May 15, 1928.

1,669,753

C. P. HOEFLER

GLARE SHIELD FOR VEHICLE HEADLIGHTS

Filed June 18, 1924

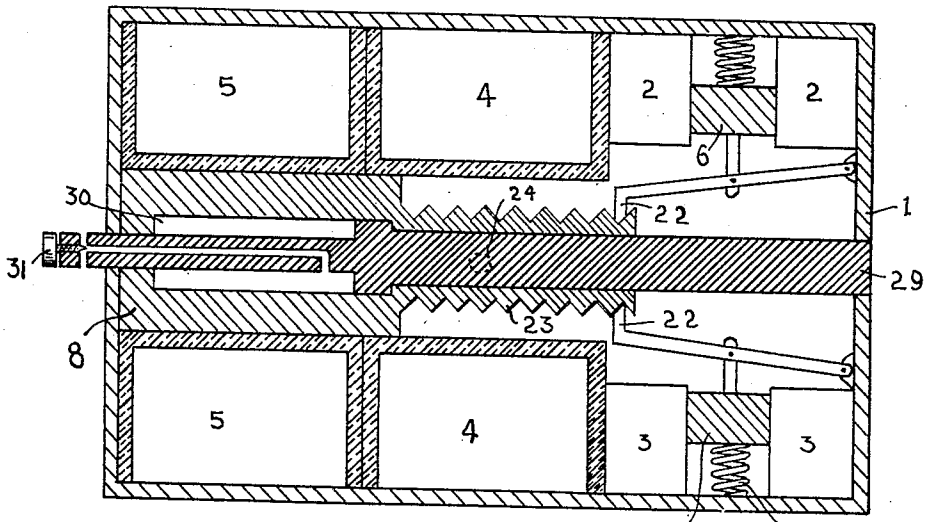


Fig. I.

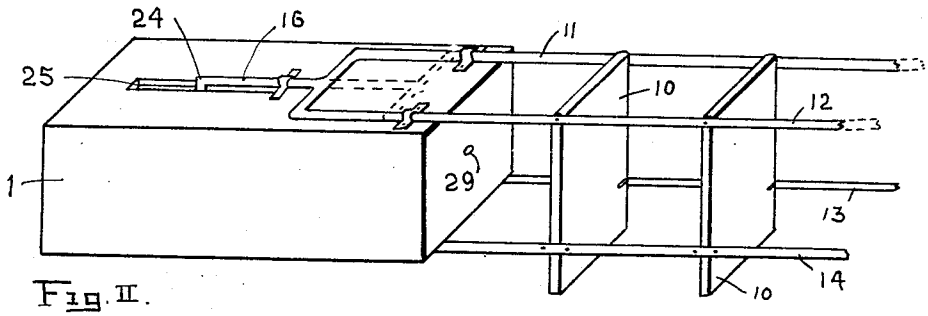


Fig. II.

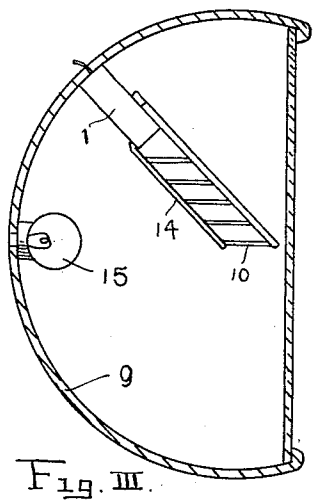


Fig. III.

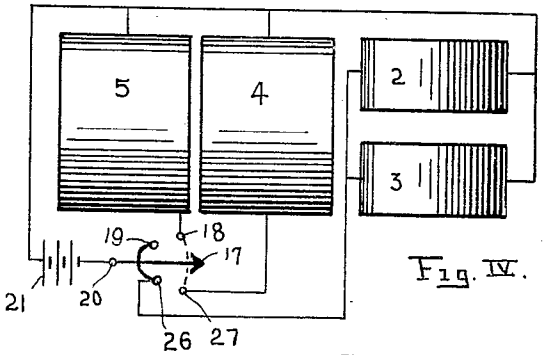


Fig. IV.

INVENTOR

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UNITED STATES PATENT OFFICE.

CARL PERRY HOEFLER, OF SYRACUSE, NEW YORK.

GLARE SHIELD FOR VEHICLE HEADLIGHTS.

Application filed June 18, 1924. Serial No. 720,842.

My invention relates to improvements in headlight shields for the elimination of glare and the objects of my improvement are, first, to provide vanes for directing the rays from the headlight; and second to provide electric means for the control of these anes.

I attain these objects by the means illustrated in the accompanying drawings, in which—

Figure I is a horizontal section of the solenoid control mechanism,

Fig. II is a perspective view of the solenoid casing with vanes attached,

Fig. III is a sectional view of the headlight with the vanes and solenoid control installed therein, and

Fig. IV is a diagram of the wiring.

The casing 1, containing solenoid windings 2, 3, 4, and 5, with their movable cores 6, 7, and 8, is attached to the headlight reflector 9. The vanes 10 are hinged to the rods 11 and 12, projecting from the end of the casing 1 and are also movably secured to rods 13 and 14 parallel therewith.

When the vanes 10 are in a horizontal position, the beams of light from the lamp 15 are directed straight to the front; when the rods 11, 12 are drawn back by the action of the solenoid 5 governing the attached arm 16, the vanes direct the beams of light upwardly. The lower rods 13 and 14 are rigidly fixed to the casing, and the dip of the vanes is controlled by the upper slidable rods 11 and 12.

The solenoids which control the tilting of the vanes are governed by the dash-board switch 17. When the arm of the switch is swung on its pivot 20 making double contact with points 18 and 19, parallel circuits from the battery 21 are closed, one through the solenoid winding 5, and a second through the solenoids 2 and 3.

The current through the windings 2 and 3 draws in the cores 6 and 7 which act on the hinged arms of the dogs 22 and release the sliding rack 23. The current which energizes the coil 5 draws its core 8, which is attached to the rack 23, into the position shown in Figure I. Since the rod 16 through its right-angular arm, sliding in the slot 25, makes attachment with the rack 23, this movement of the core draws back the tops of the vanes 10.

When the arm 17 of the dash switch is swung into double contact with switch points 26, 27, parallel circuits are closed through the solenoid winding 4 and solenoids 2 and 3. The dogs 22 are again released and the core 8 is sucked forward into the winding 4. This action pushes the tops of the vanes forward.

Movement in either direction is instantly checked by turning the switch into neutral position, for this cuts off the energy of the coils and allows the springs 28 to seat the dogs 22 so as to hold the vanes in any desired position.

The core 8 and rack 23 slide upon a fixed shaft 29, which has one end smaller of diameter than the other and surrounded by an air chamber 30 within the core 8. A central hole in the shaft 29 makes communication from this air chamber to the exterior, and a valve 31 regulates the size of the orifice. The cushioning effect of this air chamber renders a slower and more controlled action of the vanes.

I have shown the preferred position of the vanes, but it is obvious that they could be placed with equal effect outside and in front of the headlight, and that they would serve to eliminate glare, and yet would be capable of directing the light rays at any desired angle.

I claim:

A solenoid having a core, an air chamber in said core, a rod running longitudinally through said air chamber, a valve at the end of said rod, and a tunnel running longitudinally through a part of said rod and connecting said air chamber and said valve.

In testimony whereof, I hereby affix my signature.

CARL PERRY HOEFLER.