

PATENT SPECIFICATION

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(54) LAMP HOLDER

(71) We, ROTAFLEX (GREAT BRITAIN) LIMITED a British Company of Rotaflex House, 241 City Road, London EC1P 1ET do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

This invention relates to lamp holders.
Lamp holders for use in light fittings such as spotlights and the like, conventionally comprise an unitary insulated body, commonly of ceramic material, in which are mounted the essential elements of the holder, that is a mounting boss to receive the base (or cap) of a lamp, and the electrical contacts which engage the base of the lamp. Such lampholders are then assembled with a support body, such as a spotlight or floodlight housing, which is in turn mounted by an external support.

It is frequently desired to mount a completed fitting of this general form for rotation about one or more axes for directing light from the fitting in desired directions.

The present invention provides a lamp holder which is particularly well suited to compact and simple construction, in which the lamp holder requires no external housing and is directly mounted for rotational movement about one or two axes.

In a presently preferred constructional form of the invention a lamp holder comprises an insulated casing formed in two halves between and by which are located and clamped a mounting socket to receive the base (or cap) of a lamp, a pair of contacts and a mounting stirrup which cooperates with the casing to permit pivotal movement of the casing relative to the stirrup about an axis transverse (and preferably perpendicular) to the axis of the mounting socket.

This form of lampholder is described in detail below by way of example, with reference to the accompanying drawings in which:—

Figure 1 is an exploded perspective view of the lampholder;

Figure 2 is a plan view of the lampholder,

with one casing half and some details omitted for clarity.

Figure 3 is a side elevation of the lampholder;

The lampholder shown in the drawings comprises a pair of insulated casing halves 1,2 a pair of securing clips 3, a mounting socket 4, a pair of contacts 5, a mounting stirrup 6 with an end cap 7, circlip 8, a spring washer 9 and a track adaptor 10 60 having a mounting boss 11.

The two casing halves 1,2 are identically formed of moulded plastics, each with a main side wall 12 and a peripheral wall 13 formed at one end of the casing half with a semi-circular recess 14 to fit around the neck of a lamp.

The casing halves are each formed internally with a number of slots and pockets to receive and locate other components. Slots 15 locate edges of the socket 4, which is formed of sheet material with an integral screw threaded socket portion 16. Pockets 17 receive the securing clips 3, which are of springy sheet material formed with tangs to engage securely in the pockets.

The contacts 5 each have contact portions positioned behind the socket 4, intermediate portions engaged in slots 18 and terminal connector portions 19 located in pockets 20.

The mounting stirrup 6 comprises a hollow casing the forward end wall of which is of concave part-cylindrical form to match the profile of the casing the rear portion thereof, and is formed with a T-section flange 21 interrupted between its ends to either side of a slot 22 through the concave end wall. The mounting portion of the stirrup thus consists effectively of a circularly arcuate track of double channel, or H cross-section for receiving and guiding the semi-circular portions of the respective walls 13 of the casing halves.

The stirrup also includes the end cap 7 having a part tubular boss 24 with hooks 25 which make snap fitting engagement with recesses 26 of the main casing of the stirrup when the cap is assembled with the casing. The end cap 7 also has a counterbored hole

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27 to receive the mounting boss 11 of the adaptor.

The parts are assembled by locating the components 3, 4 and 5 in their respective slots and pockets in one casing half, the connector portions 19 of the contacts first having the respective conductors of a flex secured to them. The flex is fed through the stirrup slot 22 and the arcuate track portion of the stirrup is engaged over the arcuate end wall 13. The second casing half is then brought down and closed over the various components. The clips 3 effect a permanent retention of the parts. The raised internal portions of the casing halves define the joint plane in the assembled casing and thus set the desired spacing of the edges of the walls 13 to suit the mounting portion of the stirrup.

The spring washer 9 and stirrup end cap 7 are threaded over the mounting boss 11 and secured to it by the circlip 8, which retains the end cap to the boss axially but permits its rotation about the axis of the boss.

The flex is taken through the boss and connected to the terminals of the track adaptor 10, which may be of known form in itself for use with a continuous outlet electrical supply track.

The lighting fitting is now complete and ready to receive a lamp whose base is screwed into the mounting socket 4 and engages the contacts 5. The casing is rotatable, relative to the mounting stirrup about a transverse axis perpendicular to the axes of the lamp and the stirrup is in turn rotatable about the mounting boss 11, whose axis is perpendicular to the said transverse axis, so that the lamp holder is rotatable about two mutually transverse axes relative to the adaptor.

Of course, it is not essential to employ a track adaptor as the external support, but its use does provide a particularly convenient combination.

The casing of the lampholder, will of course, need to have resistance to high temperatures in use of the fitting and may if desired or found necessary, be formed with cooling passages to permit a flow of air over the base of the lamp. The lampholder as shown is, of course, designed to receive a standard lamp having a screw base, but by altering the design of the mounting socket, the lampholder could receive lamps having bayonet fitting bases push-in caps.

In Figure 2, a lamp L is shown engaged in the lampholder, trapping a loose, external cowl C, which could be replaced by a reflector or other accessory. The cowl, but not the lamp is also seen in Figure 3.

The lampholder casing may as indicated be of high temperature resistant moulded

plastics, or for example of ceramic material.

