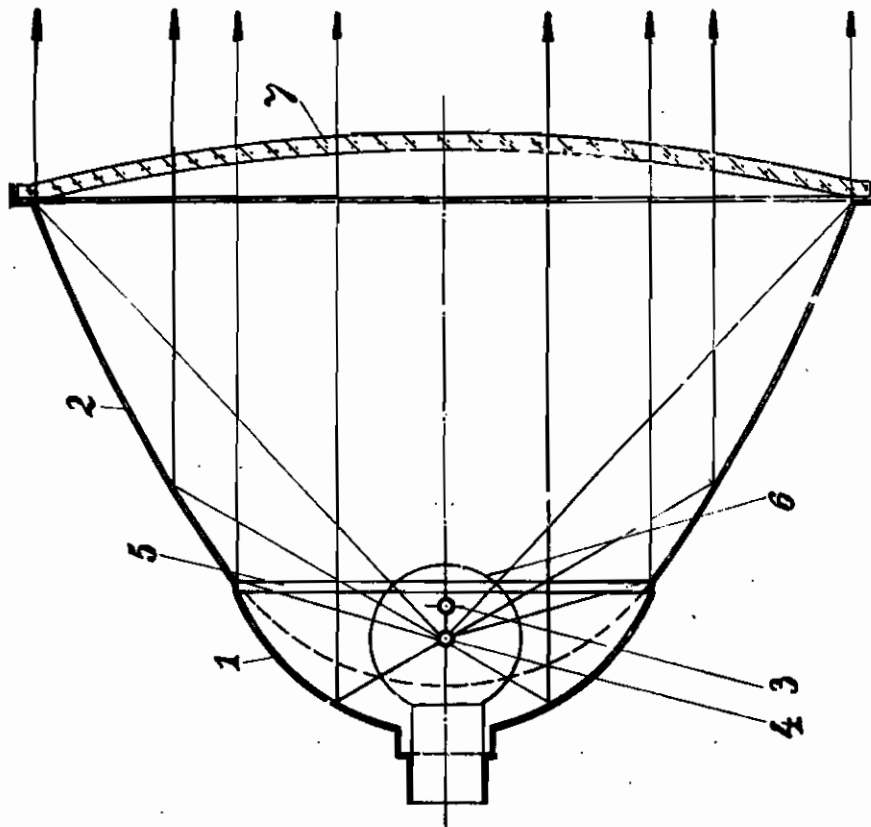


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F. R. DIETRICH  
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AN ELLIPSOIDAL VERTEX PART AND A  
PARABOLOIDAL BORDER PART  
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Friedrich Richard Dietrich  
INVENTOR  
By *O. W. Mink*  
his ATT'Y.

# ALIEN PROPERTY CUSTODIAN

## REFLECTORS FOR HEADLIGHTS CONSISTING OF AN ELLIPSOIDAL VERTEX PART AND A PARABOLOIDAL BORDER PART

Friedrich Richard Dietrich, Munich, Germany;  
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Reflectors possessing an ellipsoidal vertex part and a paraboloidal border part are known. The focuses of both parts coincide with such reflectors. The converging pencil of rays produced by the ellipsoidal vertex part is directed approximately parallel by a lens.

The present invention has for its object availing itself of such a reflecting combination without the necessity of using a light-absorbing lens.

The invention consists in the source of light lying nearest the focus of the paraboloidal border part and de-focused in relation to the focus of the ellipsoidal vertex part in direction to the vertex of same.

The attached drawing shows a form of execution of the reflector according to the invention in longitudinal section.

The reflector consists of an ellipsoidal vertex part 1 and the paraboloidal border part 2. The ellipsoidal vertex part 1 has the focus 3, whilst the paraboloidal border part 2 shows focus 4. The common plane of separation 5 of the two parts 1 and 2 lies in front of the two focuses 3 and 4. This is, however, not absolutely necessary.

The filament of the incandescent lamp 6 lies in or near the focus 4 of the paraboloidal border part 2.

The rays emanating from the source of light are thus directed approximately parallel to the paraboloidal part 2 as drawn.

Also the filament of the incandescent lamp 6 being arranged de-focused in relation to focus 3 of the ellipsoidal vertex part 1 in the direction to the vertex of same, approximately parallel rays of light are likewise reflected by the ellipsoidal vertex part 1 which fact has for its consequence that a lens directing the rays parallel such as was required formerly, may be dispensed with henceforth.

The aperture for the emanation of light of the headlight may be covered by a simple glass pane 7 which may be provided with additional diffusing channels.

The headlight is also particularly suitable for use with electric incandescent lamps and other lamps having apart from a main source of light another secondary source of light which is covered below and serves for screening. In this case the main source of light would lie again as before nearest focus 4 of the paraboloidal border part 2, whilst the secondary source of light covered below would lie near focus 3 of the ellipsoidal vertex part 1 in such a manner as to lie nearer focus 3 than focus 4.

If the focuses 3 and 4 coincided in the manner known, the de-focusing of the secondary source of light would be the same for the common focus, as the main source of light would have to lie in the common focus.

The consequence thereof would be that unless a lens directing the rays parallel be used, converging rays of light emanating from the ellipsoidal part would lie far below the border of darkness of the rays of light emanating from the paraboloidal part. As in the present case the secondary source of light lies nearer the focus of the ellipsoidal part than the focus of the paraboloidal part, it is achieved that the borders of darkness of the light of both parts of reflexion lie approximately on the same level.

Besides, a paraboloidal reflecting part of very short focal length (= distance of the focus in the vertex) may be used according to the invention. Apart from the fact that a lens is no longer required, a considerably greater utilisation of space angle is achieved as compared to the known reflecting combination with common focuses. The main source of light is thereby brought nearer the vertex of the ellipsoidal part, and by this vertex the utilisation of the space angle is increased, of course.

As compared to the known reflecting combination with common focuses a considerable diminution of the disturbance of dazzling is achieved with the headlight according to the present invention due to the fact that the secondary source of light lies near the focus of the ellipsoidal vertex part, by which, consequently, a converging pencil of rays directed downwards is produced which possesses in the middle a dark zone caused e. g. by the formation of shadow of the incandescent lamp, fitting, glass bulb etc.

Thus these converging rays of light can never produce any dazzling effect, although the reflection of the source of light is very great in the vertex. Besides an extraordinary lateral diffusion of the dimming light is caused without any additional diffusing elements on the covering glass.

A parallel direction of the rays of light cannot be achieved by aid of a reflector consisting of one single ellipsoid by de-focusing the source of light in relation to the focus, as the border zones removed from the focus would not react on the focusing.

FRIEDRICH RICHARD DIETRICH.