W. T. JONES.

ADJUSTABLE LENS FOR HEADLIGHT LAMPS.

APPLICATION FILED OCT. 3, 1910.

Patented Jan. 9, 1912.

1,014,227.

Fig. 1.

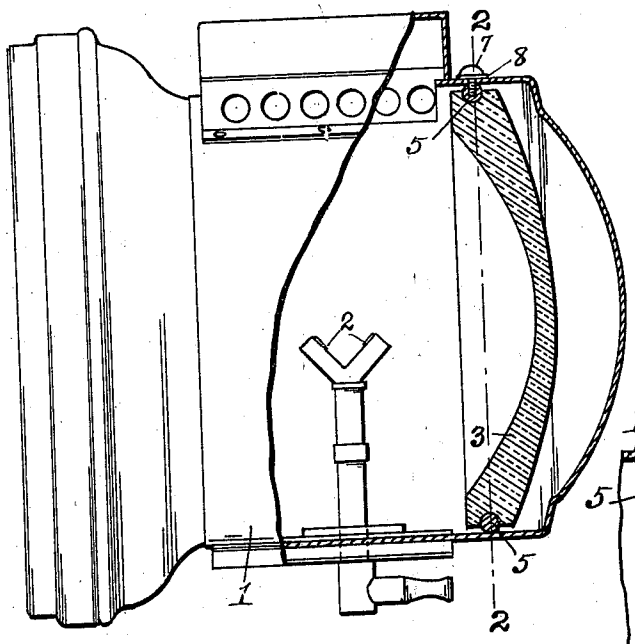
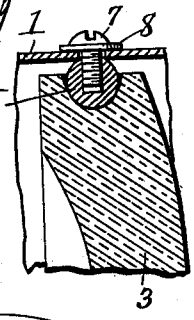


Fig. 5.



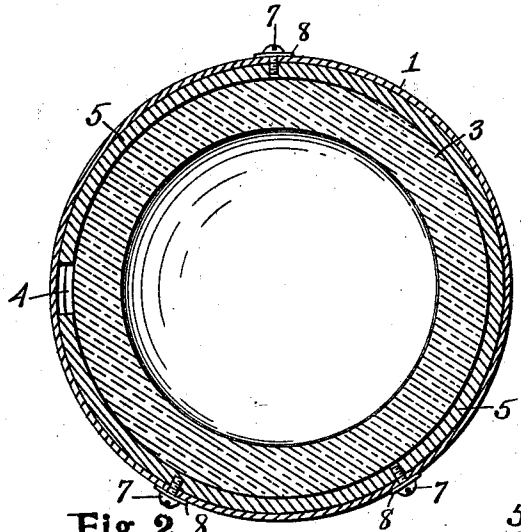


Fig. 2.

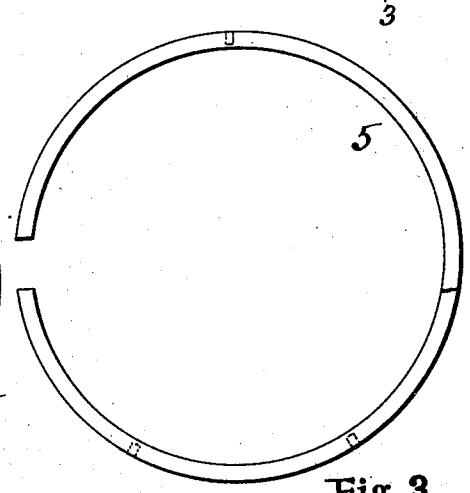


Fig. 3.

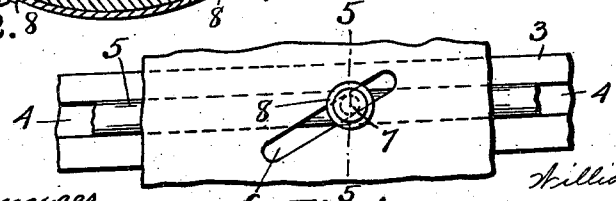


Fig. 4.

Witnesses

O. B. Baenziger.

J. L. Howlett.

Inventor

William T. Jones.

By E. W. Wheeler Attorney

UNITED STATES PATENT OFFICE.

WILLIAM T. JONES, OF DETROIT, MICHIGAN, ASSIGNOR TO EDMUNDS & JONES MFG. CO., OF DETROIT, MICHIGAN, A CORPORATION OF MICHIGAN.

ADJUSTABLE LENS FOR HEADLIGHT-LAMPS.

