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Pitacco

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[54] **LAMP HOLDER**

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[51] **Int. Cl.**..... **H01r 3/06**

[58] **Field of Search**..... 339/14 R, 14 P, 14 L, 339/14 RP, 217 R, 217 S, 217 PS, 91 L, 94 L, 97 L, 99 L, 108 L, 125 L, 176 L, 177 L, 188 R, 188 T, 188 C, 191 L, 189 L

[56] **References Cited**

UNITED STATES PATENTS

3,601,778	8/1971	Hollett	339/188
2,982,939	5/1961	Kirk	339/128
3,668,603	6/1972	Burgess et al.	339/14 R
3,383,637	5/1968	Delano	339/14 R

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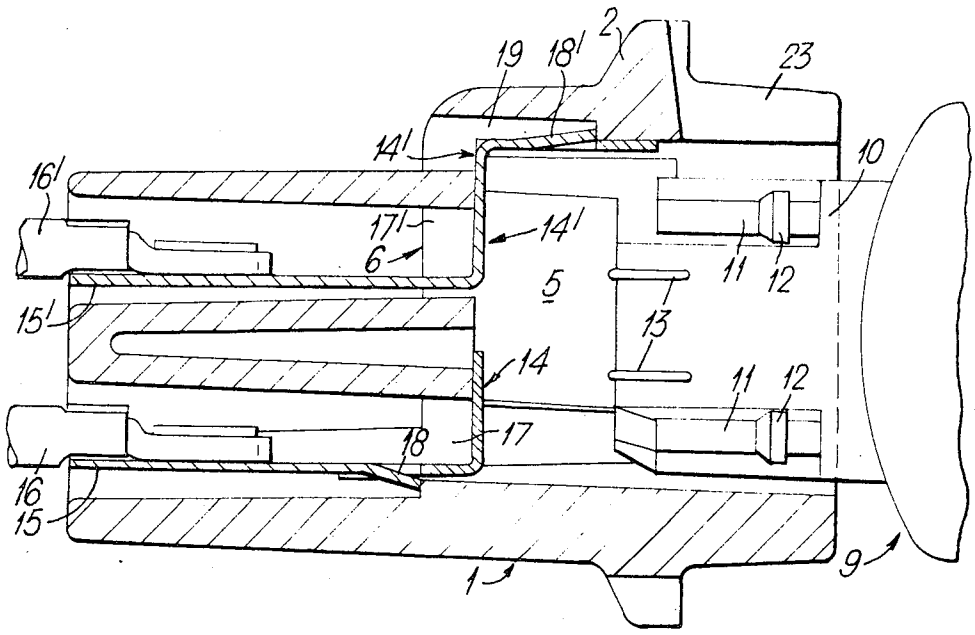
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[57] **ABSTRACT**

A lamp holder having a molded body of plastic material formed with an axial blind cavity having a shaped profile and arranged to be connected to the profile of the glass base of a lamp. The bottom of the holder has two electric contacts snap fixed and provided with deformable sheaths arranged to engage two insulated wires. The contacts also engage the base of the lamp holder and permit the electrical connection with the insulated wires of the same base.

6 Claims, 3 Drawing Figures



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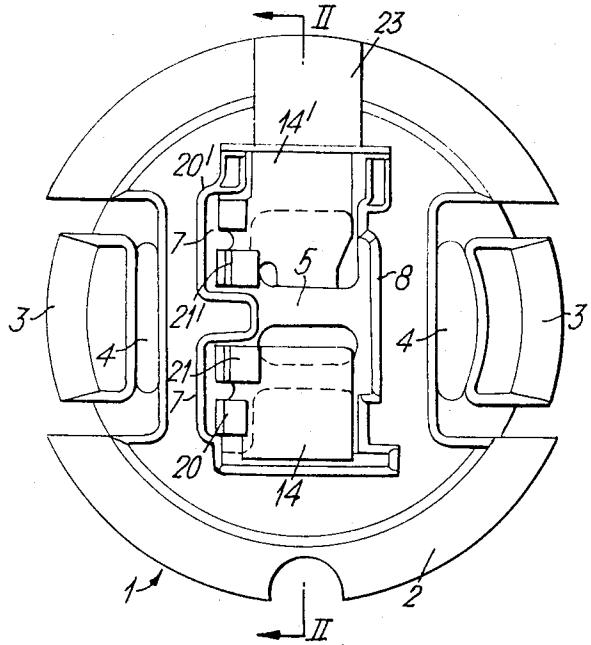


Fig. 1.

