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AUTOMOBILE HEADLIGHT

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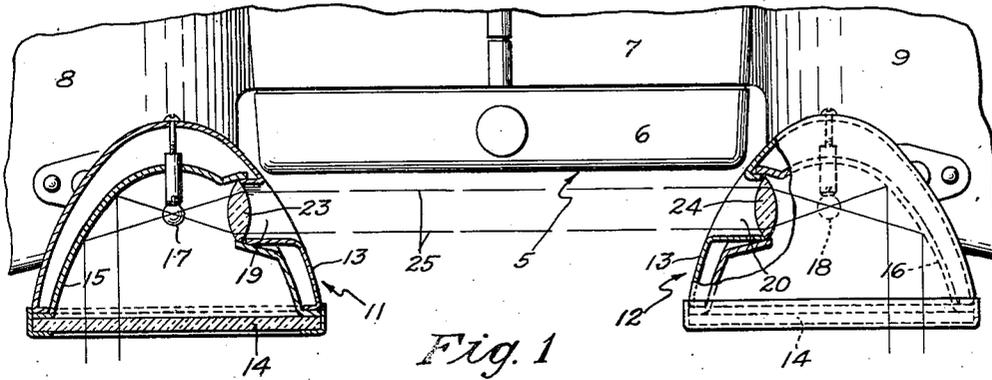


Fig. 1

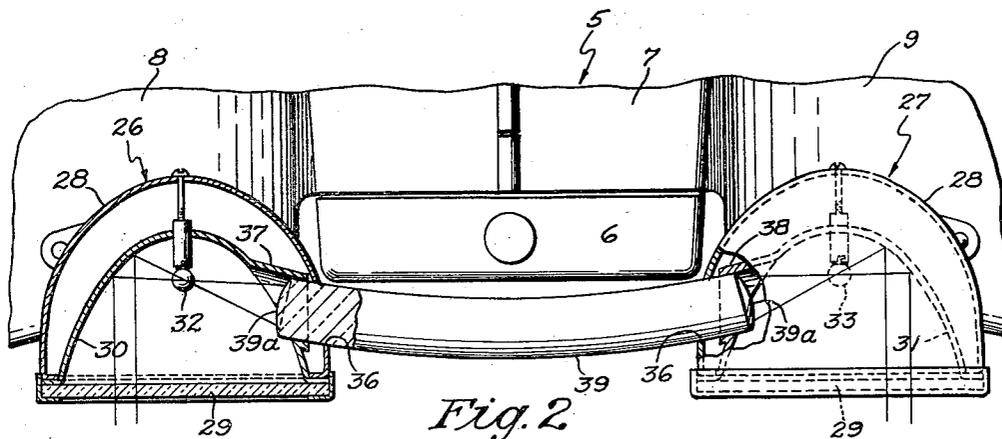


Fig. 2

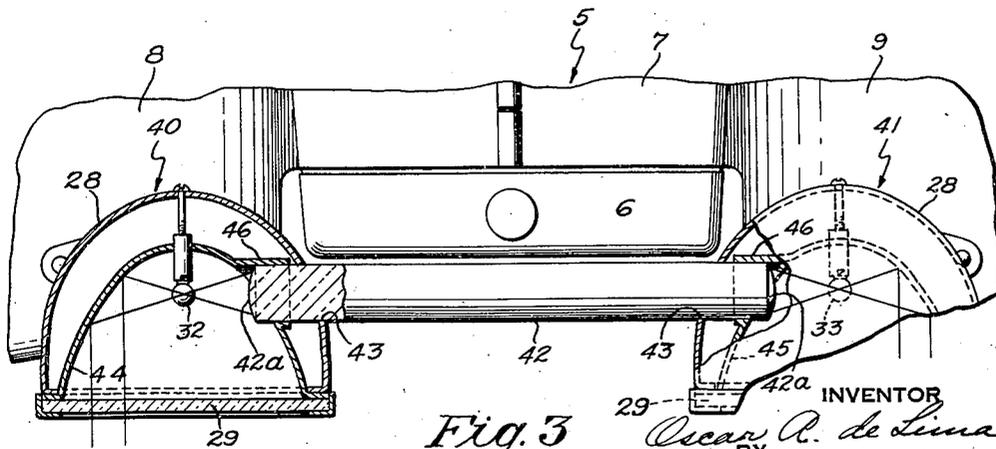


Fig. 3

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## AUTOMOBILE HEADLIGHT

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1 Claim. (Cl. 240—7.1)

This invention relates to new and useful improvements in lighting apparatus and an object of the invention is to illuminate one or two reflectors which are temporarily without a light source, having in mind particularly automobile headlights.

A further and more specific object of the invention is to provide means in a pair of lights, each including a reflector, whereby on the failure of the light source of one light the reflector of that one will be illuminated from the light source of the other.

Other objects and advantages will become apparent from a consideration of the following detailed description taken in connection with the accompanying drawing wherein satisfactory embodiments of the invention are shown. However, it will be understood that the invention is not limited to the details disclosed but includes all such variations and modifications as fall within the spirit of the invention and the scope of the appended claim.

In the drawing:

Fig. 1 is a view showing in top plan a part of the forward portion of an automobile, the headlights being constructed according to the present invention and one being in horizontal section while the other is partly broken away;

Fig. 2 is a view similar to Fig. 1 but showing a modified construction; and

Fig. 3 is a similar view showing a further modification.

