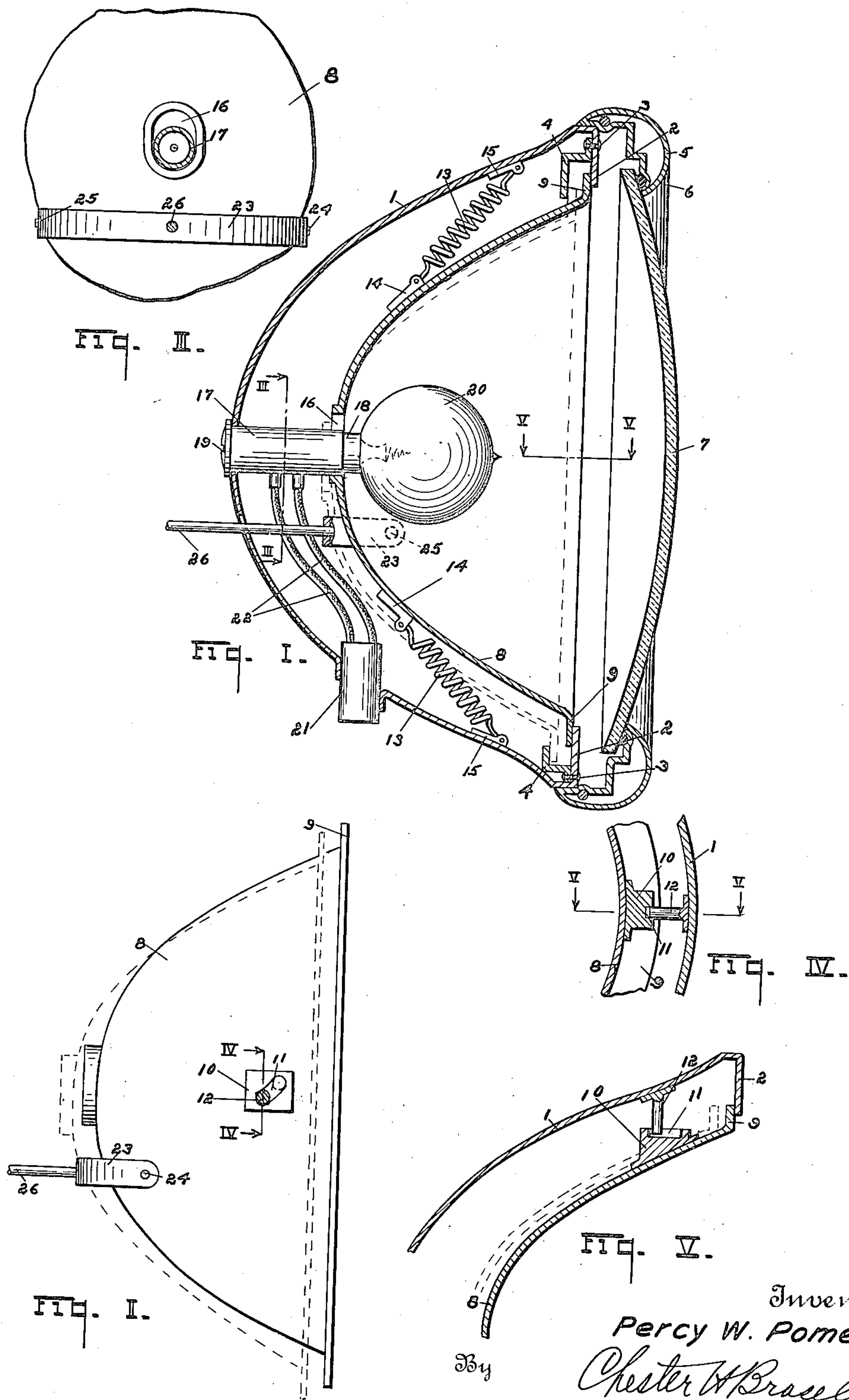


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P. W. POMEROY.  
ELECTRIC LAMP CASING.  
FILED APR. 13, 1918.



