

Nov. 26, 1929.

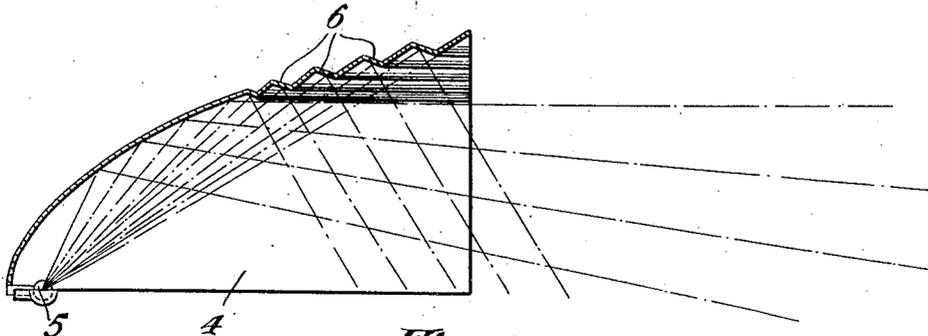
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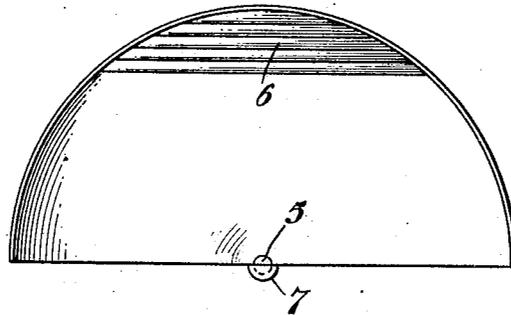
HEADLIGHT

Original Filed Dec. 13, 1924

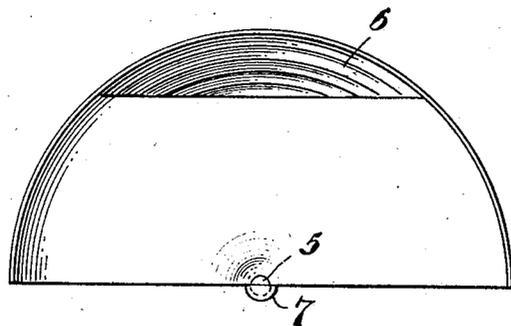
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



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# UNITED STATES PATENT OFFICE

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## HEADLIGHT

Application filed December 13, 1924, Serial No. 755,596. Renewed January 18, 1928.

This invention relates to headlights, such as are used, for instance, on automobiles. The object of the invention is to provide a headlight having reflecting means so designed and so arranged with respect to the illuminating means that substantially no diffused light is cast upwardly above the headlight. Blinding glare upwardly of the headlight is thus avoided, and full benefit of all the light is obtained by reflecting it downwardly upon the roadway.

Other objects and aims of the invention, together with the advantages inherent, will be in part obvious and in part specifically referred to in the course of the following description of the elements, combinations, arrangements of parts, and applications of principles constituting the invention; and the scope of protection contemplated will appear from the claims.

In the drawings, which are to be taken as part of this specification, and in which I have shown merely a preferred form of embodiment of invention,

Figure 1 is a vertical sectional view illustrating a headlight embodying the invention;

Figure 2 is a front view of the same; and

Figure 3 is a view similar to Figure 2, showing a modification.

Referring to the numerals on the drawings, there is shown at 4, the half of a reflector which is in general of the parabolic type, with the light 5 located near what would be the focal point if the reflector were complete, the focal point being substantially in the plane which is to be assumed as bisecting the complete reflector horizontally and axially in order to produce the half reflector shown. As indicated by dot-and-dash lines, the reflected rays are directed forwardly and slightly downwardly. It is advantageous also to provide reflecting strips 6 at the forward portion of the reflector. These may be formed in the reflector by bending the material thereof, or they may be separately formed and attached. And they may extend horizontally as in Figures 1 and 2, or they may be arcuate, as in Figure 3. In any case, they provide surfaces so inclined and so related to the light 5, that light rays are thrown sharply

downward therefrom (see dot-and-dash lines of Figure 1).

The light, which will ordinarily be an incandescent electric bulb, is provided with a reflector 7, so positioned that rays from light 5 will be thrown upwardly against the reflecting surfaces of the half parabolic reflector 4, and thence downwardly and forwardly, and so that none of the light rays are wasted.

I claim:

1. A headlight having the form of the upper half of a parabolic reflector that has been divided along a horizontal plane passing substantially through what would be the focal point of the complete reflector, a light located at the focal point, and a reflector below the light for reflecting the rays therefrom against the reflecting surfaces of the main reflector, the main reflector being provided in its forward upper portion with a segment of stepped reflecting surfaces, extending transversely but distinctly short of the lower edges of the main reflector, for reflecting rays from the light sharply downward.

2. A headlight having the form of the upper half of a parabolic reflector that has been divided along a horizontal plane passing substantially through what would be the focal point of the complete reflector, a lamp located at the focal point, a reflector below the light and closely conforming to the lamp, the main reflector being formed in its forward upper portion with a series of transverse ridges so as to throw rays from the lamp sharply downward.

In testimony whereof I affix my signature.

WILLIAM H. SCHOONMAKER.