R. A. WALKER.

HEADLIGHT DIMMER.

APPLICATION FILED DEC. 26, 1914

1,167,451. Patented Jan. 11, 1916.

Fig. 1.

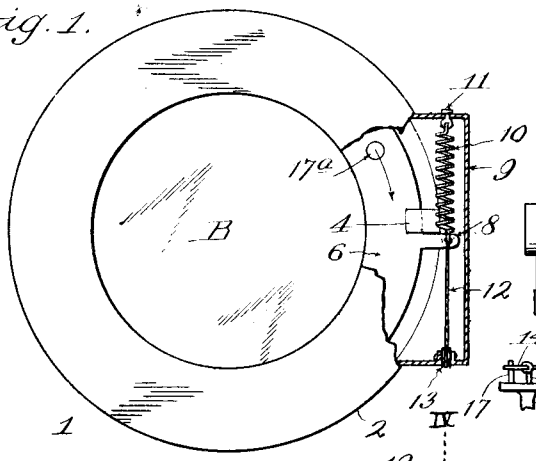


Fig. 2.

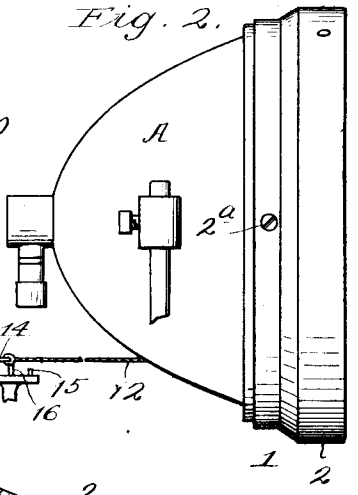


Fig. 3.

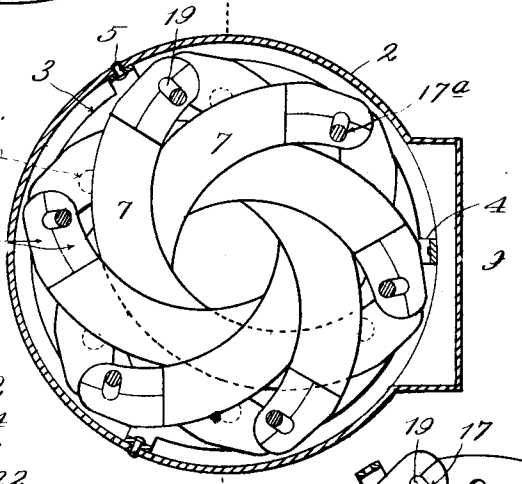


Fig. 4.

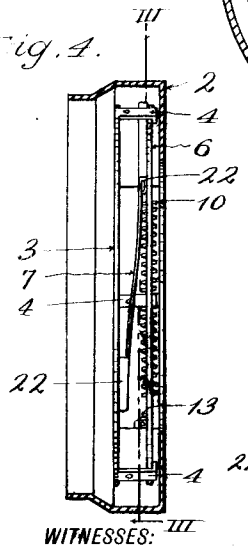
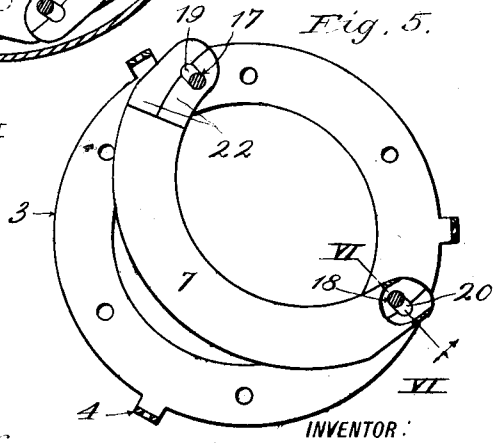


Fig. 5.



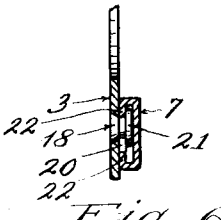


Fig. 6.

WITNESSES:

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HEADLIGHT-DIMMER.

1,167,451. Specification of Letters Patent. Patented Jan. 11, 1916.

Application filed December 26, 1914. Serial No. 879,087.

To all whom it may concern:

Be it known that I, ROBIN A. WALKER, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Headlight-Dimmers, of which the following is a specification.

My invention relates to headlight dimmers, and my object is to provide a device of this character whereby the light rays projected from the headlights of an automobile can be reduced in volume at will by the driver without leaving his seat.

The device also reduces the elevation at which the light rays are projected, so that they will not shine into the eyes of drivers approaching from the opposite direction; thereby eliminating the danger of accidents arising from this cause.