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# UNITED STATES PATENT OFFICE.

PERCY W. POMEROY, OF TOLEDO, OHIO.

ELECTRIC-LAMP CASING.

Application filed April 13, 1918. Serial No. 228,399.

*To all whom it may concern:*

Be it known that I, PERCY W. POMEROY, a citizen of the United States, residing at Toledo, in the county of Lucas and State of Ohio, have invented certain new and useful Improvements in Electric-Lamp Casings, of which I declare the following to be a full, clear, and exact description.

This invention relates to electric lamp casings, and more particularly to that type of electric lamp casing applicable for use as headlights on automobiles or other movable vehicles.

The principal object of this invention is to provide means to dim the light in a headlight when the vehicle upon which the headlight is placed is approaching other vehicles or pedestrians to whom the normal headlight effect would be confusing.

Another object is to provide means under the control of the vehicle operator, for diffusing the light at will.

Further objects, and objects relating to economies of manufacture and details of construction, will definitely appear from the detailed description to follow.

I accomplish the objects of my invention by the devices described in the following description.

A preferred embodiment of my invention is illustrated in the accompanying drawing, forming a part of this specification, in which:

Fig. I is a section in elevation showing the internal structure of the headlight;

Fig. II is a side view of the reflector detached from the headlight.

Fig. III is a detailed fragmentary view of a portion of the rear of the reflector and is taken substantially on lines III—III of Figure I.

Fig. IV is a detail, sectional view taken on line IV—IV of Fig. II, and

Fig. V is a detailed section taken on line V—V of Fig. I, showing a portion of the attachment device between the casing and the reflector.

In the drawings, similar reference characters refer to similar parts throughout the respective views, and the sections are

taken looking in the direction of the small arrows.

As illustrated, the headlight consists of an outer casing 1, which, in section, has an approximately parabolic contour. The edges of the casing are intumed as at 2, forming an inner extending rim to which is attached by means of rivets 3 at various points on the circumference of the rim, a series of angle plates 4, the purpose of which will be hereinafter described. A door 5 for the casing is also provided, having an annular frame 6 and glass 7, by means of which access is had to the interior of the head lamp for the purpose of replacing the electric light and cleaning the reflector. The reflector 8 has a contour of parabolic form and its edge is out-turned to form a flange 9 which projects between the flange 2 and the angle plates 4. The flange 2 of the casing and the flange 9 of the reflector are each provided with a series of notches and teeth whereby the reflector may be placed in position with its teeth engaging the notches of the casing and then given a rotative movement, the final position being that shown in Fig. 1. On either side of the reflector, diametrically positioned, are plates 10 attached to the reflector in any suitable manner, as by solder, and in these plates are cut grooves or run-ways 11, which grooves are positioned so as to lie at an angle with the axis of the reflector, the upper portion of the grooves approaching the front of the reflector. Fastened to the casing, adjacent these grooved plates, are inwardly projecting pins 12 which project into the run-ways 11 and have movement throughout the full length thereof. In assembling the lamp, the casing may be slightly distorted by applying pressure from above and below in order that the pins 12 may be inserted in the notches 11.

Additional holding means for the reflector is provided in the springs 13, which are attached to plates 14 on the reflector, and plates 15 on the interior of the casing. These springs are normally under tension, and tend to pull the reflector so that the



out-turned edge thereof is forced against the inturned rim of the casing. At the base or apex of the reflector is formed an elongated slot 16, the elongation extending in a vertical direction. At the point adjacent this aperture in the apex of the casing and lying in the focal axis of the casing is secured the tubing 17, which extends from the point of the attachment to the interior of the reflector through the aperture 16. Within this tubing is positioned the connector and socket 18, which is adjustable longitudinally by means of the adjusting screw 19. An electric lamp 20 is placed in the socket, and by means of the adjusting screw 19, placed so that its light center is approximately at the focus of the reflector when the reflector is in its normal position, namely, with its edge 9 in contact with the rim 2 of the casing. Electric current is brought into the casing through a tubing 21, and by means of wires 22.

