July 3, 1928. 1,675,731

G. L. SCHOFIELD

ANTIGLARE AND LIGHT DISTRIBUTING MEANS FOR VEHICLE HEADLAMPS

Filed April 8, 1925 2 Sheets-Sheet 1

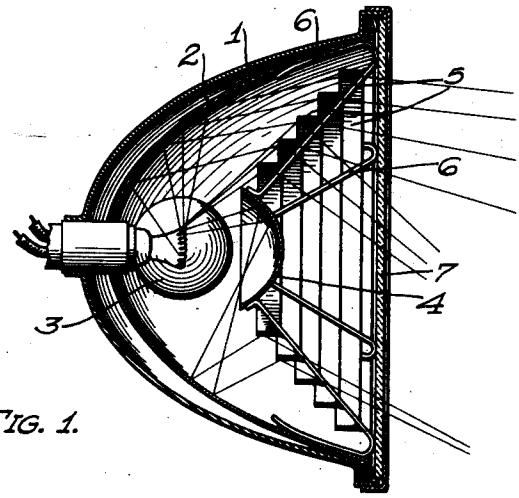


FIG. 1.

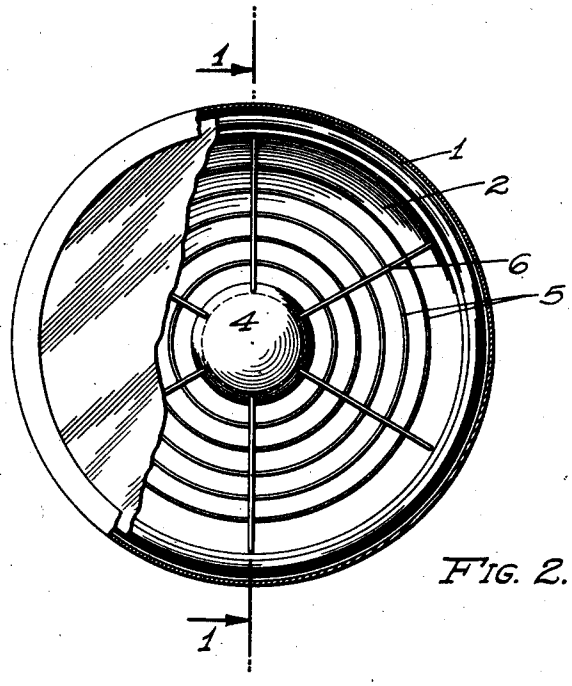


FIG. 2.

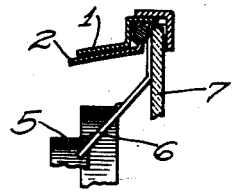


FIG. 3.

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ANTIGLARE AND LIGHT DISTRIBUTING MEANS FOR VEHICLE HEADLAMPS

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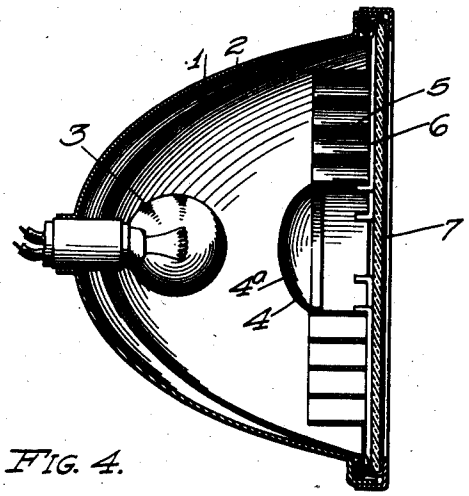


FIG. 4.

