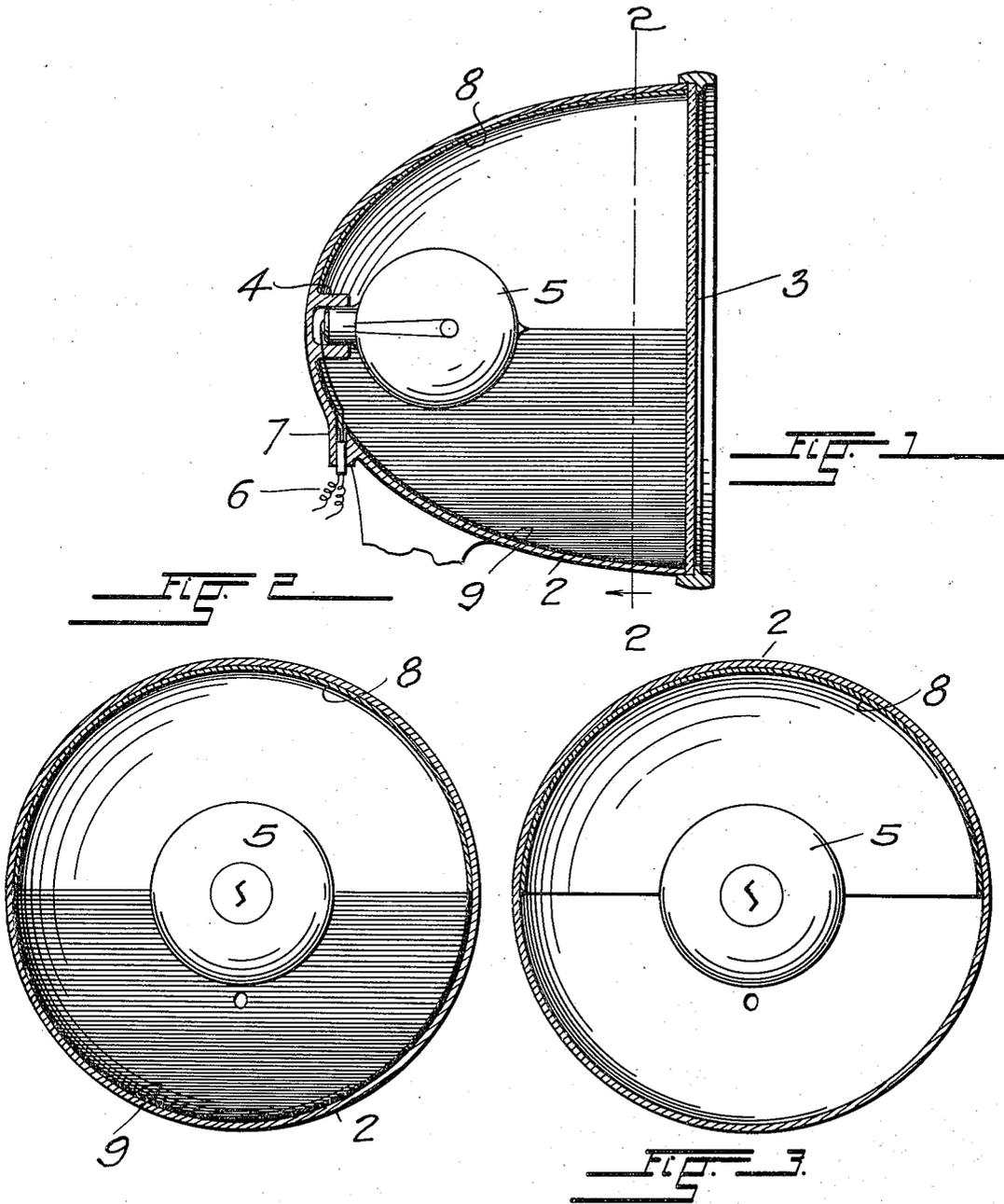


R. F. WILSON.
HEADLIGHT.
APPLICATION FILED OCT. 13, 1914.

1,154,824.

Patented Sept. 28, 1915.



WITNESSES:
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ROLAND F. WILSON, OF DENVER, COLORADO.

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1,154,824.

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To all whom it may concern:

Be it known that I, ROLAND F. WILSON, a citizen of the United States, residing at Denver, in the county of Denver and State of Colorado, have invented certain new and useful Improvements in Headlights, of which the following is a specification.

