

Nov. 4, 1924.

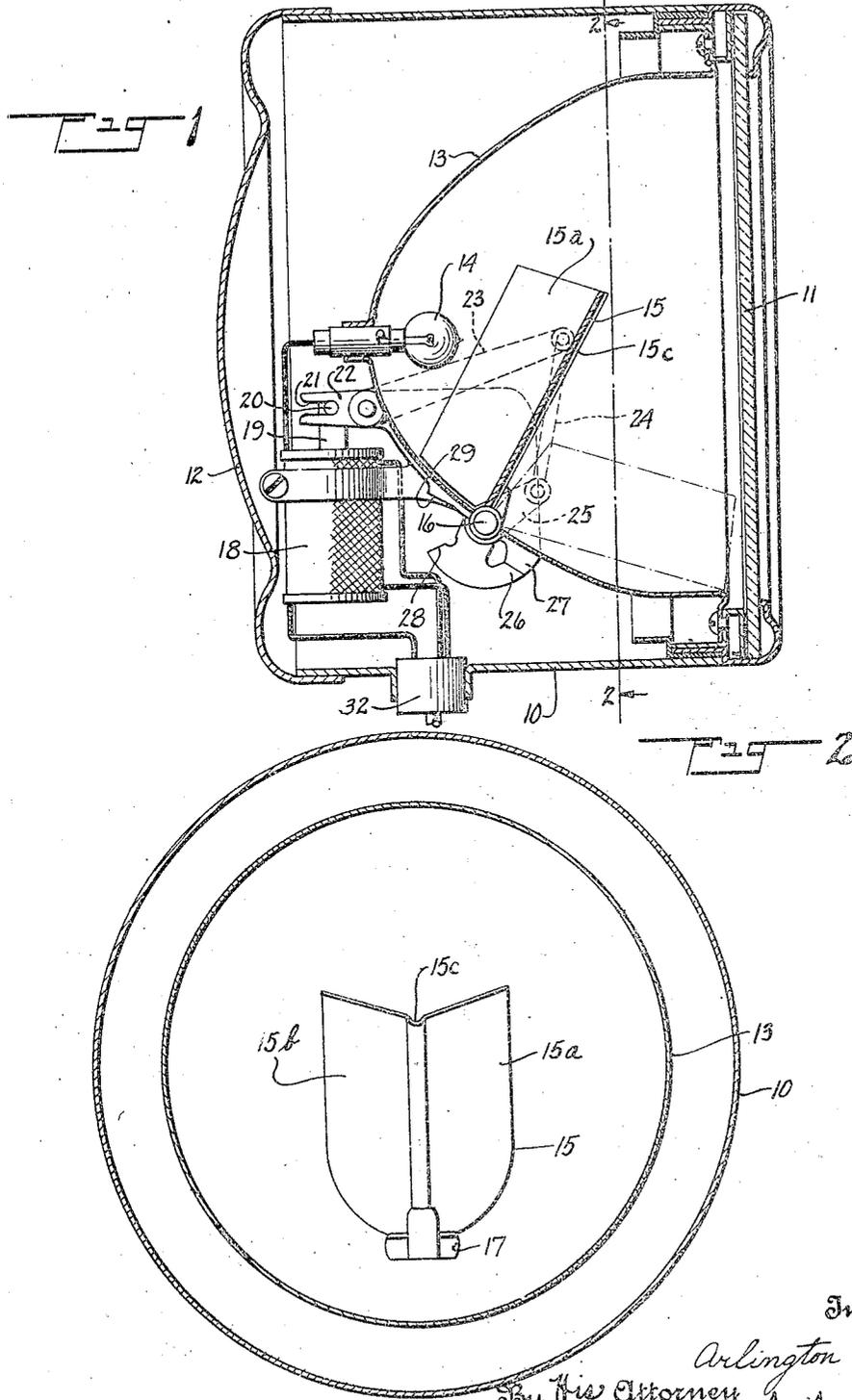
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A. MOORE

ANTI GLARE DEVICE FOR HEADLIGHTS

Filed Sept. 20, 1922

3 Sheets-Sheet 1



Inventor
Arlington Moore
By His Attorney
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Nov. 4, 1924.