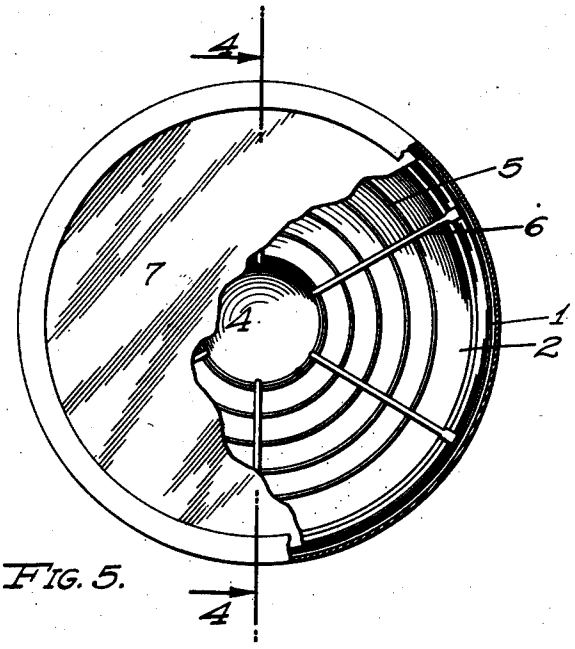


FIG. 5.

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UNITED STATES PATENT OFFICE.

GEORGE L. SCHOFIELD, OF NATIONAL CITY, CALIFORNIA.

ANTIGLARE AND LIGHT-DISTRIBUTING MEANS FOR VEHICLE HEAD LAMPS.

Application filed April 8, 1925. Serial No. 21,525.

My invention relates to an antiglare and light distributing means for vehicle headlamps, and the objects of my invention are:

First, to provide such a means whereby the luminous filament of the bulb of the headlamp, which causes a disagreeable and dangerous glare, is substantially concealed from the front of the headlamp. Second, to provide a means of this class whereby the direct rays and also the reflected rays, from the vehicle reflector, directed to the sides thereof, are intercepted and modified by my antiglare and light distributing means. Third, to provide a means of this class whereby the direct and reflected rays of light directed against my headlamp means appear to be substantially uniformly distributed over the whole front opening of the head lamp, thus modifying the force of the light. Fourth, to provide a means of this class which may be easily and quickly positioned in headlamps now in use. Fifth, to provide a novelly constructed antiglare and light distributing means for vehicle headlamps, and sixth, to provide a means of this class which is very simple and economical of construction, durable, efficient, and which will not readily deteriorate or get out of order.

With these and other objects in view, as will appear hereinafter, my invention consists of certain novel features of construction combination and arrangement of parts and portions, as will be hereinafter described in detail and particularly set forth in the appended claims, reference being had to the accompanying drawings and to the characters of reference thereon, which form a part of this application, in which:

Figure 1 is a longitudinal sectional view of a conventional vehicle headlamp with my means positioned therein with the section taken through 1—1 of Fig. 2, also showing certain parts and portions in elevation to facilitate the illustration. Fig. 2 is a front elevational view thereof with a portion of the frame and the lens partly broken away and in section to facilitate the illustration. Fig. 3 is an enlarged, fragmentary sectional view of a slightly modified form of construction of the means for supporting the device within the headlamp. Fig. 4 is a longitudinal sectional view of a conventional vehicle headlamp with a slightly modified form of construction of my antiglare and light distributing means positioned therein, showing certain parts and portions in elevation to facilitate the illustration, the section being taken through 4—4 of Fig. 5 and Fig. 5, is a front elevational view thereof with a portion of the frame and lens of the headlamp broken away and in section to facilitate the illustration.

Like characters of reference refer to similar parts and portions throughout the several views of the drawings.

The headlamp housing 1, reflector 2, bulb 3, central shield 4, bands 5, supporting members 6, and the lens 7, constitute the principal parts and portions of my antiglare and light distributing means in one form of construction.

My antiglare and light distributing means is preferably loosely positioned within the parabolic reflector 2, positioned within the headlamp housing 1 and against the lens 7 of the headlamp. Said means, in the preferred form of construction as shown in Figs. 1 and 2 of the drawings, is provided at the middle portion with a parabolically shaped reflecting shield 4 with its concave portion facing towards the bulb 3 positioned within the headlamp housing. Said shield 4 is positioned a slight distance forwardly from the bulb 3 and is supported in said position substantially within the headlamp by means of wire supports 6 secured at their inner ends to said shield and radiating angularly therefrom, substantially as shown in Figs. 1 and 2 of the drawings. The outer ends of said supports 6 are bent backwardly and curved to conform substantially with the outer portion of the reflecting surface of the reflector 2. Positioned around the shield 4 and spaced therefrom and from each other are a plurality of concentric reflecting bands 5, which are secured to the supports 6 preferably by solder. The outer concentric bands 5 are respectively positioned forwardly from the inner ones so that no part of the bulb can be seen from the outside of the headlamp. Said bands are preferably coated with a white paint or enamel so as to modify the light issuing therefrom. The lens 7 of the headlamp is also preferably frosted so as to still further modify the intensity of direct reflected rays and to more uniformly distribute the light.

