A. AND R. K. BRAKE.

HEADLIGHT FOR VEHICLES.

APPLICATION FILED MAY 8, 1920.

1,395,699. Patented Nov. 1, 1921.

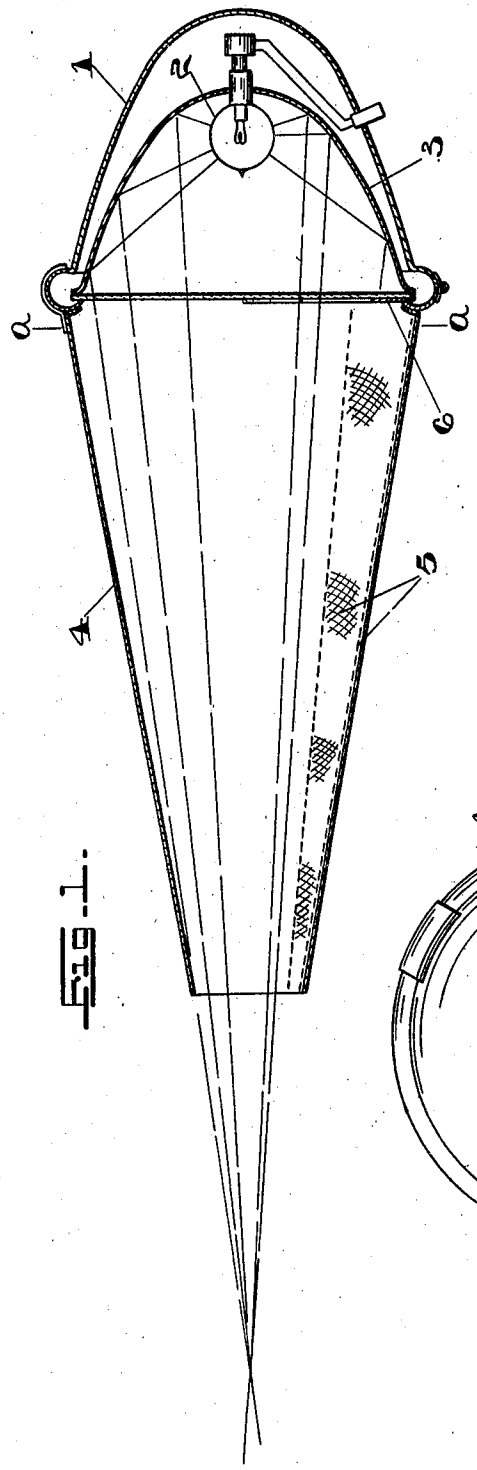


Fig. 1.

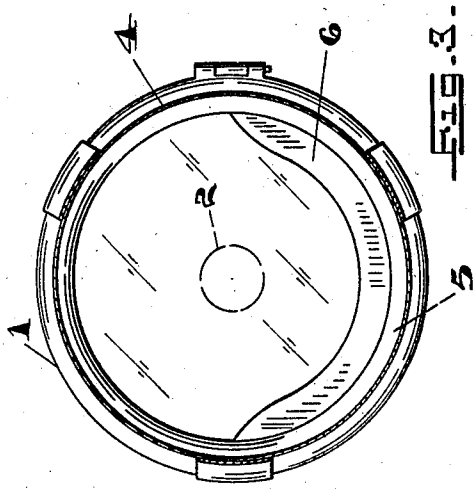


Fig. 3.

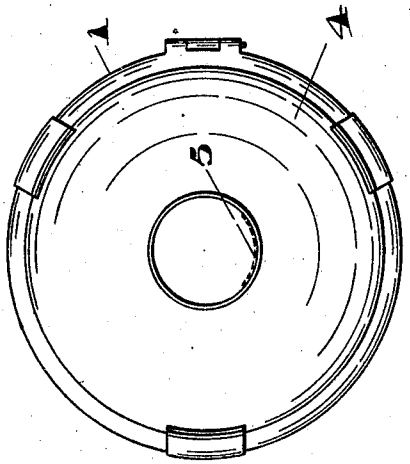


Fig. 2.