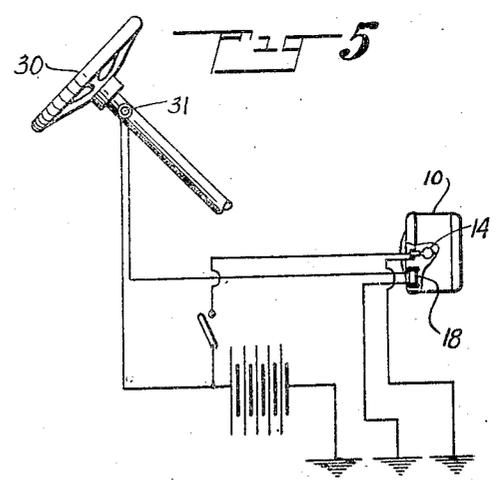
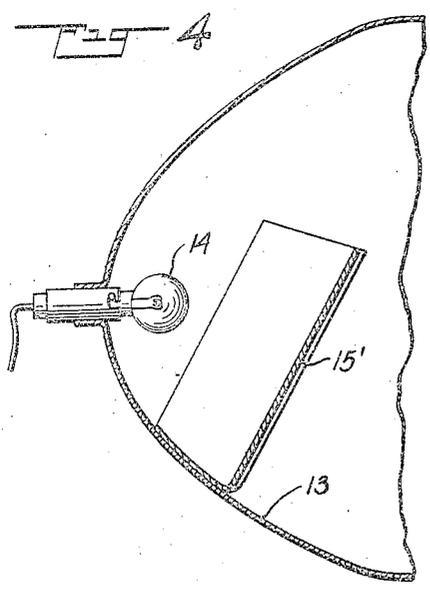
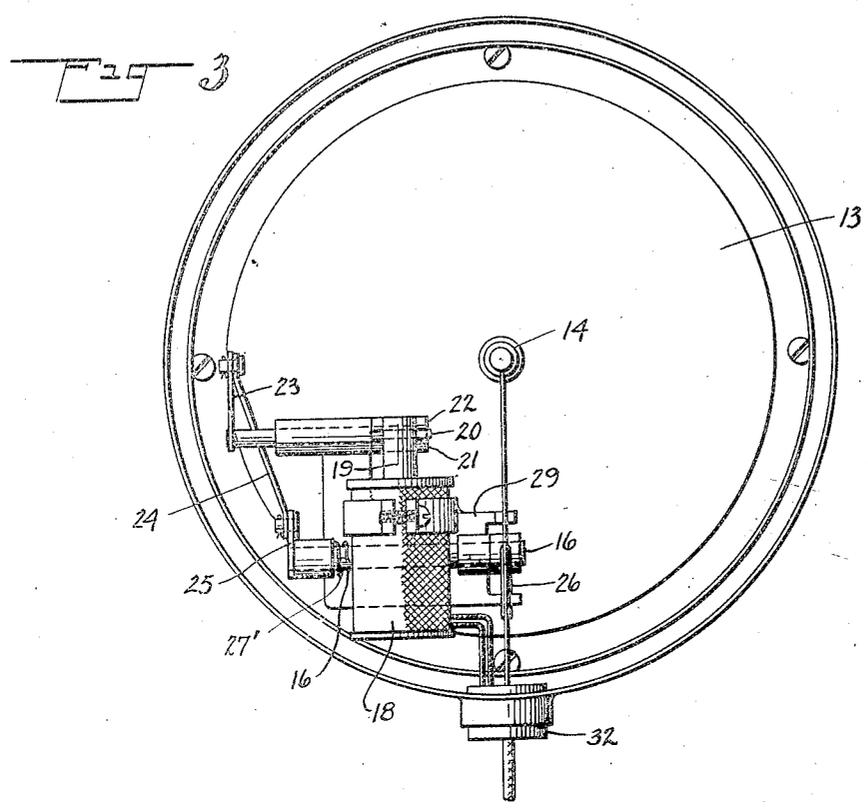
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ANTI-GLARE DEVICE FOR HEADLIGHTS

