July 16, 1940. J. C. STEARNS 2,208,437

LAMP SOCKET

Original Filed June 23, 1934

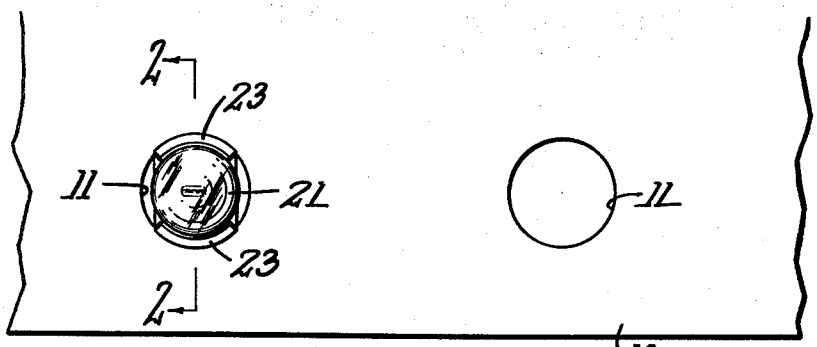


Fig. 1.

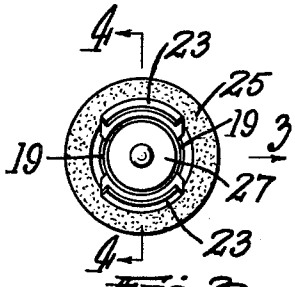


Fig. 3.

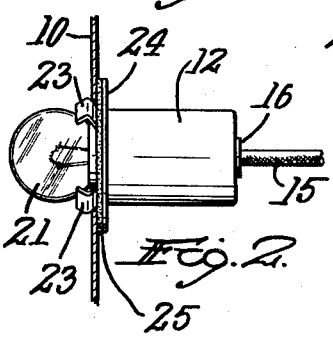


Fig. 2.

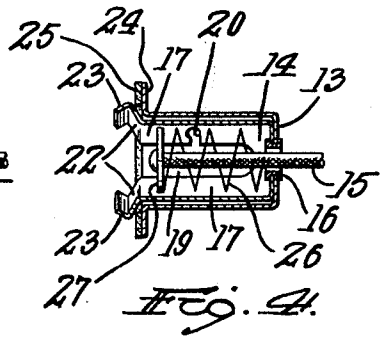


Fig. 4.

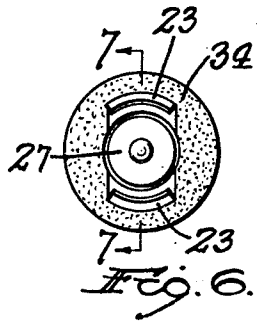


Fig. 6.

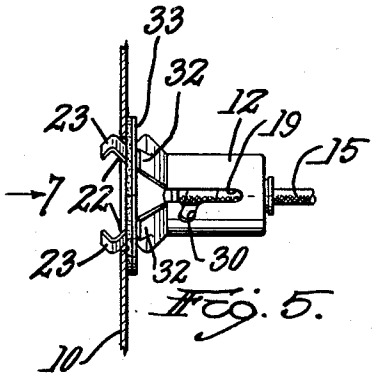


Fig. 5.

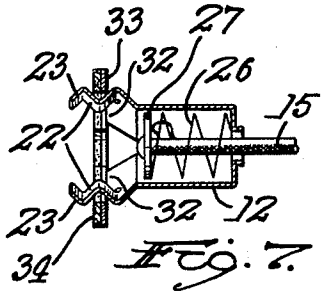


Fig. 7.

Inventor
Jason C. Stearns
By Attorneys
Southgate Fay & Hanley

Patented July 16, 1940

2,208,437

UNITED STATES PATENT OFFICE

2,208,437

LAMP SOCKET

Jason C. Stearns, Worcester, Mass., assignor, by mesne assignments, to United-Carr Fastener Corporation, Cambridge, Mass., a corporation of Massachusetts

Application June 23, 1934, Serial No. 732,102
Renewed December 5, 1939

2 Claims. (Cl. 173—339)

This invention relates to a means for mounting an electric lamp on a plate and is particularly adaptable for use in indirect lighting of dash boards of automobiles, although it is capable of general use.

The principal object of the invention is to provide an electric lamp socket with means mounted thereon for attaching it from the rear through an opening in a supporting plate. Thus the socket can be put in from the rear in what ordinarily is a very awkward position without reaching materially back of the plate to which it is to be attached and without the usual difficulties encountered in mounting lamps in this manner. Another object is to provide a construction which will be dustproof, or practically so, and to provide the socket with spring-attaching fingers shaped to facilitate the application of the socket to the plate from the rear.

Other objects and advantages of the invention will appear hereinafter.

Reference is to be had to the accompanying drawing, in which

Fig. 1 is a front elevation of a plate used in indirect lighting showing a lamp, constructed in accordance with this invention, in position in one of the perforations and showing the other perforation without a lamp;

Fig. 2 is a sectional view on the line 2—2 of Fig. 1;

Fig. 3 is a front view of the lamp socket;

Fig. 4 is a cross sectional view of certain details of the line 4—4 of Fig. 3;

Fig. 5 is a view similar to Fig. 2 of a modified form of socket;

Fig. 6 is a front view of the same, and

Fig. 7 is a sectional view on the line 7—7 of Fig. 6.