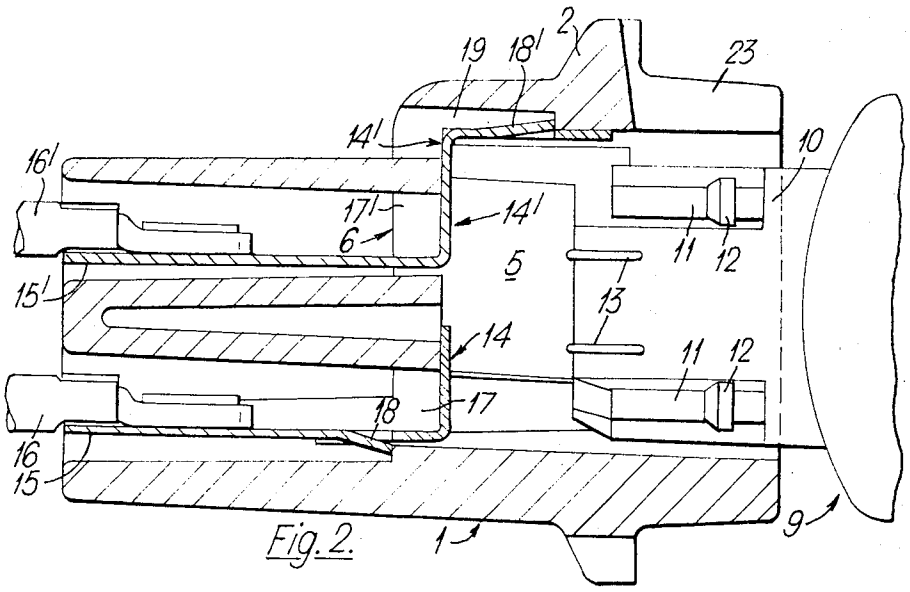


Fig. 2.

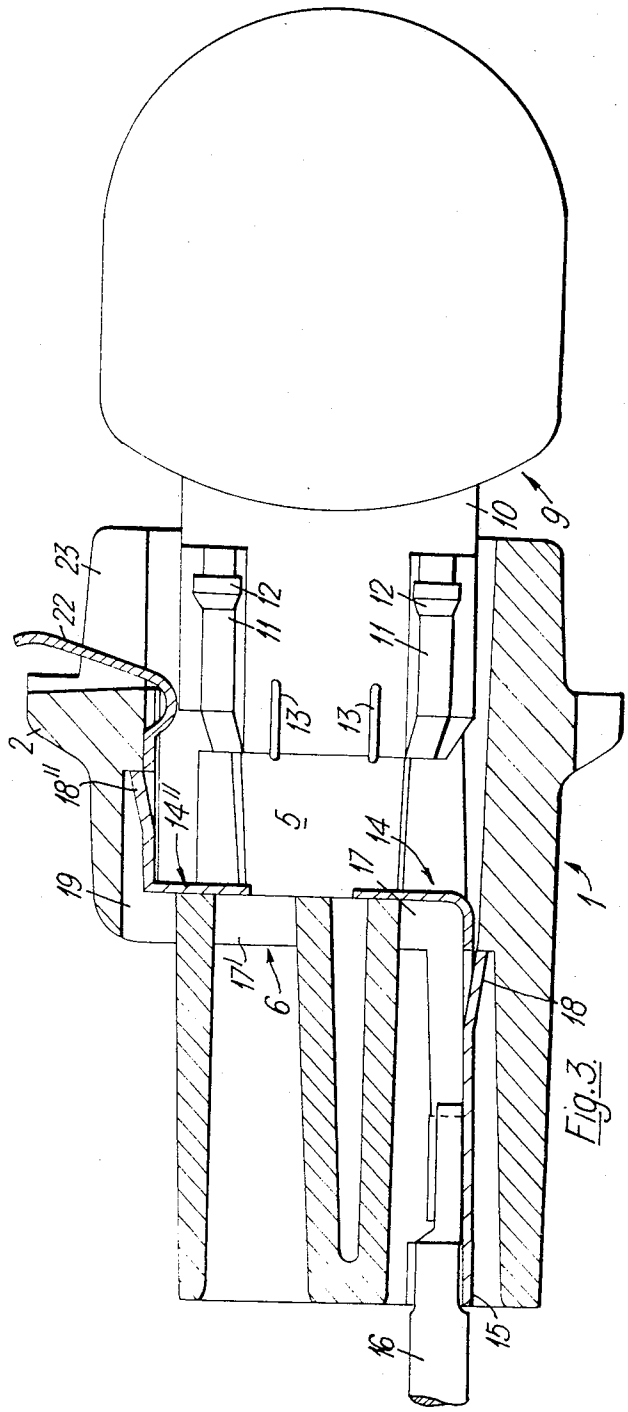


Fig.3

LAMP HOLDER

BACKGROUND OF THE INVENTION

The present invention relates to lamp holders, and more particularly to lamp holders for lamps having a glass base.

