

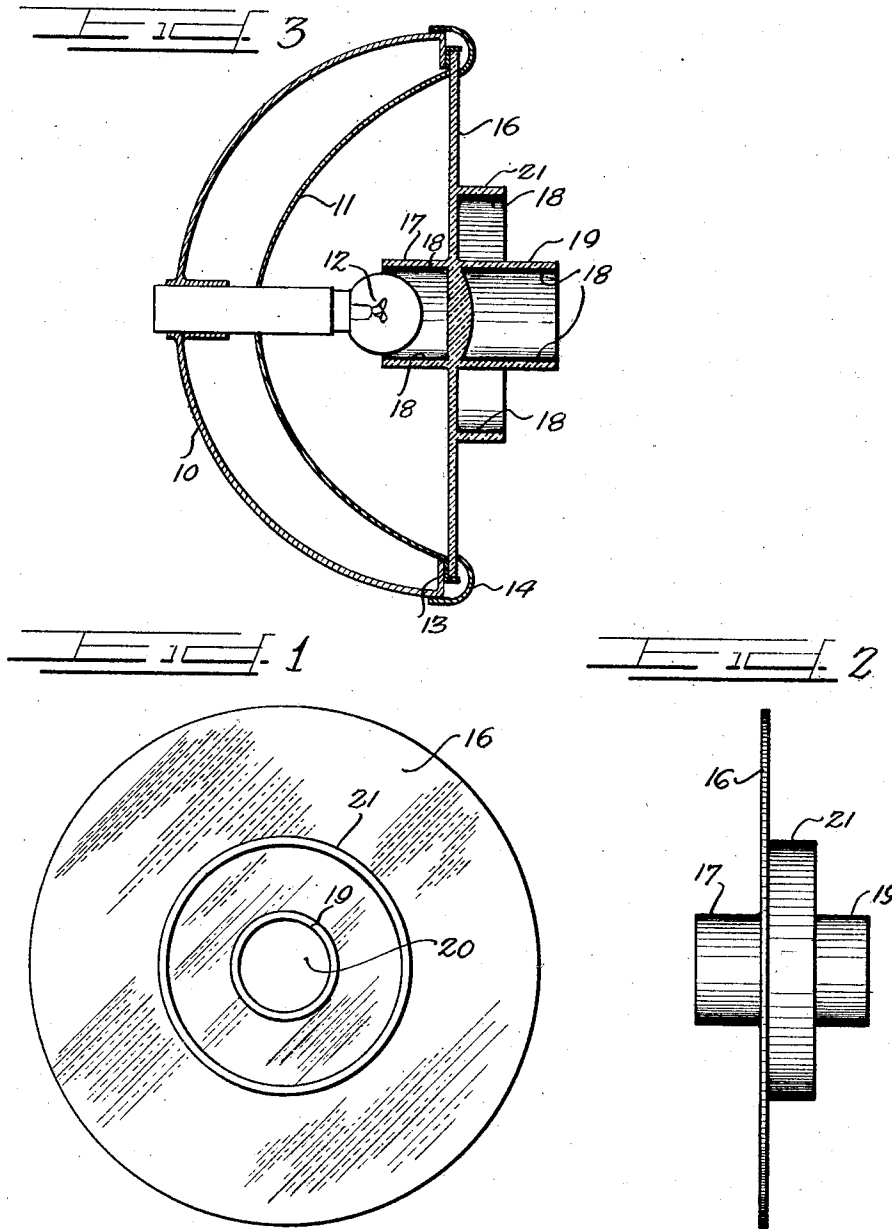
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HEADLIGHT LENS

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UNITED STATES PATENT OFFICE.

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HEADLIGHT LENS.

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This invention relates to lenses for headlights, spotlights, searchlights and the like.

It is an object of this invention to avoid the production of glare outside the area directly in the path of the light rays from the reflector. I have found that a satisfactory test for glare comprises whether or not the lamp filament itself is visible; i. e. the direct vision of the lamp filament is the cause of the glare or momentary blindness caused to observers standing out of the reflected and concentrated light beam. At the same time the direct rays from the filament serve a useful purpose in providing a diffused and less intense light around the concentrated beam from the reflector, so that the concentrated beam itself is less objectionable, because merging more gradually in the surrounding darkness. It is therefore not desirable to destroy the direct rays from the filament by means of a honeycomb arrangement or opaque bulb shield, for example, nor is it desirable to use prisms in the lens because such prisms equally and disastrously affect the concentrated beam of light from the reflector. It is therefore an object of this invention to so modify the direct rays from the lamp filament as to remove the objectionable glare therefrom while retaining the advantages of diffused lighting around the concentrated or principal beam of parallel light rays.

Other and further important objects of this invention will be apparent from the disclosures in the specification and drawings.

The invention (in a preferred form) is illustrated in the drawings and hereinafter more fully described.

On the drawings:

Figure 1 is a front view of a lens embodying the feature of this invention.

Figure 2 is a side or edge view thereof.

Figure 3 is a sectional elevation of a lens applied to a reflector or lamp casing.

As shown on the drawings:

A lamp housing 10 is shown with a reflecting surface 11 which is preferably so generated as to produce a nearly parallel beam of reflected light rays from a light

source 12 comprising an incandescent electric lamp filament. The housing 10 has the usual lens mounting flange 13 and clamping rim 14. The housing reflector and light source mounting are conventional illustrations of commercial practice comprising no part of the present invention, which relates to the lens proper.

The lens comprises a plane surface transparent closure 16 for the housing and reflector and may be made of clear glass or the like. Mounted in the rear face of the closure and preferably fused thereto is a cylinder 17 of stained transparent material, blue glass being an example having the desired active properties. This cylinder is designed to be slightly larger than the outside diameter of the light bulb and is extended back far enough to intercept all forwardly projected light rays from the lamp filament. It is not essential that this cylinder shall be of stained material, the stain may equally well be applied as a surface coating and wherever such stained material is called for in the claims it is to be understood that it is either embodied in the material or applied as a coating. The interior surface 18 of this cylinder is ground or otherwise treated to produce a translucent surface to prevent direct vision of the lamp filament while permitting the passage of a considerable portion of the light rays in the form of a spreading cone of diffused light.

A similar cylinder 19 is mounted on the front of the lens surrounding a bullseye or plano convex lens 20 which serves to give a highly concentrated central beam of light for distant illumination, the surrounding cylinder serving to prevent direct vision of the concentrated beam by a person not directly in the path thereof. A second and larger cylinder 21 is concentrically mounted with respect to the cylinder 19 and serves to augment the dispersal effect of the rearwardly projecting cylinder 17. It is to be understood that both the cylinders 19 and 21 are treated in the manner described in connection with the cylinder 17 and that this

treatment serves to give a translucent light passing surface that the filament cannot be seen through.

I claim as my invention:

- 5 In combination in a headlight lens, a transparent closure, a transparent cylinder secured to the rear surface of the closure, said cylinder extending back into the plane of the headlight bulb filament, concentric
10 cylinders secured to the front surface of

said closure, one of which is aligned with the first mentioned cylinder, a convex lens formed in the closure between said aligned cylinders, and a stained and translucent surface formed on the interior surfaces of said cylinders. 15

In testimony whereof I have hereunto subscribed my name.

CHARLES W. SIPPEL.