J. A. TOPPING.

LAMP CASING.

APPLICATION FILED JULY 19, 1920.

1,403,924. Patented Jan. 17, 1922.

Fig. 1.

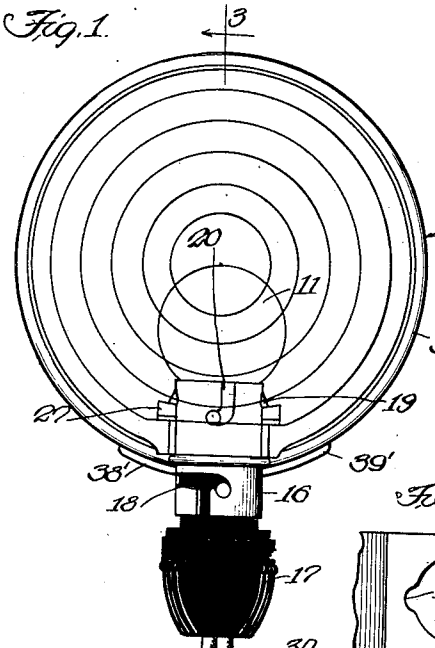


Fig. 2.

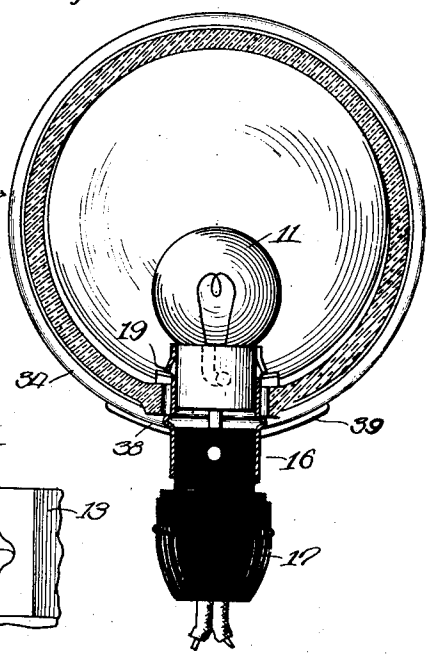


Fig. 5.

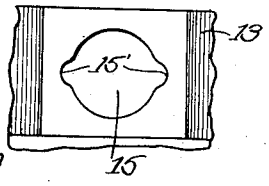


Fig. 3.

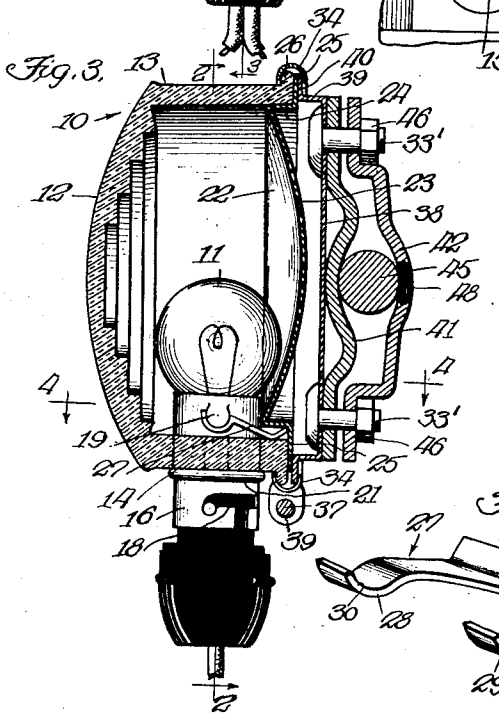


Fig. 4.

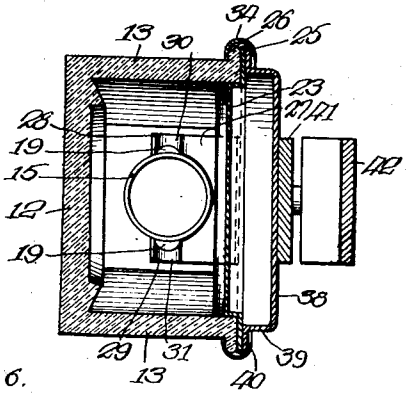
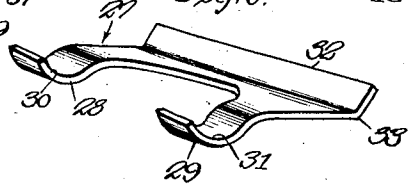


Fig. 6.



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UNITED STATES PATENT OFFICE.

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LAMP CASING.

1,403,924. Specification of Letters Patent. Patented Jan. 17, 1922.

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To all whom it may concern:

Be it known that I, JOHN A. TOPPING, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Lamp Casings, of which the following is a specification.

The invention relates to improvements in lamp casings.

One of the objects of the invention is to provide an all glass, substantially transparent casing for electric lamps and improved means for holding the lamp in the casing.

Another object is the provision of an improved socket, to receive the lamp at one end and a connecting plug at the other end, and intermediate fastening members by which, in connection with other such members, the socket is held in place.

Another object is the provision of yielding means for supporting the lamp socket whereby the lamp will be practically unaffected by sudden jar or vibration of the vehicle upon which it is carried.

Another object is to provide a means for fastening the lamp socket to the all glass casing without exerting a breaking strain on the glass.

Another object is to provide fastening means that are self adjusting to compensate for any inequality in the thickness or surface of the glass wall through which the socket passes in to the interior of the casing.

Other, further and more specific objects of the invention will become readily apparent, to persons skilled in the art, from a consideration of the following description when taken in conjunction with the drawings, wherein:—

Fig. 1 is a front elevation of the lamp casing showing the enclosed lamp.

Fig. 2 is a central, vertical section taken on line 2—2 of Fig. 3.

