of the mount 10, however. The body 20 is formed at one end to provide the means for affixing the lamp socket 12 at selected distances from the opposite end 16 of the mount 10 and the adjoining reflector 18. The foregoing means constitute a plurality of stepped seats 24 positioned at varying distances outwardly from said one end and paralleling substantially the axis of the body 20. These seats 24 are adapted to support the laterally disposed lugs 26 of the lamp socket 12 which are

secured to selected pairs of seats by means of screws 27, or other conventional removable, means of attachment.

In the preferred embodiment shown in the drawings, the seats 24 are so disposed that each pair of seats positioned opposite one another about the periphery of said one end 14 lie in a common plane perpendicular to the longitudinal axis of the body 20 and each pair of seats is axially displaced from the adjoining seats. In this way the socket is received within the opening in said one end in axial alignment with the opposite or other end 16 of the socket mount 10 and of any adjoining reflector 18. It will be obvious that the foregoing pairs of seats 24 need not be disposed in sequential, step-wise relationship, although it is preferred to do so for convenient adjustment by an operator. It will be evident, too, that while pairs of seats 24 are generally preferred to support conventional lamp sockets 12 within the socket mount 10, increased numbers of coplanar seats such as three, four or more may be utilized where desired.

The socket 12, extending forwardly of the lugs 26, fits preferably in snug engagement within the said one end 14 of the body 20. The end 14 is of such dimensions as to accommodate any one of a variety of standard electric lamps (not shown) mounted in the forward end of the socket 12. The lamp socket 12 includes a cable 30 for connection to a suitable source of electric power (not shown).

The reflector 18 adjoining the said other end 16 of the body 20 is preferably secured to said end 16 about the opening defined therein by means of a projecting annular lip 36 extending into the recess 40, preferably curved or bevelled, disposed about the said opening 36.

The lip 36 is sufficiently malleable so that its outer margin 37 may be swaged laterally to overlies the collar 42 defined about the opening of a conventional reflector 22. The outer surface of the reflector, adjacent the collar, is also retained against the bevelled surface of the recess 40. Means are provided for securing the socket mount 10, and any lamp socket 12, any lamp engaged therein, and any reflector 18 mounted in the lamp socket 12 to the housing or shield 46. To this end there is furnished in the preferred embodiment at the level of the foregoing recess 40 and extending laterally or transversely outwardly from the longitudinal axis of the socket mount 10 a circumferential flange 50, which is adapted about its outer margin for attachment to the housing 46, by screws 52 or other fastening means, as for example, where the combination of socket mount 10, socket 12 and lamp, and a reflector 18 constitute a down light assembly positioned in a recess in a ceiling.

The body 20 of the mount 10 and the annular flange 50 are preferably thickened to provide effective heat absorption by the socket mount 10 from the critical zones of heat evolved about the lamp socket 12 and the upper portion of the reflector 18 braced against the wall of the bevelled recess 40, where necessary. The snug engagement of the upper portion of the reflector 18 within the recess 40, and that of the lamp socket 12 within the opposite end of the body 14 is designed to facilitate this absorption of heat energy and dissipation through the flange 50 into the shield 46 at the point of their mutual engagement described above.

The socket mount 10 may be made from a readily available variety of materials having relatively high heat conductivities such as metals, and preferably, die-

cast aluminum. It will be evident, in any event, that the terms and expressions which have been employed are used as terms of description and not of limitation. There is no intention in the use of these terms and expressions of excluding equivalents of the features shown and described, or portions thereof, and it is recognized that various modifications are possible within the scope of the invention claimed.

What is claimed is:

1. A lamp socket mount comprising a body having an opening extending therethrough, one end of said body being recessed to form a plurality of pairs of axially spaced stepped seats, a lamp socket disposed within and slidably engaging the opening in said body, said socket having a base with lugs extending outwardly therefrom for engaging selected pairs of said seats, said socket being adapted to carry a lamp extending from the other end of said body, means on the other end of said body carrying a reflector having a central opening and extending outwardly therefrom in surrounding relationship to said lamp and means engaging said lugs for securing them to selected pairs of seats to adjustably position said lamp relative to said reflector, said means on the other end of said body comprising an annular lip surrounding the opening in said body, said lip extending through the opening in said reflector and swaged outwardly to secure the reflector in position, a curved concave recess in said body surrounding said lip, said recess receiving said reflector in snug heat engaging relationship therewith, said body including heat conductive means on the other end thereof the last said means carrying a shield disposed about said socket mount and accommodating the lamp and reflector carried by said socket mount.

2. A lamp socket mount according to claim 1 wherein said means for securing of said socket mount to said shield comprises a laterally disposed flange positioned

about the outer periphery of said body adjoining said other end of said body.

3. A lamp socket mount according to claim 2 wherein said mount and said flange are of such thickness as to be capable of absorption of heat imparted to said light socket and reflector and transfer a portion of said heat to said shield.

4. A lamp socket mount comprising a body having an opening extending therethrough, one end of said body being recessed to form a plurality of pairs of axially spaced stepped seats, a lamp socket disposed within and slidably engaging the opening in said body, said socket having a base with lugs extending outwardly, therefrom for engaging selected pairs of stepped seats, said socket being adapted to carry a lamp extending from the other end of said body, means on the other end of said body carrying a reflector having a central opening and extending outwardly therefrom in surrounding relationship to said lamp and means engaging said lugs for securing them to selected pairs of seats to adjustably position said lamp relative to said reflector.

5. A lamp socket mount according to claim 4 including a reflector and means for securing said reflector to said other end of said body and in axial alignment with said lamp socket.

6. A lamp socket mount according to claim 5 wherein said means for securing said reflector comprises an annular lip positioned about the periphery of the opening in said other end of said body, said lip extending through an opening in said reflector and swaged outwardly to secure the reflector to said mount.

7. A lamp socket mount according to claim 6 wherein the means for securing said reflector further includes a curved recess bordering said lip and receiving in snug engagement therewith that portion of the reflector surface adjacent the opening therein.

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