The lamps having a glass base, also called all-glass lamps are generally small in size and used for lighting dashboard instruments of motorvehicles, thus the lamp holders to which such lamps are applied are shaped in such a manner so that to receive the glass bases thereof, to engage therwith and to establish the electrical connection with the bare wires projecting from such bases.

Due to the small size of the lamps no mechanical problems arose up to now for holding the lamps themselves, it being sufficient that there was an engagement with the spring straps acting as electric contacts at the same time.

When the all-glass lamps are increased in size to be used as lighting lamps in signaling headlights, it is necessary to re-shape the lamp holders on which the same are received and adapt the holding devices to the size and weight of the lamps themselves.

SUMMARY OF THE INVENTION

An object of the present invention is providing a lamp holder in which all-glass lamps of large size can be mounted, such lamp holder assuring an effective and long lasting holding action on the lamp and providing a good connection for the electric contacts.

Another object of the invention is to provide a lamp holder of the above-specified type capable of being used for two different types of mounting, one of which the lamp is supplied with current by two different insulated cables, and in the other the lamp is supplied with current by an insulated cable and a ground contact.

Accordingly, the lamp holder comprises a molded body of plastic material formed with an axial blind cavity having a shaped profile and arranged to be connected to the profile of the glass base of a lamp, and on the bottom of which two electric contacts are snap fixed and provided with deformable sheaths anchored to two different cables and arranged to engage with the base of the lamp holder to permit the electrical connection with the insulated wires of the same base, the said body being also formed with a side notch designed to permit the alternate mounting of a different type of electric contact for the ground terminal in place of one of the contacts connected to insulated cables.

BRIEF DESCRIPTION OF THE DRAWINGS

Further characteristics and advantages of the invention will appear from the following description made in connection with the accompanying drawings, in which:

FIG. 1 is a top view of a lamp holder according to the invention;

FIG. 2 is an axial section view thereof taken along lines II—II in FIG. 1; and

FIG. 3 is an axial section view similar to FIG. 2 illustrating a lamp holder set for a different kind of mounting.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring to the drawings, the main body 1 of a lamp holder is indicated which consists of molded insulated plastic material, such body being substantially tubular

in shape and provided with an outer annular rib 2 which is cut off at two resilient spring teeth 3, adjacent to two axial blind recesses 4 and capable of permitting the snap mounting of the lamp holder on a fixed support. The lamp holder has an axial inner recess or cavity 5, which is limited at the bottom by a transverse wall 6. Such recess when seen from above is substantially rectangular in shape and on one of the major side walls thereof is provided with two parallel recesses 7, while on the opposite wall only one recess 8 is formed. The said configuration of the recess or cavity 5 permits a fit engagement with the base 10 of an all-glass lamp 9, such base being provided on a face thereof with a boss or projection arranged to engage with the recess 8 in one side wall and on the other face with two parallel bosses 11 designed to engage with the recesses 7 of the other side wall; the bosses or projections 11 being formed with transverse holding notches 12; two bare wires 13 being arranged between the two bosses 11 and electrically connected with the inner filament of the lamp.

On the bottom of the cavity 5 two electric contacts 14, 14' are engaged which are provided with axial extensions at the end of which deformable sheaths 15, 15' are arranged in order to engage with two electrical insulated cables 16, 16' thus making contact with the wires thereof. The said contacts and the related cables during the mounting are caused to pass through two openings 17, 17' formed in the transverse wall 6; the contacts 14, 14' are anchored to the lamp holder by snap engaging with two of the spring teeth 18, 18' thereof, respectively, in one of the openings 17 and in an axial cavity 19 provided in the body 1.

In the same opening 19 a spring tooth 18'' can be engaged which is of a different type from the electric contact 14' provided with a spring strap 22 folded outwardly and in engagement relationship with a slit 23 formed in the annular edge of the body 1. In any case each electrical contact 14, 14', 14'' is provided with two parallel straps 20, 21, 20', 21' which axially extends from the wall 6 and are received in pairs by the two recesses 7 in the cavity 5. One of such straps 20, 20' is provided with a shaped end portion which engages with the notch 12 formed in the corresponding rib 11 of the lamp base, while the other strap has a shaped end portion which contacts one of the bare wires 13 of the lamp. The all-glass lamp is thus safely mounted in the body of the lamp holder by inserting the base thereof into the cavity 5 by a fitting engagement of the outer straps 20, 20' with the notches 12 in the base.