The system of indirect lighting used for automobile dashes involves the provision of a plate with perforations therein for receiving several electric lamps. In Patent No. 1,621,873, patented March 22, 1927, a bracket is spot welded on the rear of this plate for providing a support for the electric lamp base. This bracket extends backwardly from the plate and comprises arms having grooves for receiving a bead arranged circumferentially around the base of the electric lamp socket.

One of the objects of this invention is to take away this bracket and attach the lamp directly to the plate itself so that the plate will be simple and have no projections upon it. This eliminates the cost of the bracket but especially the cost of applying it to the plate.

In Fig. 1 the above mentioned plate 10 is shown in a plane condition with perforations 11 therethrough. The lamp socket comprises a casing 12 having an end wall 13 at one end provided with a perforation for the feed cable 15.

Secured through this perforation to the end wall 13 is an inner spring frame 14 having a flat bottom perforated for the feed cable and permanently connected with the outer casing 12 by an eyelet 16 or the like. This spring frame is provided with two opposite concave arms 17 separated from each other by a pair of opposite longitudinal slots 19 with a circumferential slot 20 at one side for completing the bayonet joint of the lamp 21. Otherwise these arms extend out to the outside of the cylindrical casing. These arms are made of sheet metal and provided on the outside of the casing with a pair of outwardly projecting integral convex tongues 22 which terminate in a pair of integral angularly connected inwardly projecting convex tongues 23.

The angle between the tongues 22 and 23 is approximately a right angle and both are arranged on a slant. The outer casing 12 is provided with a flat end flange 24 and on this is mounted a packing ring 25 of sheet material. The sizes of the parts are such that the ends of the convex tongues 23 are materially smaller than the perforations in the plate 10 so that when inserted from the back they will easily be introduced into the perforations and will find their own center therein.

Now, in order to fix the whole structure in the perforations, it is convenient to swing it first to one side and then to the other so that the metal of the plate 10 will come back firmly against the packing ring and will also be held with great rigidity against the front of the plate 10 by the projecting portions between the tongues 22 and 23. As appears in the drawing, the usual spring 26 and disc of insulating material 27 are employed, the latter having the feeding cable passing through it to form a terminal in the usual manner. This is a dust-proof construction.

In the form shown in Figs. 5, 6 and 7 the parts are substantially the same except that the casing 12 and the spring tongues are all made in one piece so that the bayonet slot 30 projects through to the outside of the casing. The spring feature for the holding members 22 and 23 is exactly the same but lugs 32 have to be provided on the combined member for constituting the casing and the spring arms in order to have surfaces against which a flat flange 33 may bear.

This flange, instead of being integral with the body of the socket member, is held in a groove formed under the convex tongue 22. The collar 34 is substantially the same as in the other case but the opening through it, instead of being circular, is oblong with four curved sides, in order to fit the parts with which it is connected. Its operation is the same as in the other case.

It will be seen that, constructed in either form, the device is very easy to apply from the rear because it has to be entered only in a circular perforation and the spring arms with convex and angular ends have to be put only in an approximate position and not in an exactly definite position in order to center them and start them into place. Furthermore, the insertion of the lamp socket in place in the perforated plate is of such a simple character that it does away with a good deal of trouble previously encountered in mounting lamps of this kind in the inaccessible position of said patent. The lamp casing and its mounting means are entirely self-contained and there are no parts that can become detached before the device is applied to the plate.

The construction is very simple. In the one shown in Figs. 1, 2, 3 and 4 the whole casing and the means for mounting it on the plate are formed of two pieces of metal easily and cheaply manufactured and assembled while in Figs. 5, 6 and 7 the same advantages are secured with one main piece of metal and the circular perforated disc.

Having described my invention and the advantages thereof, I do not wish to be limited to the details herein disclosed, otherwise than as set forth in the claims, but what I claim is:

1. As an article of manufacture, a lamp socket including a sheet metal casing formed from a single piece of metal and having a tubular body portion for receiving and holding lamp-contacting means and for receiving the base of a lamp, socket-supporting fingers integral with and extending forwardly from one end of the body portion, said fingers being adapted to move toward and away from each other and being bowed thereby providing converging outer free end portions and diverging portions located between the converging portions and the body portion so as to snap into and out of an aperture in a socket support solely by axial movement exerted upon the socket, and said body portion having integral socket-holding means operable to receive and hold cooperating socket-engaging means presented by a lamp.

2. As an article of manufacture, a lamp socket comprising a casing having two arms extending longitudinally beyond one end and separated by a pair of longitudinal slots having extensions for constituting bayonet joints for the lamp, whereby said arms are rendered resilient, and the lamp is held by the casing itself, the outer ends of said arms being provided with tongues having outwardly slanting surfaces which in turn are provided with inwardly slanting surfaces beyond the end of the casing, whereby said tongues are capable of being inserted in a perforation larger than the inner end of the last named inwardly slanting surface and pressed thereagainst to cause the arms to yield and the extreme outer surfaces between the inwardly and outwardly slanting surfaces to be received through the perforation so that the resiliency of the arms will hold the socket in position in the perforation.

JASON C. STEARNS.