May 1, 1923. 1,453,501

C. S. HASH

AUTOMOBILE LIGHT DIMMER

Filed Dec. 16, 1920

Fig. 2.

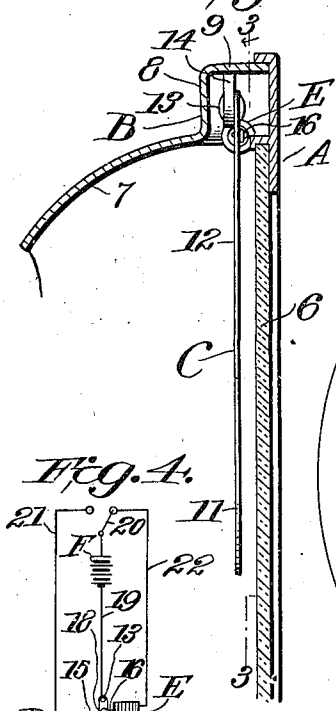


Fig. 1.

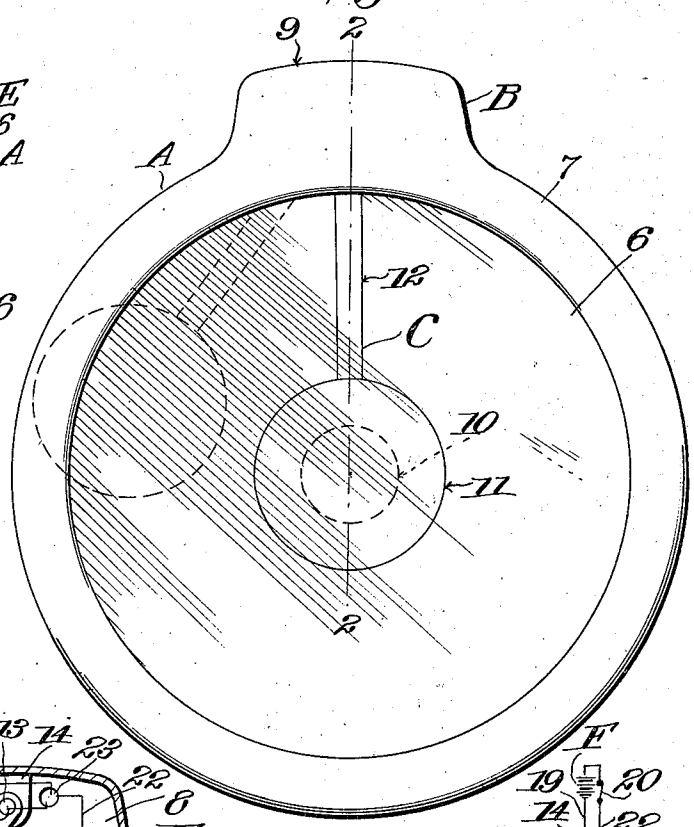


Fig. 4.

Fig. 3.

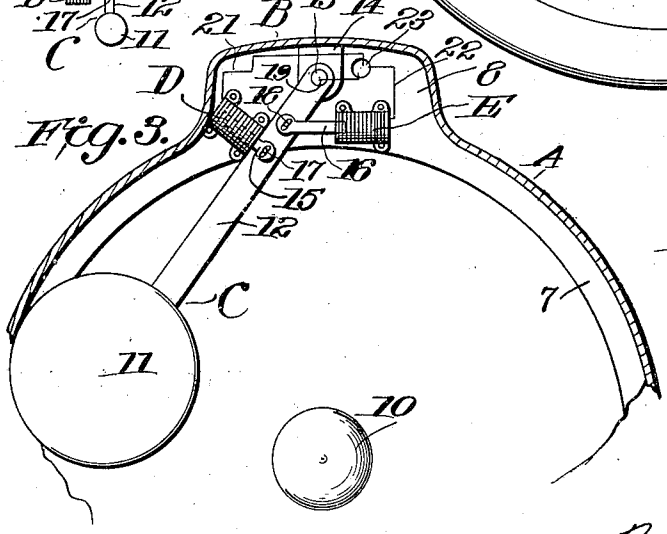
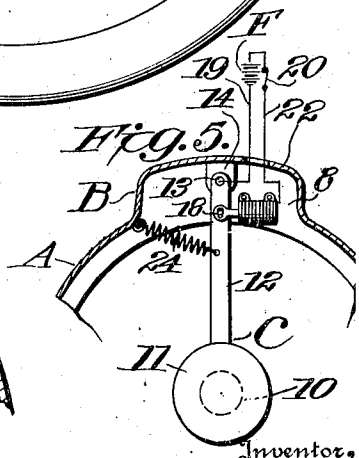


Fig. 5.



