

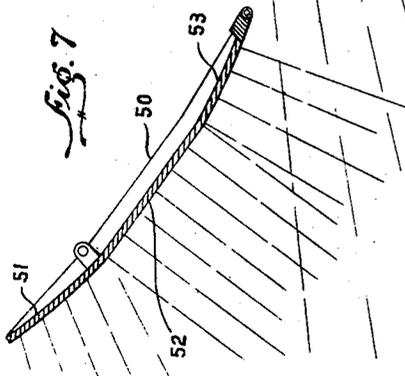
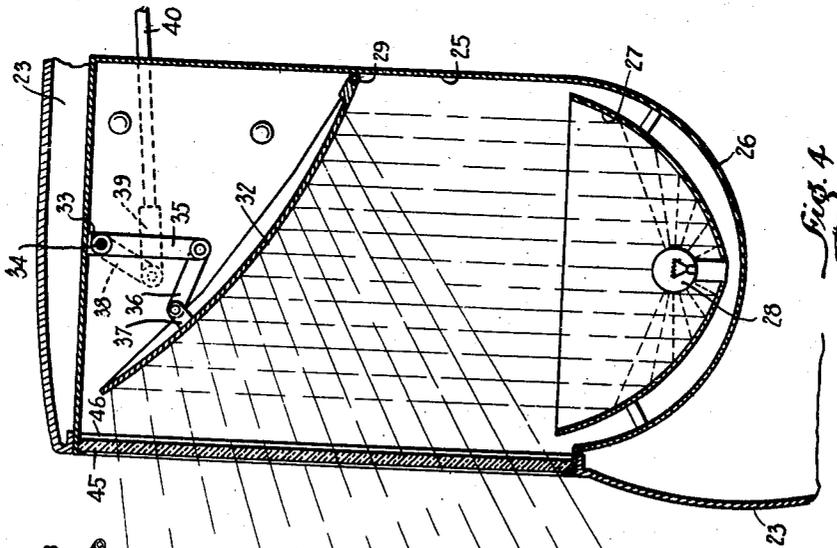
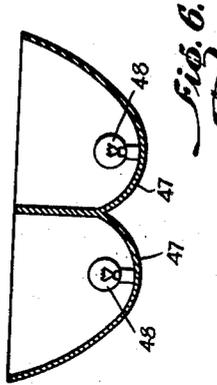
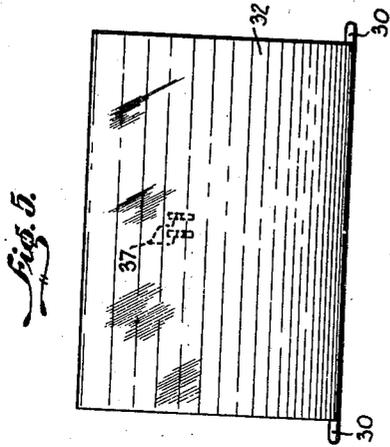
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AUTOMOBILE NONGLARE HEADLIGHT

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AUTOMOBILE NONGLARE HEADLIGHT

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1 Claim. (Cl. 240—41.1)

This invention relates to lighting devices, and more particularly to such as are used for lighting the roadway from moving vehicles carrying headlights.

5 It is a notorious fact that the ordinary arrangement of lights used for such purposes have a blinding effect upon pedestrians, and drivers of other vehicles; that the light is frequently directed either too high or too low, and seldom
10 where it should be, directly on the roadway in advance of the vehicle.

It is therefore, the main purpose of the present invention to produce a nonglare light in which direct rays from the source of illumination are prevented from being visible, the rays being directed by fixed and movable reflectors, the latter controllable from the interior of the vehicle, so that the light is directed outwardly in beams which diverge from a horizontal plane upon the
20 roadway.

A further feature is in the provision of means whereby such light direction may be obtained in an efficient and practical manner by novel reflectors set at such angle as is found most advantageous.
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Another purpose is to produce a nonglare headlight so disposed as to be protected from accidental breakage by a safety housing located at the sides of the vehicle in compartments within the wheel or mud guards at the front.
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These purposes are accomplished by the novel construction, arrangement, and combination of simple parts as hereinafter described and shown in the accompanying drawings forming a component of this disclosure and in which—
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Figure 1 is a partial side elevational view of a conventional type of automobile showing an adaptation of the invention as applied thereto.