The lamp holder described above permits two different types of mounting in one of which (see FIGS. 1 and 2) two electric contacts 14, 14' are used which are connected to two insulated cables 16, 16', and in the other one electric contact 14 connected to an insulated cable 16 and an earth contact 14'' are used. The body of the lamp holder can be integral with the body of a signaling headlight for motorvehicles, in which case the annular rib 2 and the snap holding sheath 3 are not necessary.

While I have described above the principles of my invention in connection with specific apparatus, it is to be clearly understood that this description is made only by way of example and not as a limitation to the scope of my invention as set forth in the objects thereof and in the accompanying claims.

What is claimed is:

1. A lamp holder for lamp having a rectangular glass base including a pair of first projections on one major surface of said base, a second projection intermediate said pair of first projections on the other major surface of said base and a pair of filament wires for said lamp extending from said base on said one major surface of said base between and spaced from said pair of first projections, each of said pair of filament wires being associated with an associated one of said pair of first projections, said pair of first projections each having a notch disposed therein, said holder comprising:

an annular body of molded material having an inner rectangular cavity disposed symmetrically about a longitudinal axis of said body to receive said base of said lamp, said inner cavity having a bottom wall in a transverse relation to said axis, a pair of first recesses in one major wall of said inner cavity parallel to said axis, each of said pair of recesses receiving an associated one of said pair of first projections and an associated one of said pair of filament wires, a second recess in the other major wall of said inner cavity parallel to said axis to receive said second projections and two openings through said bottom wall parallel to said axis in registry with said pair of first recesses; and

two electrical contacts each disposed in a different one of said openings extending through said bottom wall, each of said two contacts having a deformable portion remote from said inner cavity to engage an associated one of two electrical insulated cables, one of said two contacts having a first spring tooth to engage a transverse surface of said bottom wall opposite said inner cavity adjacent an associated one of said openings and a first inwardly extending portion to engage a transverse surface of said bottom wall in said inner cavity, said first inwardly extending portion and said first spring tooth cooperating to hold said one of said two contacts in said body, the other of said two contacts having a first outwardly extending portion to engage a transverse surface of said bottom wall in said inner cavity and a second spring tooth to engage an outward step in an associated one of said pair of first recesses, said first outwardly extending portion and said second spring tooth cooperating to hold said other of said two contacts in said body, and each of said two contacts having a first portion extending parallel to said axis in an associated one of said pair of first recesses, said first portion having a shaped end portion to engage an associated one of said notches when said base of said lamp is received in said inner cavity and a second portion extending parallel to said axis and said first portion in an associated one of said pair of first recesses, said second portion having a shaped end portion to make electrical contact with an associated one of said pair of filament wires.

2. A lamp holder according to claim 1, further including a third electrical contact to be substituted for said other of said two contacts, said third contact having a second inwardly extending portion engaging said transverse surface of said bottom wall in said inner cavity, a third portion at substantially right angles to said second inwardly extending portion engaging a major surface of an associated one of said pair of first recesses, said third portion having a third spring tooth to engage said outward step in an associated one of said pair of first recesses, said second inwardly extending portion and said third spring tooth cooperating to hold said third contact in said body and a fourth portion extending through a slot in the wall of said cavity transverse to said axis to a ground contact external of said holder, said fourth portion having a shaped part to engage an associated one of said notches and make electrical contact with an associated one of said pair of filament wires.

3. A lamp holder according to claim 2, further including

an annular rib formed integral with the outer surface of said body, said annular rib having diametrically opposite cut outs; and

a retaining spring tooth formed integral with the outer surface of said body adjacent each of said cut outs;

said annular rib and each of said retaining spring teeth enabling said body to be snap mounted to a fixed support.

4. A lamp holder according to claim 2, wherein said molded material is a plastic.

5. A lamp holder according to claim 1, further including

an annular rib formed integral with the outer surface of said body, said annular rib having diametrically opposite cut outs; and

a retaining spring tooth formed integral with the outer surface of said body adjacent each of said cut outs;

said annular rib and each of said retaining spring teeth enabling said body to be snap mounted to a fixed support.

6. A lamp holder according to claim 5, wherein said molded material is a plastic.

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