The device can be either built into new lamps, or readily applied to lamps now in use; and in order that the invention may be fully understood, reference will now be made to the accompanying drawings, in which:

Figure 1 is a broken front elevation, partly in section, of the device applied to a headlight. Fig. 2 is a side elevation of the device applied to a headlight. Fig. 3 is an irregular vertical section of the device on line III—III of Fig. 4. Fig. 4 is a vertical cross section of the device with a number of shutter leaves removed, on line IV—IV of Fig. 3. Fig. 5 is a front elevation of an annulus and one leaf of the shutter. Fig. 6 is a cross section on line VI—VI of Fig. 5.

A designates a headlight of any ordinary or preferred type, provided with the customary lens B.

1 designates the dimmer constituting the important feature of the invention.

2 designates an annular case applied to the front portion of the headlight A, to which it may be secured by any suitable means, such for instance, as screws 2^a.

3 designates a stationary annulus provided with marginal lugs 4, secured to the inner surface of the case 1 by rivets 5, or other suitable means.

6 designates a movable annulus of about the same size as the stationary annulus 3, in advance of which it is spaced to leave room for a series of segmental leaves 7. The movable annulus 6 is supported in axial alinement with the stationary annulus 3 by the lugs 4, and is provided at one side with an arm 8, extending into a bay 9, formed at one side of the case 1.

10 designates a retractile spring connected at one end to the arm 8 and at its opposite end to an eye-bolt 11, to move the arm 8 up to the position disclosed by Fig. 1.

12 designates a cable to pull the arm 8 downward against the action of the spring 10, for the purpose of partly closing the shutter. Said cable 12 is attached at one end to the arm 8, extends around a guide sheave 13, and is provided at its rear end with a ring 14, adapted to engage any one of a series of pins 15, 16 and 17, preferably, arranged within convenient reach of the driver, so that it may be operated without leaving the driver's seat.

The front sides of the shutter leaves 7 are connected to the movable annulus 6 by rivets 17^a, while their rear sides are connected to the stationary annulus 3 by rivets 18. The rivets 17^a and 18 extend through slots 19 and 20 in the ends of the leaves 7, to permit the same to move toward and away from the axial line of the stationary and movable annuli 3 and 6, respectively. In order that the heads 21 of the rivets may not project into the paths of the leaves 7 and interfere with their operation, the ends of said leaves are provided with marginal flanges 22, bent over said heads 21 and between the same and the adjacent sides of the annuli 3 and 6.

Normally the shutter is held in open position, as disclosed by Fig. 1, through the intermediacy of the coil spring 10, but when it is desired to partly close said shutter, the ring 14 is removed from the pin 15 and drawn over the intermediate pin 16. This operation partly rotates the movable annulus 6, causing it to force the leaves 7 inward toward the axial line of the annuli 3 and 6, and thus reduce the area through which the rays of light are projected from the lamp A. To further reduce the area of said opening the ring 14 is drawn backward over the pin 17, thereby causing further rotation of the annulus 6, which in turn moves the leaves 7 closer to the axial line of the annuli 3 and 6, as disclosed by Fig. 3. When traveling over dark streets or country roads where the full benefit of the headlight is desired, the shutter may be instantly opened to its full capacity by removing the

ring 14 and placing it over the pin 15, thereby permitting the spring 10 to draw the arm 8 upward and rotate the annulus 6 until all of the leaves lie hidden behind said annulus.

While I have shown and described the preferred form of my invention, I reserve the right to make such changes in the construction, combination and arrangement of parts as properly fall within the spirit and scope of the claims.

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

1. In combination with a headlight, a shutter consisting of a series of mutually and centrally intersecting segmental leaves pivoted at each of their ends, and means to open and partly close said shutter to control the volume of light rays projected from the headlight.

2. In combination with a headlight, a stationary annulus, a movable annulus, and a series of mutually and centrally intersecting leaves operably-connected to said annuli at their respective ends to control the volume of light rays projected from the headlight.

3. In combination with a headlight, a case secured to said headlight, mutually and centrally intersecting segmental leaves operably-mounted within said case, and means to actuate said leaves to control the volume of light rays projected from the headlight, said leaves being connected at their ends to said case and means and arranged to have their center portions intersecting one another.

4. In combination with a headlight, a shutter consisting of a series of segmental leaves which centrally intersect each other and are supported at each of their ends to control the volume of light rays projected from the headlight, means to automatically move said leaves in one direction, and manual means to move said leaves in an opposite direction.

5. In combination with a headlight, a shutter consisting of a stationary annulus, a movable annulus, segmental leaves having pin and slot connections with said annuli at their respective ends, and flanges on said leaves to cover the heads of the pins.

6. In a headlight dimmer, a case, leaves in the case which coöperate to form an adjustable light outlet, spring means to tension said leaves, and means to operate and hold the leaves against said tension including a flexible member having a latch member, and a series of spaced projections any one of which is engageable with said latch member so as to hold the leaves in different adjusted positions.

In testimony whereof I affix my signature, in the presence of two witnesses.

ROBIN A. WALKER.

Witnesses:
F. G. FISCHER,
L. J. FISCHER.