1,014,227. Specification of Letters Patent. Patented Jan. 9, 1912.

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To all whom it may concern:

Be it known that I, WILLIAM T. JONES, a citizen of the United States, residing at Detroit, in the county of Wayne, State of Michigan, have invented certain new and useful Improvements in Adjustable Lens for Headlight-Lamps; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the characters of reference marked thereon, which form a part of this specification.

This invention relates to lamps of the head-light type, especially designed for automobile use, and consists in the construction and arrangement of parts hereinafter more fully set forth and pointed out particularly in the claims.

The object of the invention is to provide simple and efficient means whereby the mirror lens of a head-light may be readily secured in the cylindrical body of the lamp with its axis parallel with the axis of the lamp body, and wherein provision is made for readily adjusting the lens to regulate the focus without danger of tilting the lens or shifting the plane of its axis with respect to the body of the lamp.

The invention further contemplates the mounting of the lens in the body of the lamp in a manner to provide for the expansion and contraction of the parts so as to obviate the breaking of the lens due to expansion where confined rigidly to the lamp body.

The above object is attained by the structure illustrated in the accompanying drawings, in which:—

Figure 1 is an elevation of a lamp, partly in section, showing one embodiment of my invention. Fig. 2 is a transverse section through the lamp body and lens, as on line 2—2 of Fig. 1. Fig. 3 is an elevation of the open resilient ring seated in the margin of the lens and through the medium of which said lens is secured in the body of the lamp. Fig. 4 is an enlarged fragmentary view in elevation, showing one of the inclined channels in the body of the lamp, and one of the fastening screws passing through said channel and into the ring in the margin of the lens. Fig. 5 is an enlarged fragmentary view in section, as on line 5—5 of Fig. 4.

Referring to the characters of reference, 1 designates the body of the lamp which may be of any suitable construction, and which is preferably cylindrical in form. Projecting centrally into the body of the lamp is a burner 2. At the rear of the lamp body is located a mirror lens 3, which is provided in its periphery with a circumferential channel 4, (see Fig. 4). Sprung into said channel and adapted to lie therein is an open ring 5 of steel, or other resilient material, the contracting force of which causes it to embrace the periphery of the lens with sufficient tension to securely retain it in place. This ring projects from the channel 4 and its exterior diameter is equal to the interior diameter of the cylindrical body of the lamp, so that when the lens with the ring in the peripheral channel thereof is placed in position in the lamp body, said ring will engage the inner wall of the lamp, as shown in Fig. 1.

To provide for securing the lens in place within the lamp body, and at the same time enable it to be adjusted toward and from the burner to regulate the focus thereof, the wall of the lamp body is provided with a plurality of diagonal slots 6, preferably three in number, through which are passed screw-bolts 7 that screw into the ring 5, said bolts being provided with washers 8 of large diameter which lie across the slots 6. By this arrangement the ring 5 becomes suspended within the body of the lamp, said ring in turn embracing and supporting the mirror lens 3. By loosening the screw-bolts 7, the lens may be adjusted toward or from the burner 2 by moving said screw-bolts longitudinally of the channels 6, a slight rotary movement being imparted to the ring and lens during such adjustment because of the angle of the slots 6. It will be noted that all of the bolts move alike and maintain their relative positions circumferentially of the lamp body, thereby maintaining the axis of the lens always parallel with the axis of the lamp. When properly adjusted, the ring may be securely fastened within the lamp body by tightening the screw-bolts 7. It will also be noted that when the ring 5 is drawn against the wall of the lamp body by tightening the screw-bolts 7, it is not caused to clamp the lens, but on the contrary is drawn slightly away from it so as to entirely free the lens from compression or any rigid resisting force, whereby the lens is free to

expand under a heightened temperature without danger of cracking.

Having thus fully set forth my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. A lamp body, a lens having a channel in its periphery, a ring lying in said channel, the body of the lamp having slots therein, and an attaching device passing through said slots and engaging said ring.

2. A lamp body having diagonal slots in the wall thereof, an adjustable ring within the lamp body and crossing said slots, means passing through said slots and engaging said ring to enable the adjustment of the ring within the body, and a lens carried by and movable with said ring.

3. A lamp body, having diagonal slots in the wall thereof, a lens within the body of the lamp having a channel in its periphery, a ring lying in the said channel, and headed screws passing through the slots in the wall of the lamp and threaded in said ring.

In testimony whereof, I sign this specification in the presence of two witnesses.

WILLIAM T. JONES.

Witnesses:
E. S. WHEELER,
I. G. HOWLETT.