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UNITED STATES PATENT OFFICE.

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HEADLIGHT FOR VEHICLES.

1,395,699. Specification of Letters Patent. Patented Nov. 1, 1921.

Application filed May 8, 1920. Serial No. 379,933.

To all whom it may concern:

Be it known that we, ARCHIBALD BRAKE and RICHARD KENNETH BRAKE, of the city of Toronto, in the county of York, Province of Ontario, Canada, have invented certain new and useful Improvements in Headlights for Vehicles, of which the following is a specification.

This invention relates particularly to headlights adapted for use on motor vehicles and our object is to devise a headlight construction which will direct the light where it is wanted and which will prevent either direct or reflected rays reaching the eyes of the driver of an approaching car.

We attain our object by means of the constructions hereinafter described and illustrated in the accompanying drawings in which—

Figure 1 is a longitudinal section of the device;

Fig. 2 a front elevation; and

Fig. 3 a section on the line *a*—*a* in Fig. 1.

In the drawings like numerals of reference indicate corresponding parts in the different figures.

1 is a headlight in the main of ordinary construction provided with a source of light 2, which is usually an electric bulb. The reflector 3 is preferably formed as a true paraboloid of revolution. The source of light is so located relative to the reflector 3 that the direct rays of light striking the reflector and reflected therefrom are brought to a focus at a point some distance in front of the reflector, thereafter forming a diverging beam. The optical axis of the device will preferably be inclined somewhat downwardly so that the upper surface of the beam of light will not rise sufficiently high to strike the eyes of the driver of an approaching vehicle. To cut off direct rays and reflected rays which might otherwise rise sufficiently high to be objectionable to the driver of an approaching vehicle, we provide the tubular shield 4, which is extended sufficiently far forward and has its outer end sufficiently contracted to entirely shield the source of light from the eyes of a driver of an approaching vehicle and also to cut off any stray rays from the reflector which may tend to rise above the horizontal. We have found that satisfactory results can be obtained if the tubular shield is in length somewhat about twice the greatest diameter of the mouth of the reflector and if the opening at its forward end be something less than one-third of such diameter.

In order to better absorb any rays which might strike the underside of the tubular shield at a small angle and be reflected out through the opening in the end thereof, we cover the under side of the shield with wire netting 5, which we find completely breaks up the rays of light striking it and which is, of course, of a dark color. Even with the tubular shield as described, it is still found that there is the possibility of rays from the reflector passing out through the opening in the end of the shield with an upward inclination. We therefore locate at the front of the reflector 3 and at the lower side thereof a crescent-shaped shield 6 which we find satisfactorily attains our object.

What we claim as our invention is:—

1. A headlight comprising a source of light; a reflector positioned with regard to the source of light to produce a converging beam of light; a tubular shield extending forward from the reflector well toward the principal focus of the beam and having an opening at its forward end of sufficient size to permit only of the passage of the focused rays and direct rays diverging but slightly from the optical axis, and having a light absorbing inside surface along its lower part; and a crescent-shaped shield at the forward edge of the lower part of the reflector adapted to eliminate stray light which normally would be reflected from the lower part of the reflector with an upward inclination out through the opening of the tube.

2. A headlight comprising a source of light; a reflector positioned with regard to the source of light to produce a converging beam of light; a tubular shield extending forward from the reflector well toward the principal focus of the beam and having an opening at its forward end of sufficient size to permit only of the passage of the focused

rays and direct rays diverging but slightly from the optical axis, and having a light absorbing inside surface along its lower part formed of wire netting; and means for eliminating stray light which normally would be reflected from the forward edge of the lower part of the reflector out through the opening of the tube with an upward inclination.

Signed at Toronto, Canada, this 23rd day of April, 1920.

ARCHIBALD BRAKE.
RICHARD KENNETH BRAKE.