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3 Sheets-Sheet 2



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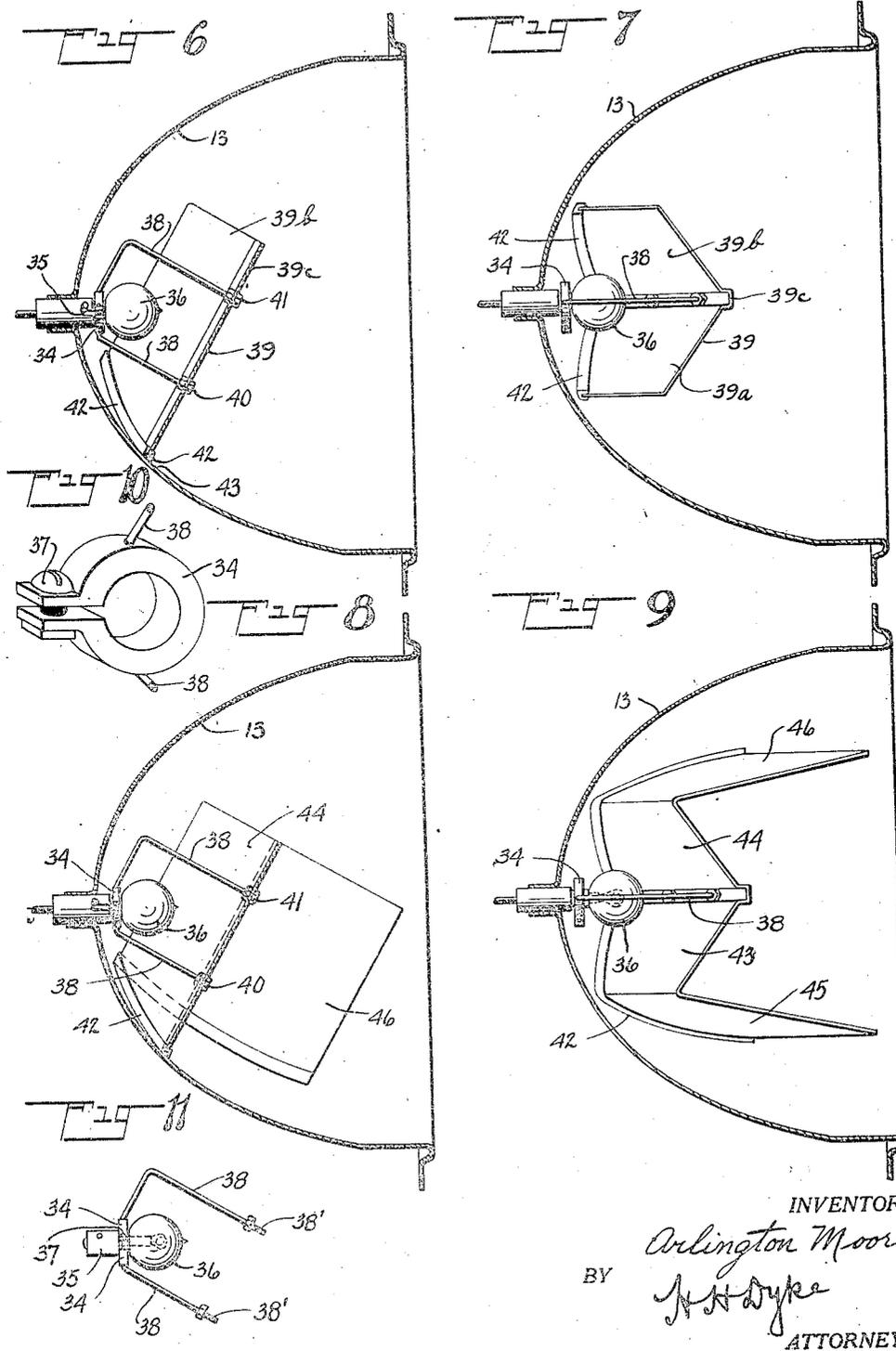
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ANTI-GLARE DEVICE FOR HEADLIGHTS

Filed Sept. 20, 1922

3 Sheets-Sheet 3



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UNITED STATES PATENT OFFICE.

ARLINGTON MOORE, OF NEW YORK, N. Y., ASSIGNOR TO MOORE INVENTIONS CORPORATION, OF WORCESTER, MASSACHUSETTS, A CORPORATION OF MASSACHUSETTS.

ANTIGLARE DEVICE FOR HEADLIGHTS.

