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D. E. RILEY

MEANS FOR ATTACHING LIGHT BULBS TO REFLECTORS

Filed May 24, 1926

Fig. 1.

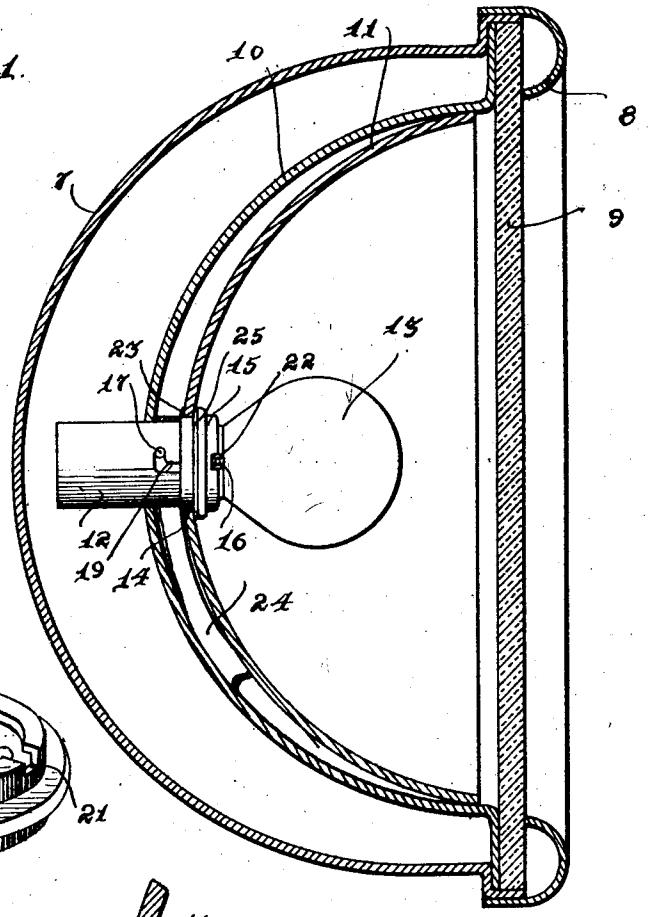


Fig. 3.

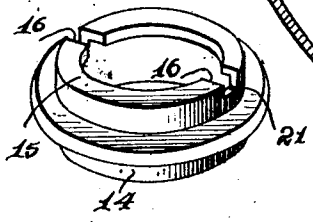
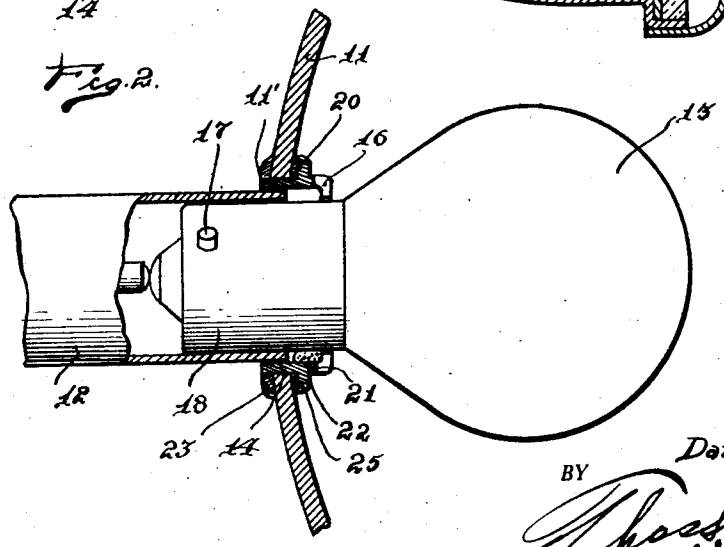


Fig. 2.



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UNITED STATES PATENT OFFICE.

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MEANS FOR ATTACHING LIGHT BULBS TO REFLECTORS.

Application filed May 24, 1926. Serial No. 111,216.

My invention relates to a means for attaching a light bulb to a reflector for obtaining a predetermined focal adjustment and is intended as an improvement on my invention set forth in an application filed by me on May 5th, 1923, Serial No. 636,905.

In the present invention it is designed to attach the light bulb to an auxiliary reflector which is positioned forwardly of the reflector commonly used in vehicle headlights. In attaching the light bulb to the auxiliary reflector much difficulty has been encountered in making the connection as it is desired that the light bulb be attached to the auxiliary reflector in a certain position, this position of attachment varying with the different light bulbs because it is desirable that the light bulb be attached to the reflector in a certain position to effect the proper focal adjustment of the light bulb relatively to the reflector.

It is an object of the present invention to provide a method of attaching the light bulb to the reflector which is simple to secure and one which results in considerable saving of labor and operates most efficiently.

Another object of the present invention is the provision of an attaching collar adapted for fastening to the neck of a light bulb and to an auxiliary reflector.

