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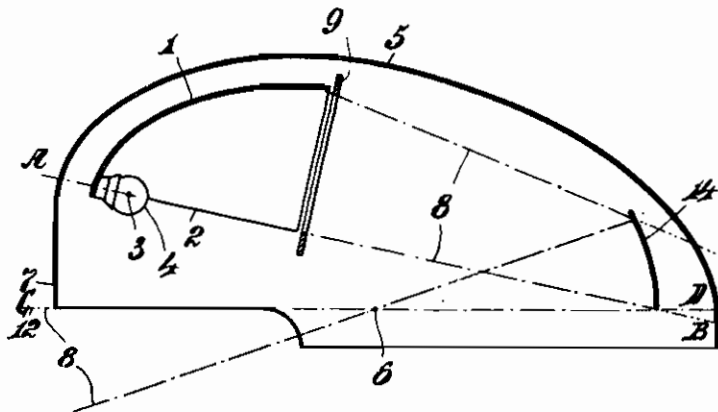
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VEHICLE LAMPS

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ALIEN PROPERTY CUSTODIAN

VEHICLE LAMPS

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For effective avoidance of dazzle by the head lights of a road vehicle the lamp itself, and the reflector, must be screened from direct view from the front, at least up to the level of the eyes of approaching drivers and pedestrians, and the projected beam must be sharply defined at the top, without upward diffusion liable to dazzle.

Screens for preventing direct view of the lamp and reflector have been used. The object of my invention is to provide for the sharp demarcation above referred to, with the brightest light directly below the dark zone above the beam.

For that purpose I project the section through the rays of light of an optical system with light source in focus by means of a concave mirror.

A form of construction is shown in the accompanying drawing. The reflector 1 is a sector of an ellipsoidal body with an approximately horizontal bottom edge 2. At the focus 3 there is a lamp 4, and the reflector 1 is inside a housing 5, extending rearwards. Before the inner back part of the housing 5 is disposed a concave mirror, directed with its concave side to the reflector 1.

In the path of the pencil of rays 8 reflected by the reflector there is a diaphragm 9. Within the housing is disposed before the diaphragm 9 a concave mirror 14. The optical axis C—D of the mirror makes an acute angle with the axis A—B of the reflector and the focus of the mirror is approximately in the plane of the diaphragm. The second focus 8 of the reflector 1 is by the effect of the mirror 14 an unreal. The mirror 14 may be disposed before or behind the real second focus of the reflector 1. The housing 5 has on the front part a prolongation portion

7, which extends approximately until to a line 12 being the line of demarcation of the rays reflected by the mirror 14. It will be seen that all or practically all the light projected by the reflector issues below the edge of the part 7, as the rays diverge from the focus 8 close to this edge. The mirror 14 projects that section of the beam across which the diaphragm 9 lies, the result being that the rim of the diaphragm aperture produces a sharply defined demarcation 12 of the beam. Actually the sharp demarcation is only of importance at the top edge 12. It serves as a guide or pointer for adjusting the vehicle lamp so that it illuminates a long stretch of road in front without diffuse rays at a level where they may dazzle approaching drivers or pedestrians.

A sharp line of demarcation 12 is not obtained unless the focus of the mirror 14 is approximately in the plane of the diaphragm. If the focus is at any considerable distance from that plane the outline is blurred.

The projection of the section through a beam of light in the range of a diaphragm with a concave mirror is till now unknown and of a great advantage. While the thickness of a lens is remarkable and is destined by the situation over the diaphragm, the thickness of the mirror is uniform and can be likely slight. The loss of light is consequently small and there are not irregular rays. A lens must be of glass, whereas the mirror can be of metal. The mirror is disposed completely protected by the housing. A lens must be near the aperture of the housing.

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