40 Figure 2 is a fragmentary front elevation thereof.

Figure 3 is a fragmentary cross sectional view of the outer lens taken on line 3—3 of Figure 2.

45 Figure 4 is an enlarged vertical sectional view of a lighting unit, showing the manner in which it is arranged.

Figure 5 is a front elevational view of the movable reflector and its associated parts.

50 Figure 6 is a fragmentary, sectional view showing a double means of illumination.

Figure 7 is a sectional view showing a modified form of inclinable reflector.

55 The theory of this method of illumination is that the rays from the light source are redirected from the parabolic reflecting surface in a beam

of parallel light rays; as the parallel rays strike the upper reflecting surface they are again re-directed downward from a slightly lower than horizontal position to the lowest which strikes the ground line a short distance from the lighting device. 5

The upper reflecting surface is developed from the principle that light is reflected at an equal angle from which it comes. Or more explicitly: if at any point on the reflectory surface, a light ray is directed from the parabolic reflector, and a line drawn through the point of contact tangent to the surface of the upper reflector and a perpendicular erected at that point, the reflected ray of light and the directed ray of light will make an equal angle with the perpendicular. 10 15

Therefore, in order to obtain a desired range of redirected rays from the parabolic reflector, a series of such points are selected so that the resultant surface of the upper reflector assumes the proper curvature. 20

Referring in greater detail to the drawings, the numeral 15 indicates the mid portion of a conventional type of automobile body, having a door 16, over a running board 17, while over the engine is a motor hood 18; the front bumper 19, steering wheel 20, instrument board 21 and dirigible wheels 22, over which are guards 23, being all of the usual type of construction. 25 30

The wheel guards 23 have fixed in their front ends housings 25, generally rectangular with concavely curved bottoms 26, in which is secured a parabolic reflector 27 carrying a lamp 28 in its lower portion. 35

Midway in the height of the housing rear wall are brackets 29 to receive pintles 30 extending oppositely outward from the lower edge of a plate reflector 32, curved outwardly throughout its length, which nearly equals the width of the housing. 40

Brackets 33, extending downwardly from the top of the housing, support a shaft 34 on which is secured one end of a link 35 pivotally engaging another link 36 having its opposite end pivoted to a lug 37 on the back of the reflector 32. 45

Also rigidly fixed on the shaft 34 is a shorter link 38 connected with the stub end 39 of a rod 40 extending under the hood 18, through the instrument board 21, where it is provided with an actuating hand knob 41. 50

Set in the open front of the housings 25 are lenses 45 having fine vertical undulations 46 adapted to deliver light rays received from the 55

reflector 32 in horizontal beams upon the roadway as may be required.

Thus it will be seen that the dirigible reflectors 32 may be moved angularly upon the pivots 30 in accordance with the direction in which it is desired to divert the beams on their passage through the transparent front lens 45.

If preferred a double concave reflector 47, as shown in Figure 6, may be substituted for the reflector 27, in which event two independent lamps 48 will be required, the lighting effect being essentially the same as in the previously described arrangement.

In Figure 7 is shown a different type of inclinable reflector 50 having at its center portion a curved surface 52 of much greater radius than the portions 51 and 53, which are of the same curvature as the reflecting surface of the reflector 32 shown in Figure 4.

This central portion 52 tends to concentrate a part of the rays on the roadway in such manner as to provide a greater intensity of light directly in advance of the vehicle.

While certain preferred embodiments of this device have been shown and described, it will be

understood that changes in the form of arrangements, proportions, sizes and details thereof may be made without departing from the scope of the invention as defined in the appended claim.

Having thus described the invention, what is claimed as new and desired to secure by Letters Patent is:

In a vehicle having front wheel guards, headlights completely enclosed therein, each headlight comprising a housing having an upright rear wall, a semi-cylindrical bottom, a front wall parallel with the rear wall containing an elongated rectangular opening, a lens fixed in the mentioned opening, a parabolic reflector set spacedly within said semi-cylindrical bottom at the level of the bottom of said lens, a lamp in said reflector, a tiltable rectangular reflector straight horizontally and curved vertically, said tiltable reflector having a pivoted connection at its lower edge with said rear wall, and means to adjust the angle of inclination of the tiltable reflector, said tiltable reflector adapted to receive light rays from said lamp and project them outwardly through said lens.

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