Another object of the present invention is the provision of an attaching collar having an inwardly projecting flange, a portion of the sleeve of the collar and a portion of the flange being cut away to provide a radially extending notch for the entry of solder therethrough.

Other objects will appear hereinafter.

The invention consists in the combination and arrangement of parts hereinafter described and claimed.

The invention will be best understood from a reference to the accompanying drawing which forms a part of this specification and in which,

Fig. 1 is a side elevational view of the invention showing it applied to a light bulb and reflector taken in vertical section centrally thereof.

Fig. 2 is a fragmentary side elevational view of the invention with parts broken away and parts in section.

Fig. 3 is a perspective view of the attaching collar used in the invention.

There is illustrated in the drawings a vehicle head light 7 having the locking rim 8 and the lens 9 together with the reflector 10 mounted therein in a well known manner. In the invention there is utilized an auxiliary or detachable reflector 11 which as shown is positioned forwardly of the reflector 10, this reflector 11 being provided with a central opening registering with the opening formed in the reflector 10. The lamp socket 12 which is of conventional type and mounted in the usual manner is utilized with the invention.

With the present invention the light bulb is permanently attached to the auxiliary reflector 11, the light bulb being focused relatively to the reflector 11 so that it always remains properly focused when in use. The reflector 11 of course is removed and replaced when the light bulb 13 is removed and replaced, the light bulb being permanently attached to the auxiliary reflector 11. In order to attach the light bulb 13 to the reflector 11 I have provided an attaching collar comprising a sleeve 14 having at its outer end the inwardly projecting flange 15, this flange being cut away as at 16 to provide a clearance for the trunnions 17 which project radially outwardly from the neck 18 of the light bulb. By cutting away the flange 15 at 16 the neck 18 may be projected through the sleeve as shown in Fig. 2 so as to engage the neck 18 in the socket 12, this socket 12 being provided with the bayonet slot 19 formed in the conventional manner. Projecting outwardly from the collar 14 is a peripheral flange 20 intermediate the ends of the collar 14. As shown in Fig. 2 this peripheral flange 20 engages the inner surface of the reflector 11 surrounding the opening 11′ formed therein, the sleeve 14 projecting through this opening 11′. When the bulb is projected through the collar 14 it is desirable that the neck of the bulb 18 be soldered to the collar 14 when the bulb 13 is in the proper position relatively to the collar 14. To project a predetermined beam of light, frequently it is necessary to so adjust the bulb that the flange 15 engages the neck 18 close to its forward end or adjacent the base of the bulb 13. It is difficult to solder the collar 14 to the neck 18 in any position but particularly difficult to fasten the collar 14 to the neck 18 when the collar is positioned well forwardly on the neck as the hot solder may strike and fracture the glass or may loosen the glass in its mountings in the neck 18.

To provide an easy method of soldering

this collar to the neck 18 I have formed in the collar 14 axially extending slots 21, each of which communicates at its end with the radially extending slots 16. With the slots 21 formed in this manner the solder 22 may be dropped radially downwardly upon the neck 18 so as to solder the flange 15 and the neck 18 together. The sleeve 14 is also soldered to the reflector 11 by means of solder 23. The reflector may be soldered to the collar 14 previous to locating the neck 18 in the collar but it is preferred to solder the collar to the neck first and the reflector to the collar afterwards. Loosely positioned over the socket 12 forwardly of the reflector 10 is a band 24 made from rubber or other similar material so as to lie between the reflectors 11 and 12 to prevent possible rattling resulting from relative movement of these reflectors.

Mounted on the collar 14 are washers 25 which may be used to space the peripheral flange 20 of the collar from the inner surface of the reflector 11 in order to permit the mounting of the light bulb at the proper distance to effect a predetermined focus.

While I have illustrated and described the preferred form of structure I do not wish to limit myself to the precise forms of structure shown but desire to avail myself of such variations and modifications as may come within the scope of the appended claims.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is:

1. An attachment for securing a light bulb permanently on a reflector comprising a collar having at one end an inwardly projecting flange, said inwardly projecting flange having radially extending diametrically opposite slots formed therein and axially extending slots formed in said end of said collar communicating at its end with said radially extending slots.

2. An attachment for securing a light bulb permanently to a reflector comprising: a cylindrical collar; a peripheral flange on said collar intermediate its ends, an inwardly projecting flange at one end of said collar, radially extending slots being formed in said flange and openings formed in the periphery of said collar adjacent said end for passage of solder therethrough into engagement with the neck of a light bulb inserted in said collar.

3. Means for attaching a light bulb having a neck permanently on a reflector having a central opening formed therein for the reception of said neck, comprising: a cylindrical collar; a radially inwardly projected flange at one end of said collar; a peripheral flange on said collar intermediate its ends adapted for engagement with and for being fastened permanently to said reflector, said inwardly projecting flange retaining the inner surface of said collar normally spaced from the periphery of said neck; and a quantity of solder in said space attaching said collar permanently to said neck.

In testimony whereof I have signed the foregoing.

DANIEL E. RILEY.