

L. GOLDIE.
HEADLIGHT BEAM MODIFIER.
APPLICATION FILED JULY 19, 1919.

1,333,482.

Patented Mar. 9, 1920.

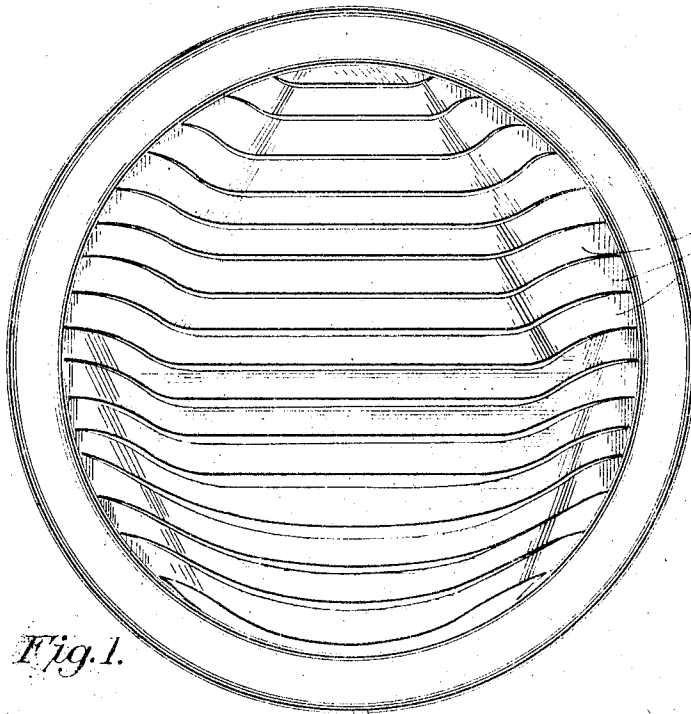


Fig. 1.

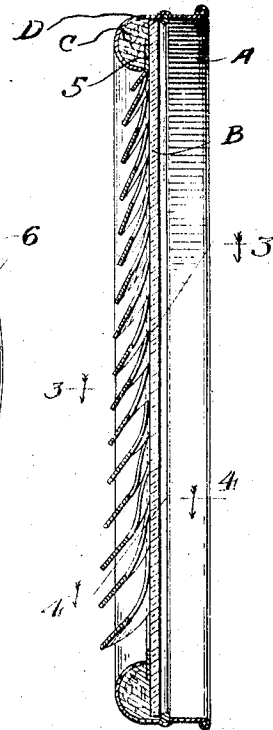


Fig. 2.

Fig. 3.

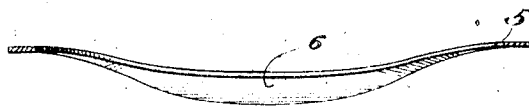
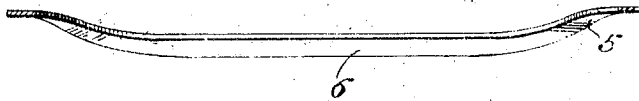


Fig. 4.

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HEADLIGHT-BEAM MODIFIER.

1,333,482.

Specification of Letters Patent.

Patented Mar. 9, 1920.

Application filed July 19, 1919. Serial No. 312,010.

To all whom it may concern:

Be it known that I, LOUIS GOLDIE, a citizen of the United States, residing at Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Headlight-Beam Modifiers, of which the following is a specification.

My invention relates to a headlight beam modifier, and is especially applicable to the headlights of automobiles, locomotives, and other instances where it is desirable to deflect or diffuse light beams.

The primary object of my invention is to improve as well as to cheapen the construction of devices of this general character, to which end one feature of the invention consists in constructing the device contemplated by the invention, in its preferred form, of a metal mask piece which is adapted to overlie the lens of the headlight, and to construct the mask piece with a plurality of cut and stamped overlapping shutter sections, the sections being so positioned as to deflect the beams radiating from the headlight in a downwardly direction and thus overcome the blinding effect presented to an approaching vehicle. While the shutters are so constructed as to deflect the light beams in a downwardly direction, I of course so arrange the angle of deflection that the light may be reflected a sufficient distance ahead of the vehicle to enable its driver to take advantage of the benefits of the light. While these features constitute the primary objects obtained by my invention, certain other minor details, which are an improvement over known devices, are of importance, but these latter will be referred to in the following detailed description of the accompanying drawing.