I have provided means for actuating the reflector, in a sheet metal bail 23, which is pivoted at opposite points on the reflector as at 24 and 25. At the center of this bail, I attached a wire or rod 26, which rod extends to a convenient point in the vehicle within reach of the operator.

The normal position of the reflector is as shown in Fig. 1 of the drawing. In this position, the lamp bulb 20 is at the focus of the reflector, and light rays emanating therefrom impinge upon the reflector and are deflected outwardly in a direction parallel with the axis of the reflector. If the operator desires to vary the illumination because of the approach of any vehicle, he pulls on the rod 26, thereby causing the reflector to move in a downwardly and rearwardly direction, the pins 12 moving in the runways 11, and the slot 16 being provided to permit movement of the reflector relative to the tubing 17. This movement continues until the edge of the reflector makes contact with the angle plates 4, in which position the pins 12 and tubing 17 are at the limits of their range of travel. By this movement of the reflector, the lamp bulb is in effect moved, both outward from the focus of the reflector and also transversely upward from the focus of the reflector, and in consequence, light rays emanating therefrom, are deflected in all directions within certain limits from the surfaces of the reflector. To an observer, therefore, the movement causes transmutation from a dazzling glare to a diffused light which is the end desired by the operator.

It is evident from this description that I have devised a very simple and satisfactory arrangement by which the illumination of a headlight may be easily dimmed.

I am aware that this particular embodiment of this invention is susceptible of vari-

ous modifications, and I therefore desire to claim the same broadly, as well as specifically, as indicated by the appended claims.

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

1. In a headlight, the combination of a casing, a closure for the casing, including a transparent member, a reflector within the casing, and means for simultaneously moving said reflector bodily in axial and transverse directions.

2. In a headlight, the combination of a casing; a closure for the casing including a transparent member; a reflector within the casing having means to co-operate with said casing to provide a sliding engagement therewith; an electric lamp in the casing; means tending to hold the reflector so that the lamp is normally in focus; and means for moving the reflector to the side and to the rear, thereby displacing the lamp from focus.

3. In a headlight, the combination of a casing; a closure for the casing including a transparent member; a reflector within the casing having a sliding engagement with said casing; an electric lamp in the casing; means tending to hold the reflector so that the lamp is normally in focus; and means for simultaneously moving the reflector bodily to the side and to the rear, thereby displacing the lamp from focus.

4. In a headlight, the combination of a casing; a closure for the casing including a transparent member; a reflector mounted within the casing to be moved bodily forwardly or rearwardly; an electric lamp socket fixed to the casing, adapted to hold an electric lamp in position within the reflector; means including resilient members for holding the reflector in focal position relative to the lamp; means for moving the reflector bodily out of said focal position against said resilient members; and means for limiting the movement of said reflector and for holding the same in an erect position at each limit of its movement.

5. In a headlight, the combination of a casing; a closure for the casing, including a transparent member; a reflector within the casing, said reflector having grooves cut on opposite outer sides and inclined to the axis of the reflector; pins attached to the casing adjacent the grooves on the reflector, and adapted to have sliding engagement therewith; spring means connecting the reflector to the interior of the casing, tending to move the reflector into a normal position; and means attached to the reflector, adapted to slide the reflector bodily on said pins to an abnormal position.

6. In a headlight, the combination of a casing, a closure for the casing including a transparent member, a reflector in the casing having grooves on opposite sides inclined to



the axis of said reflector, pins carried by said casing engaging said grooves whereby said reflector may have a combined axial and downward movement, springs connecting  
5 said reflector and said casing tensioned to normally hold the reflector in its extreme forward position, a lamp socket fixed to the casing, a lamp bulb carried thereby arranged to lie in the focus of the reflector when in its normal position and means for moving the  
10 reflector rearwardly to an abnormal position.

In testimony whereof, I affix my signature.  
PERCY W. POMEROY.