Application filed September 20, 1922. Serial No. 599,465.

To all whom it may concern:

Be it known that I, ARLINGTON MOORE, a citizen of the United States, and a resident of the borough of Manhattan, city, county, and State of New York, have invented a new and useful improvement in Antiglare Devices for Headlights, of which the following is a specification.

The present invention has for its object to provide an efficient glare preventing device for headlights of automobiles and the like.

According to the present invention glare is prevented by interposing an opaque reflecting shield in the path of the direct rays of the lamp, whereby the glare is prevented without substantial diminution of the lighting power of the headlight.

Means are preferably provided for moving the shield to glare preventing position at will, and for causing it to move out of such position when not required. Other objects of the invention will appear in connection with the following description.

In the accompanying drawings, I have illustrated embodiments of my invention, but same are for illustration only and for affording an understanding of the invention and not for limitation of the invention. Fig. 1 is a vertical cross-sectional view of a headlight embodying one form of my invention. Fig. 2 is a transverse section on the line 2-2, Fig. 1. Fig. 3 is a back view with the outer casing removed. Fig. 4 is a cross-sectional fragmentary view of a modification. Fig. 5 is a wiring diagram. Figs. 6 and 7 are respectively vertical and horizontal cross-sectional views of a shield formed as an attachment to be connected at and supported from the lighting bulb socket. Figs. 8 and 9 are views similar to Figs. 6 and 7 of a modified form in which the shield is provided with lateral reflecting wings. Fig. 10 is a perspective view of an attaching member for use with the devices of Figs. 6-9, and Fig. 11 is a side view of the attaching means of Figs. 6-9 secured in place upon the neck of an electric lamp.

Reference character 10 indicates the headlight casing or shell having the front glass 11, rear cover 12, reflector 13 and lamp 14.

The glare prevention shield 15 is preferably of metal, silvered on the side next to the lamp 14 to act as a reflector of light

and white frosted on its opposite side. The shield shown in Figs. 1 and 2 is of V-form, with the concave side toward the lamp 14, and the convex side facing forwardly toward the glass 11, and the two leaves 15^a and 15^b are preferably joined in the rounded bead 15^c, so that the shield can be bent somewhat for fitting it to various lamps and reflectors without danger of breaking.

Means are preferably provided for turning the shield into its various adjusted positions, and in the form shown, shield 15 is secured on shaft 16 extending transversely of casing 10 in the lower part thereof and extending for a small part of its length through slot 17 in reflector 13 to permit shield 15 to be secured thereto.

Means are provided for operating shaft 16 to turn the shield 15 into its various adjusted positions, and in the form shown a magnet, solenoid or other device comprising coil 18 is provided for converting electrical energy to mechanical movement, as by causing longitudinal movement of core 19. Core 19 is provided with a pin which enters slot 21 in the rearward extension 22 of a rocking lever 23, and the rocking lever 23 is connected by the connecting rod 24 to a crank arm 25 on the shaft 16.

It will be seen that downward movement of the core 19 results in turning shield 15 to the position in front of lamp 14, shown in cross-hatched full lines in Fig. 1, being arrested in this position by stop 26 secured to shaft 16 coming into contact with stop piece 27. Gravity may be relied upon for securing the return movement of shield 15, or a spring, such as coil spring 27' on shaft 16, may be provided for this purpose.

Upon upward movement of the core 19, the shield 15 is depressed to substantially the dotted line position shown in Fig. 1, the stop 28 coming into contact with the bracket 29 and serving to stop the shield in such position.

It will be seen that the construction of the apparatus is very simple, all that is required to convert the ordinary type of headlight into a headlight equipped with glare prevention device according to the present invention being to secure the bracket 29 with its connected parts to the underside of the reflector 13 and to cut a small slot 17 through the reflector for the accommoda-

tion of shaft 16 and for securing the shield 15 into place.

The device may be controlled from any desired position, as for instance by push-button switch 30 on the steering wheel 31, and the additional wiring required for electrically operating the device may be introduced into the radiator shell along with the lamp cables through the single inlet connection 32.