In said drawing—

Figure 1 is a front elevation of a conventional form of headlight, illustrating the application of the invention;

Fig. 2 is a side elevation in section;

Fig. 3 is a sectional view on the line 3—3 of Fig. 2; and

Fig. 4 is a sectional view on the line 4—4 of Fig. 2.

Before referring to the drawing by numerals of reference, I wish to mention the type of headlight front cover piece which I have illustrated in the drawing. In some instances headlights are provided with flat lenses, and in other instances the lenses are constructed of curved or oval shapes. My

invention is applicable to any form of lens, either curved or flat. For this reason, the illustration shown should not be construed as limiting the use of the idea to flat lenses. 60

Referring now to the drawing in detail, A represents the front cover piece of a headlight. As is usual in these cover pieces, the lens B is adapted to be confined by means of the annular integral ring D and the cushioning packing C. The inner face of the ring D provides a substantially wide bearing surface for the outer edge of the lens, the packing C being used, as stated, to produce a cushioning effect. When the cover is applied to the headlight, the rim of the headlight will serve as another bearing surface for the edge of the lens opposite the inner face of the ring D. The mask piece contemplated by my invention is constructed of a single piece of metal having an annular edge or flange 5, which is confined between the lens and the inner face of the ring D. The mask piece covers the entire face of the lens and is constructed with a plurality of overhanging shutter sections 6. To produce the desired results I prefer and consider it exceedingly important, that the shutter sections be constructed in wavelike formation. They may be cut and stamped from the mask piece, the wavelike formation being produced by stamping them with upwardly extending ends terminating in an integral annular edge. It is to be noticed that, while all of the sections have these upwardly extending ends, some of them, namely, those from the top to the center of the mask piece, are provided with horizontal intermediate portions, while the intermediate portions of those sections near the bottom of the device are constructed curved. At the time of cutting and stamping the sections, or, indeed, even after this operation has been completed, the desired angle or overlapping relation of the shutters to one another may be accomplished. I desire to construct the shutters with an increased depth from the top to the bottom of the device, and in this manner produce each shutter section with an individual light deflecting position. In other words, the light beams deflected by the uppermost shutters will be deflected downwardly more abruptly than the beams deflected by the shutters at the lower part of the device. Therefore, the angle of deflection of the light beams will be increased in a downwardly direction 110

from the bottom to the top of the mask. This is done because the beams radiating from the lower part of the projector need not be deflected as much as those radiating
 5 from the top, as they are not so much in the path of the vision of the operator of an approaching vehicle. The peculiar formation of the shutter sections also leaves an
 10 unobstructed space between their overhanging portions, and it is to be noted that this space increases in width from the top to the bottom of the device. I can of course
 15 adjust the angle of the shutters to any desired degree, by bending the web portions, but in most instances the desired angle or
 overhanging relation of one section to the other will be permanently fixed by the cutting and stamping operation.

Claims.

20 1. A headlight beam modifier, comprising a mask adapted to overlie the headlight

projector, said mask embodying in its structure a plurality of overhanging shutter sections, increasing in depth from the top to the bottom and disposed in wave-like formation, all of the sections having inwardly and
 25 upwardly extending ends, some of the sections having horizontal intermediate portions and others of the sections having downwardly curved intermediate portions, 30
 whereby the light beams radiating from the projector will be deflected downwardly, with the angle of deflection increasing in a downward direction from the bottom to the top
 35 of the mask.

2. A head light beam modifier such as set forth in claim 1, in which the shutter sections with the downwardly curved intermediate portions are located in the bottom part of the device.

LOUIS GOLDIE.