WHAT WE CLAIM IS:—

1. A lampholder comprising an insulated casing formed in two halves between and by which are located and clamped a mounting socket to receive the base (or cap) of a lamp, a pair of contacts and a mounting stirrup which co-operates with the casing to permit pivotal movement of the casing relative to the stirrup about an axis transverse (and preferably perpendicular) to the axis of the mounting socket.

2. A lampholder according to claim 1, wherein the casing halves define a circularly arcuate portion which co-operates with the stirrup to permit a guide part of the stirrup to slide around the said portion.

3. A lampholder according to claim 2, wherein the guide part of the stirrup is interrupted between its ends to provide a gap through which a conductor cable is taken through the stirrup.

4. A lampholder according to claim 2 or 3, in which the said guide part is of H-section, the co-operating portions of the casing halves comprising flanges engaged in opposite sides of the section.

5. A lampholder according to claim 1, 2, 3 or 4 wherein the two halves of the casing are identically formed and provide recesses in which the mounting plate and contacts are trapped.

6. A lampholder according to any preceding claim, wherein the stirrup is formed, externally of the casing, with a swivel mounting means by which the stirrup and casing can be supported for rotation about the axis of the swivel mounting means which axis is transverse to the axis of relative movement of the casing and stirrup.

7. A lamp holder according to claim 5, wherein the swivel mounting means comprises a circular hole formed in the stirrup, to receive a mounting boss of an external support for the lampholder.

8. A lampholder according to claim 7, in combination with an external support having a tubular mounting boss engaged in the said circular hole, a conductor cable connected to the contact being taken out of the lamp holder through the tubular boss.

9. A lampholder according to claim 7 or 8, wherein the external support comprises an adaptor for use with a continuous outlet

electrical supply track and having track conductor engaging contacts to which the conductor cable of the lampholder is connected.

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10. A lampholder substantially as herein described with reference to the accompanying drawings.

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COMPLETE SPECIFICATION

2 SHEETS

This drawing is a reproduction of
the Original on a reduced scale
Sheet 1

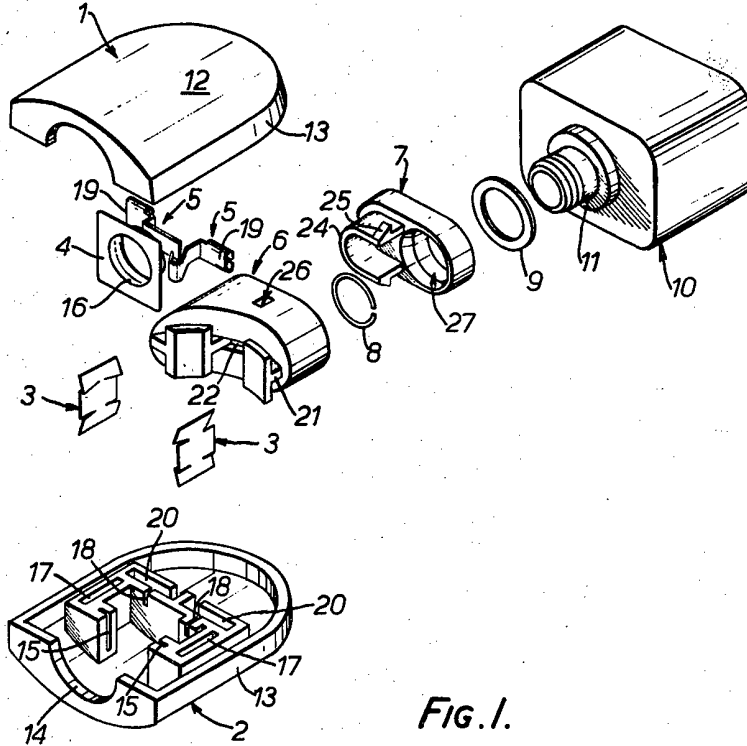


FIG. 1.

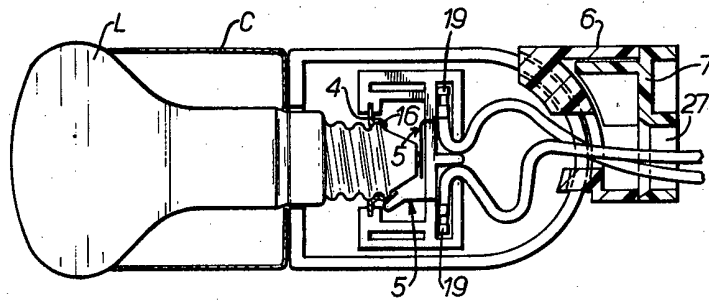


FIG. 2.

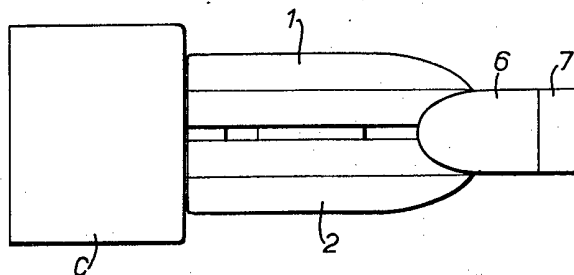


FIG. 3.