It will be seen by reference to Fig. 1 that when the glare preventing shield is in its upper position, the shield is interposed in the path of the direct rays of the lamp, preventing such direct rays from blinding the eyes of the operator of an oncoming automobile, and that the lighting effect of such rays is not lost, but that the light is reflected and deflected principally toward the top of the headlight so that while the objectionable effects of a glare of direct light waves is prevented, the lighting effect is not diminished to any substantial extent, but that objects within the range of the lamp are lighted up to substantially the same extent as if shield 15 were not in place.

The prevention of glare by interposing the shield 15 in the path of the direct rays of lamp 14 is performed by the push-button 30 as readily, if not more readily, than in the case of switching from the bright headlight lamps to the so-called dimmer headlight lamps, as has recently become the practice to some extent in order to prevent glare upon the occasion of automobiles meeting one another. With the present invention, while glare is prevented, the lighting power of the lamps is not substantially diminished, whereas, with the substitution of the dimmer lamps for the bright lamps, practically all lighting power is lost and the very small electric lamps used are of use only to indicate the position of the car carrying the same and are practically useless for lighting up the car ahead or the roadway. It is, of course, well recognized that notwithstanding numerous attempts to prevent glare by specially formed headlight glasses, the desired results cannot be secured in this way, since if the effect of preventing glare is successfully attained, the light is cut down unduly, and if the light is not so cut down, the glare is not eliminated.

In Fig. 4 I have shown the glare prevention shield here designated by the reference number 15' as being rigidly secured to the reflector 13 so as to remain permanently in position to shut off the direct rays of the light and prevent glare.

In the form shown in Figs. 6-11 the shield and its support are formed as an attachment adapted for insertion in headlights already on the market or in place on automobiles and the like. Various modes of

attachment may be resorted to, but I prefer to make use of a split ring 34 adapted to be clamped upon the neck portion 35 of an electric lamp 36, as by means of the screw 37. The clamp 34 has the wire arms 38 screwed thereto, and the screen 39 is attached to the arms 38 in any suitable way, as by being bolted or soldered thereon.

The screen 39 is preferably of metal, silvered on the side next to the lamp 36 to act as a reflector of light, and white frosted on its opposite side. The shield shown in Figs. 6 and 7 is of V-form, with the concave side toward the lamp 36, and the convex side facing forwardly toward the glass of the headlight. The two leaves 39^a and 39^b are preferably joined in the flat bead 39^c, which has two holes drilled therein for the reception of the threaded portions 38' of wire arms 38, and is held in place on the wire arms 38 by nuts 40, 41 screwed thereon. A strip of rubber channel 42 is fitted on the lower edge of screen 39 to prevent scratching the reflector surface 43.

In Figs. 8 and 9 I show a modified form of screen, which is M-shaped. The light waves leaving the electric lamp strike the leaves 43, 44, are deflected to the reflector and then on to wings 45, 46, again striking the reflector, at least in part, and issue forth from the headlight in a diffused state, thereby eliminating the glare and giving good lighting effect on the road and objects close to the front of the car. The zig-zag travel of the light waves in the manner described above, from the screen to the reflector, does not detract substantially from their lighting value, but eliminates the glare caused by direct rays. The wings as 45, 46 may, of course, be made use of with the screen shown in Figs. 1-5, if desired.

With headlights provided with my invention, it becomes possible for one to look directly at the headlights, even when relatively close thereto, without being dazzled by the glare. The headlight appears as practically uniformly lighted throughout, except that there is, of course, some extra concentration of light in the neighborhood of the upper portion thereof.

Changes within the scope of my claims may be resorted to within my invention.

I claim:

1. In a headlight comprising a lamp and a reflector, a reflecting shield comprising a pair of substantially plane reflecting surfaces arranged at an angle to one another and arranged to extend upwardly below and in front of the lamp at an oblique angle, so as to reflect light rays striking the sides thereof next to the lamp laterally upward to the two sides of the reflector.

2. In a headlight comprising a lamp and a reflector, a reflecting shield of substan-

tially V-form arranged to extend upwardly below and in front of the lamp at an oblique angle. lamp at an oblique angle, the axis of the V being in a vertical plane passing through the lamp. 10

3. In a headlight comprising a lamp and a reflector, a reflecting shield of substantially V-form arranged to extend upwardly and forwardly below and in front of the In testimony whereof, I have signed my name hereto.

ARLINGTON MOORE.