Fig. 3 is a section taken on line 3—3 of Fig. 1.

Fig. 4 is a transverse section taken on line 4—4 of Fig. 3.

Fig. 5 is the bottom view of a fragment of the casing showing the opening through which the socket is introduced into the casing.

Fig. 6 is a perspective view of a socket holding member.

In all the views the same reference characters are employed to indicate similar parts.

The lamp casing about to be described can advantageously be used for illuminating the rear end of an automobile to assist the driver of a car in backing out from dark places and for illuminating the path which the vehicle is to travel when moving in a rearward direction.

There are other advantageous uses for the lamp as will readily appear, to persons skilled in the art.

In the specific embodiment 10 is an all glass casing for the enclosed lamp 11. The casing has, preferably, a radially corrugated lens 12, closing one end of the cylindrical rim 13, the rear end of the rim being open. The rim is circular in form except at 14 where it is preferably made flat, with inside and outside parallel wall faces and which portion is perforated, as at 15, for insertion of the socket member 16. The lamp 11 is contained in the upper end of the socket member 16 and a connecting plug 17 in the other end. The socket is provided with the usual bayonet-slots 18 and 20 for the plug and lamp, respectively. Near the upper end of the socket 16, are outwardly extending lugs or projections 19, which are made by pressing outwardly portions of the socket cylinder. The perforation 15 has laterally extending grooves 15′ to permit the projections 19 of the socket to pass therethrough. The socket is also provided with an annular shoulder or bead 21 which prevents it from passing entirely through the opening 15.

A closure 22 fits in the open end of the rim 13 and may consist of a concave reflector portion 23 having an annular shoulder 24 and a radially extending flange 25 which lays against the flat edge of the rim. Near this flat edge of the rim is an integral, annular bead 26 which is preferably a portion of the rim 13, and is one of the means by which the closure 22 is held in place.

A spring clip 27 consists of two outwardly curved arms 28 and 29 having curved portions 30 and 31, respectively, and a yoke portion 32 which joins the two arms together. The yoke portion is bent upwardly to form a fulcrum 33. The arms 28 and 29 extend on opposite sides of the socket 16 and the curved portions 30 and 31 underlie the projections 19 of the socket. The shoul-

der 24, of the closure 22, rests upon the upper edge 32 of the clip and causes the arms 28 and 29 to be resiliently held against the projections 19 of the socket, thereby holding the bead or shoulder 21 yieldingly against the lower surface of the front portion 14 of the rim.

When the closure 22 is put in place, as clearly shown in Fig. 3, the shoulder 24 is placed over the portion 32 of the clip 27 and when the closure is forced into the open end of the rim, there is some yielding pressure exerted upon the clip. A ring 34, U shaped in cross section, surrounds the bead 26 and the flange 25 of the closure, the ring ends being held together by means of a screw 37, which passes through clips 38′ and 39′ which are attached to the terminal ends of the ring 34.

Means for supporting the lamp may consist of a disc 38, offset by the annular rim portion 39, and having a radially extending flange 40 which lies under the ring 34. Any convenient means for supporting the lamp may be attached to the disc 38. I have shown a strap 41 and a spaced-away strap 42 secured to the disc 38 by bolts 33′, the straps 41 and 42 being pressed together against a supporting rod 45 by operation of the nuts 46. If the bar or support 45 be flat in cross section, then a set screw may be introduced into the threaded opening 48, to assist in holding the lamp casing in supported position. It is, of course, manifest that the straps 41 and 42 may be turned into horizontal or vertical positions to accommodate themselves to supporting rod or bar 45. This means of fastening enables the lamp to be tilted to any degree, or to occupy a horizontal or vertical position with reference to the socket 16 and the attached devices.

In disassembling the parts the ring 34 is disconnected at its ends by removing the screw 37, whereupon it may be sprung apart and the disc 38 and reflector 23 may then be taken from their respective positions. The clip 27 may be taken from the casing and thereupon the socket is free to be removed after the lamp 11 is taken from the inner end thereof.

The casing 10 being made wholly of a substantially transparent material, the light is free to be radiated in all directions and the reflector 23 projects the light 11 through the lens 12 into a desired field.

Having described my invention what I claim is:—

1. A lamp casing, open at one end and having an annular rim provided with a radially extending opening in which to insert a lamp socket; a lamp socket having lateral projections near its upper end and an annular bead for engaging the outer surface of the rim surrounding said opening; a spring clip engaging said projections for yieldingly holding said bead in contact with the rim and a closure for the open end of the casing for retaining the clip in place.

2. A one-piece glass lamp casing comprising a lens member and an integral cylindrical rim member, said rim having a radially extending opening for insertion of a lamp socket; a spring clip, inside the casing, engaging the socket to yieldingly support it in place and a closure for the casing, engaging the clip, adapted to tension the clip when the closure is in place.

3. A one-piece lamp casing comprising a lens and a cylindrical rim, the latter having an opening within which to insert a socket; a socket having a lateral projection on each side thereof, near its upper end; a spring clip having two spaced-apart arms, said arms engaging the respective projections of the socket and joined together by a yoke having its outer edge turned upwardly to provide a fulcrum, said upturned edge being normally in the path of the casing closure and a closure having a part to engage the upturned edge of said clip, whereby to tension the said arms, by movement on its fulcrum to yieldingly hold the socket in place.

4. In combination with a lamp enclosing casing having an opening for introduction of a lamp socket and a socket having lateral projections insertable therein, of a spring clip having arms for engaging said projections and having an extended end comprising a part of the clip yoke joining the arms and an intermediate fulcrum and a closure for said casing bearing on said extended end to tension the arms.

In testimony whereof I hereunto subscribe my name.

JOHN A. TOPPING.