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Patented May 1, 1923. 1,453,501

UNITED STATES PATENT OFFICE.

CHARLES S. HASH, OF CHADRON, NEBRASKA.

AUTOMOBILE LIGHT DIMMER.

Application filed December 16, 1920. Serial No. 431,063.

To all whom it may concern:

Be it known that CHARLES S. HASH, a citizen of the United States, residing at Chadron, in the county of Dawes and State of Nebraska, has invented certain new and useful Improvements in Automobile Light Dimmers, of which the following is a specification.

This invention relates to a dimmer or anti-glare devices for lamps and particularly the headlights of automobiles and other motor vehicles.

The main object is to provide a means to accomplish the end stated in the nature of a shutter whose position is electrically controlled.

Additional objects and advantages will become apparent as the description progresses in connection with accompanying drawings of one preferred embodiment.

In said drawings,—

Fig. 1 is a front elevation of an automobile headlight equipped with my improvements.

Fig. 2 is a sectional view taken substantially along the line 2—2 of Fig. 1.

Fig. 3 is a section on line 3—3 of Fig. 2, showing a fragmentary view of the parts of Fig. 1 with the lens and its retaining frame removed;

Fig. 4 is a diagram of the electrical connections; and

Fig. 5 is a view substantially similar to Fig. 3 but through a modified form.

Throughout the drawings like characters of reference designate like or similar parts.

Referring specifically to the drawings an automobile headlight is conventionally shown at A to illustrate the application of my improvements. Of the headlight, 6 is the lens, 7 is the frame or casing, 8 and 9 rear and top walls respectively of a dome B of said casing, and 10 the lamp or bulb to illuminate the headlight.

I principally employ a shutter C movable to a position in axial alignment with the bulb 10 so that a disk 11 will cover it, and also movable to a position out of alignment with the bulb to expose it as suggested in the drawings. Disk 11 may be of any desired material either opaque or impenetrable to light but is preferably of thin aluminum. An arm 12, preferably of soft iron carries said disk and is pivoted for oscillation from a pin 13 mounted by a lug 14 depending from and within dome B. Fastened within and to the dome are solenoid magnets D and E whose cores or armatures 15 and 16 respectively are connected to and in conducting relation with arm 12 through the medium of pivot and elongated slot connections at 17 and 18.

The electric current may be taken from any approved source for instance the storage battery of the automobile as suggested at F. One wire from this battery leads to the pin 13. A switch arm 20 is connected to the wire 19 and may selectively engage a contact of a wire 21 leading to magnet D or a wire 22 leading to magnet E. The wires may conveniently pass into dome B through an opening 23 in the rear wall thereof.

When the switch 21 is in the position of Fig. 4 that is in contact with wire 22, the current flows from the battery through switch 21, wire 22, the field of magnet E, armature 16, pin 18, arm 12, pin 13 and wire 19, back to the battery. Under these conditions, magnet E is energized, attracting armature 16 and drawing and holding the shutter against it with the disk 11 over bulb 10, in the full line position of Fig. 1 thus overcoming the blinding glare. When it is desired that the shutter should not cover the bulb 10 switch 21 is shifted into contact with wire 21 to energize the magnet D so that its armature 15 will draw the shutter to the dotted line position of Fig. 1, the current passing from the battery through the switch 21, wire 21, magnet D, armature 15, pin 17, arm 12, pin 13 and wire 19 back to the battery.

Modifications and changes may be resorted to within the spirit and scope of the invention, for instance the form shown in Fig. 5. In this form, magnet D has been omitted and a spring 24 employed is tensioned to normally maintain the shutter in the full line position of Fig. 3, that is out of alignment with the lamp. However, the magnet E is employed as well as, armature 16, pin 18, wire 19, battery F, switch 21 and wire 22 so that the magnet E may be energized to draw the shutter, against the tension of spring 24 over the lamp as in Fig. 5. Spring 24 is fastened to casing 7 and bar or arm 12.

I claim;

In a light dimmer, a casing, a lamp therein, said casing being extended at its top to provide a dome, a lug depending from the

casing into the dome, an arm pivoted to said lug and carrying a dimmer disk, electromagnets in said dome one on each side of the arm and adapted at adjacent ends to directly abut the arm, said magnets having slidable armatures pivoted to said arm, one of said magnets being adapted to actuate the arm in one direction to dispose the disk in line with the lamp, the other of said magnets being adapted to actuate the arm in the opposite direction to inutile position, the magnets being disposed at an angle to each other and with the ends aforesaid corresponding to the angle of the arm when in engagement therewith, respectively.

In testimony whereof I affix my signature.

CHARLES S. HASH.