In the modified form of construction of the supporting means, as shown in Fig. 3 of the drawings, the supports 6, supporting the concentric bands 5 and the shield 4, extend to the outer periphery of the lens 7 and

are bent backwardly over the outer edge of the same, substantially as shown in Fig. 3 of the drawings, so that the device does not produce unnecessary wear on the reflector of the headlamp and also so that the same may be removed when removing the lens for replacing bulbs of the headlamp.

In the modified form of construction of my antiglare and light distributing means, as illustrated in Figs. 4 and 5 of the drawings, the shield 4, similarly positioned within the headlamp housing in front of the bulb 3, as in the preferred construction, is provided with a convex reflecting surface 4^a, which convex reflecting surface faces the bulb, positioned within the headlamp, and reflects the direct rays toward the main reflector 2. Said shield is preferably secured at its edges to the inner portion of the inner light distributing band 5. The bands 5 in the modified form of construction are also positioned in concentric order but are of greater width and positioned in substantially the same vertical plane. The inner edges of the bands are secured to the supports 6 which are positioned against the lens with their outer ends extending over the edge thereof.

It is obvious from this construction, as illustrated in the drawings and disclosed in the foregoing specification, that there is provieded a means for modifying the glare and uniformly distributing the rays of light of vehicle headlamps, and though I have shown and described a particular construction, combination and arrangement of parts and portions and certain modifications thereof, I do not wish to be limited to this particular construction, combination and arrangement nor to the modifications but desire to include in the scope of my invention the construction, combination and arrangement substantially as set forth in the appended claims.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:

1. In a device of the class described, the combination with a conventional headlamp and reflector, of supports positioned near one end of said reflector, a solid curved shield positioned in axial alinement with said reflector and supported by said supports and a plurality of bands positioned around said shield and spaced therefrom and supported by said supports.

2. In a device of the class described, the combination with a reflector of a headlamp and a bulb positioned therein, of a shield positioned within said reflector in front of said bulb, a plurality of angular supports radiating outwardly from said shield towards the open edge of said reflector, and a plurality of bands spaced from each other and supported by said angular supports.

3. In a device of the class described, the combination with a reflector of a headlamp and a bulb positioned therein, of a shield positioned within said reflector in front of said bulb, a plurality of angular supports radiating outwardly from said shield towards the open edge of said reflector, and a plurality of concentric annular bands spaced from each other and from said shield and supported at their front edges on said supports.

4. In a device of the class described, the combination with a conventional headlamp, of a shield positioned in front of and spaced from the bulb positioned therein and a plurality of supporting members secured at one end to said shield and radiating angularly therefrom, their other ends being positioned contiguous to the opening of said reflector.

5. In a device of the class described, the combination with a conventional reflector of a headlamp and a bulb positioned therein, of a shield positioned within said reflector in front of said bulb, supports extending outwardly from said shield toward the edge of said reflector, and a plurality of eccentric cylindrical bands spaced from each other, secured to said supports at their front edges and adapted to direct reflected light outwardly beyond the headlamp directly from the reflector.

6. In a device of the class described, the combination with a conventional reflector of a head lamp and a bulb positioned therein of supports positioned near one end of said reflector and extending inwardly and backwardly on an angle therefrom and a plurality of concentric annular bands spaced from each other and in front of said bulb and secured to said supports at their front edges.

7. In a device of the class described, the combination with a reflector and lens of a conventional headlamp, of radiating supports loosely positioned at their extended ends at the outer end of said reflector and in engagement with the lens, and a solid curved shield positioned in axial alignment with said reflector and supported by said supports at their central portion.

In testimony whereof, I have hereunto set my hand at Los Angeles, California, this 25th day of March, 1925.

GEORGE L. SCHOFIELD.