Referring in detail to the drawing and at first particularly to Fig. 1, at 5 is generally indicated a part of the forward portion of an automobile including a radiator 6, a hood 7, and fenders 8 and 9 at opposite sides of the radiator and hood. Headlights 11 and 12 are mounted on the fenders and each includes an outer shell 13, the forward side of which is closed by a lens 14. Within the shells of the respective headlights 11 and 12 are reflectors 15 and 16, and arranged at about the focal point of the respective reflectors are suitable sources of light as for example the light bulbs 17 and 18. The headlights are arranged laterally with respect to one another and in their opposed side walls are provided with openings 19 and 20 respectively which openings extend into the reflectors.

Arranged in the openings 19 and 20 are lenses 23 and 24 respectively. With this construction should the bulb 18 become extinguished while the bulb 17 remains illuminated, light from the bulb 17 will fall directly on the lens 23. The lens 23 is constructed to transmit in substantially par-

allel beams to the lens 24 the light falling on it as above described and as suggested by the broken lines 25. Lens 24 bends the light so received toward the focal point of the reflector 16 and illuminates the light bulb therein, and such light passing through the focal point is reflected by the walls of the reflector 16 in the same degree as would rays of light actually originating at or near the said focal point. Light rays from the illuminated bulb and the lens 24 are reflected forwardly by the reflector 16 and illuminate the lamp 12 sufficiently to be easily visible by the driver of an approaching car and also to assist in illuminating the road and surrounding objects. Should the light source 17 fail then light from the source 18 will be transmitted to the bulb 17 and the reflector 15 as will be understood to give a similar effect.

From this it will be seen that with headlights constructed as described should the light source of one fail a certain amount of light from the other will be directed onto the reflector of the headlight of which the source of light has failed so that both headlights will be illuminated and the driver of an approaching car will be able to determine the amount of clearance necessary for passing.

Referring now to Fig. 2 it will be noted that the headlights 26 and 27 are arranged with the radiator 6 projecting further forwardly between them than in the construction of Fig. 1. The headlights 26 and 27 each include an outer casing 28 the forward end of which is closed as by a lens 29 and within the headlight 26 is a reflector 30 while within the headlight 27 is a substantially similar reflector 31. The bulbs or other light sources 32 and 33 of the reflectors 30 and 31 are arranged at or near the focal points of the respective reflectors. In their opposed side walls the casings 28 are provided with openings 36 and in alignment with such openings the reflectors 30 and 31 are provided with open ended short tubular extensions 37 and 38.

A transparent bar or rod 39 of glass or other suitable material is mounted by the headlights 26 and 27 and has its ends extending into the reflectors through the tubular extensions 37 and 38 thereof. Light falling on the exposed surfaces of the bar 39 directly from either the light source 32 or 33 will be transmitted from one headlight to the other. That is, should the light source 32 fail then direct light from the source 33 will be transmitted to the reflector 30 by the bar 39 and should the light source 33 fail light from the source 32 will be similarly transmitted to the re-

flector 31. Therefore, should one light source fall the reflector associated therewith will have light transmitted to it for reflection by it so that both headlights will be illuminated. Since the bar 39 is curved as shown it may be carried about a radiator projecting a substantial distance between the headlights. As the end walls 39a of the glass rod are convex they act as lenses to bend the light rays in a similar manner to the lenses 23 and 24 in the arrangement of Fig. 1.

Fig. 3 shows a further slight modification and in this figure the headlights 40 and 41 are so arranged with respect to the radiator 6 that a straight bar or rod of glass or other suitable transparent material may be used to connect the headlights for the purpose of transmitting light from one to the other thereof. In this figure the headlights include the casings 28 closed by the lenses 29. In their opposed side walls the casings are provided with openings 43 in line with which the respective reflectors 44 and 45 are provided with tubular extensions 46 and the respective ends of the bar 42 of transparent material project into such tubular extensions 46. In this construction direct light rays from the bulbs 32 and 33 fall on the respective convex ends 42a of the bar 42 forming lenses. On either the bulb 32 or the bulb 33 being extinguished the bar 42 will transmit light from the bulb which is not extinguished to the reflector of the bulb which is extinguished as will be understood. This form is the same as that of Fig. 2 and operates

the same, except the bar 42 is straight instead of curved as is bar 39.

It should now be understood that with either of the constructions disclosed should the bulb of one headlight become extinguished the reflector of that headlight will receive light from the bulb of the other headlight so that both headlights of an automobile will be illuminated and the driver of an approaching automobile will be definitely advised of the position of the car which he must pass and so allow proper clearance. The lenses 23 and 24 and the bars 39 and 42 in addition to serving in the transmission of light from one headlight to the other also close the openings in the sides of the headlights to exclude dust and moisture. Further, the bars 39 and 42 are ornamental.

Having thus set forth the nature of my invention, what I claim is:

In a headlight construction including two laterally spaced headlights having reflectors with openings in their opposed side walls, a lens in each of said openings arranged so that each light source is in the principal focus of the adjacent lens so as to project substantially parallel light beams of substantially the area of each lens, and each of said lens having a common axis whereby if either light source is extinguished its reflector is illuminated by the light beam projected from the other light source.

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