This invention relates to improvements in headlights for automobiles and other power driven vehicles, and its object is to provide in a light of this character, means for preventing the upward deflection of light rays without obstructing the course of downwardly deflected rays or rays which are propagated from the illuminative element without impingement upon the inner surface of the concave reflector in which said element is mounted. By the use of a headlight thus constructed, only the road in front of the vehicle and other objects below the horizontal plane of the axis of the light are brightly illuminated, while more elevated objects are comparatively dimly lighted by the unreflected rays radiating from the lamp. The blinding effect of the reflected rays of the head light on pedestrians and drivers of approaching vehicles is thus completely eliminated, and accidents frequently occurring by reason of this effect are in consequence avoided.

An embodiment of my invention is illustrated in the accompanying drawings in the various views of which like parts are similarly designated, and in which,

Figure 1 is a sectional elevation of a head-light constructed in accordance with my invention, Fig. 2, a section taken along the line 2—2, Fig. 1, and Fig. 3, a section similar to Fig. 2, showing a modified construction.

Referring to the drawings by numerical reference characters, 2 designates the parabolic reflector of a head-light which at its forward end is closed by means of a lens 3 and which is provided with suitable means for its attachment to a vehicle.

Mounted in an axial socket 4 at the rear end of the reflector is the electric lamp 5 which by means of wires 6 extending through a tubular passage 7 on the reflector is connected in an electric circuit with a source of electricity on the vehicle.

The numeral 8 designates the coating or inner shell of the reflector which in lights of ordinary construction is made so that its

entire inner surface reflects the light rays radiating from the lamp 5. In a light constructed in accordance with my invention the lower part 9 of this coating or shell is rendered nonreflective either by making it of light absorbing material or by coating its surface with matter of a dull or light-absorbing color, as shown in Fig. 2.

In a head-light thus constructed, only those light rays which radiate in an upward direction from the lamp are reflected, and those reflected rays together with the rays emitted directly forwardly from the lamp will brilliantly illuminate the road and other objects ahead of the vehicle below the horizontal plane of the axis of the lamp, while objects of higher elevation are left in comparative darkness. As no light rays are reflected upwardly from the head-light, pedestrians and drivers of approaching vehicles are not annoyed or blinded as by lights of ordinary construction, it being obvious that the rays which are propagated directly from the lamp through the lens have not sufficient strength to produce the blinding effect of both sets of rays.

Instead of rendering the lower portion of the inner surface of the reflector non-reflective by a coating of light-absorbent color or other means, the entire lower half of the inner shell of the light may be omitted as shown in Fig. 3. This modification of my invention has the advantage that while fully answering the main object of the invention it presents a simple means for restoring the light to its normal condition in which its entire inner surface is uniformly reflective. To obtain this result it is but necessary to divide the inner shell of the head light into two halves, the lower one of which is removable so that it may be omitted whenever it is desired to eliminate the upward reflection of light rays.

While for the purpose of my invention it is preferable to render the lower portion of the inner surface of the reflector, non-reflective by either of the methods mentioned, it may in many instances be required to make the said lower portion of the inner surface of the reflector, reflective to a slight degree so that while the objects ahead of the vehicle below the axis of the head-light are brilliantly illuminated by the rays reflected by the more perfect reflective surface of the upper portion of the reflector, more elevated

objects while being less brilliantly illuminated will still be lighted sufficiently to render them clearly discernible.

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

1. In a headlight, a concave reflector the inner surface of which is at one side of a plane passing through the axis of the reflector light absorbent, and at the opposite side of the same light reflective.

2. In a head light, a concave reflector the inner surface of which is below the horizontal plane passing through the axis of the reflector light-absorbent, and above the same light-reflective.

3. In a head light, a concave reflector comprising an outer shell, and an inner shell composed of two component parts one

of which is removable, the surface of the said removable part of the inner shell, and the surface of the outer shell normally covered thereby, differing with respect to their effect upon light-rays impinging thereon.

4. In a head-light, a concave reflector comprising an outer shell, and an inner shell composed of two component parts one of which is removable, the surface of the said removable part of the inner shell, and the surface of the outer shell normally covered thereby, being respectively light-reflective and light absorbent.

In testimony whereof I have affixed my signature in presence of two witnesses.

ROLAND F. WILSON.

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