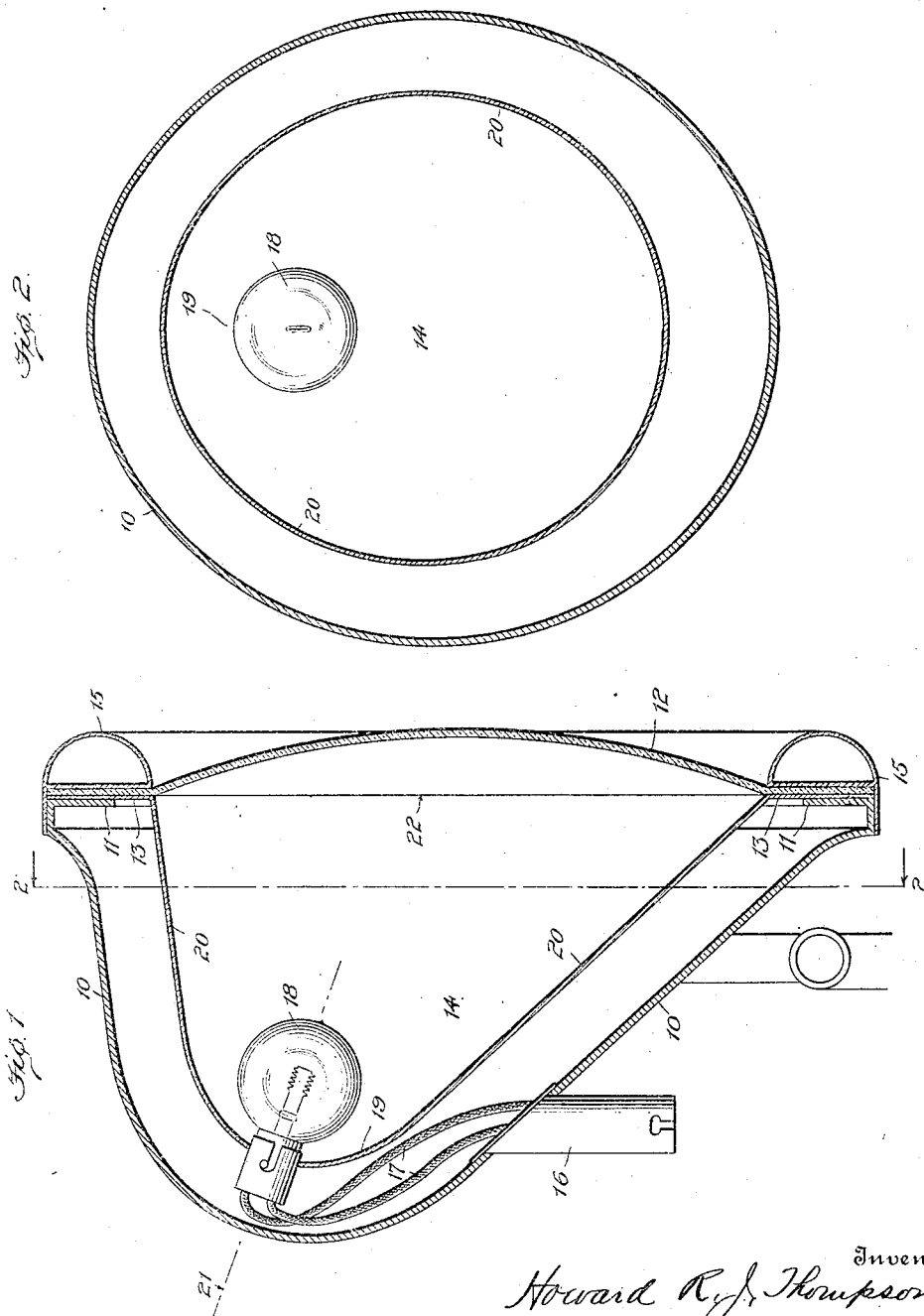


H. R. J. THOMPSON.
 AUTOMOBILE HEADLIGHT.
 APPLICATION FILED JUNE 23, 1919.

1,367,439.

Patented Feb. 1, 1921.



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UNITED STATES PATENT OFFICE.

HOWARD R. J. THOMPSON, OF WASHINGTON, DISTRICT OF COLUMBIA.

AUTOMOBILE-HEADLIGHT.

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Specification of Letters Patent.

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Application filed June 23, 1919. Serial No. 306,141.

To all whom it may concern:

Be it known that I, HOWARD R. J. THOMPSON, a citizen of the United States, and resident of Washington, in the District of Columbia, have invented certain new and useful Improvements in Automobile-Headlights; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to lamps and particularly to headlights generally in use on automobiles and has for one of its objects the provision of a headlight with a reflector of such a construction that none of the rays of reflected light will be projected upwardly a sufficient distance to affect the vision of a person approaching the vehicle. This object is accomplished without the necessity of blocking off any of the reflected rays of light, with the resultant advantage that the lighting efficiency of the lamp is not reduced.

A further object is to so construct the lamp as to give it a very neat appearance in that the entire front edge portion lies in a vertical plane, the paraboloidal surface of the reflector, which is essential in this type of lamp, being so arranged that its directrix lies in a plane angularly disposed to the vertical.

In the accompanying drawings:

Figure 1 is a front elevation of a lamp constructed in accordance with the present invention; and

Fig. 2 is a sectional view on the line 2—2 of Fig. 1.

The embodiment illustrated in the drawings includes an outer casing 10, the front of which is entirely open and substantially elliptical in cross section, the front marginal portion being turned inwardly to form an annular flange 11 against which the lens or transparent member 12 and a flange 13 of the reflector 14 is secured by an elliptical band 15 which is attached to the casing 10 in any preferred manner. Casing 10 is also provided with an aperture for a socket 16 from which extend the wires 17 leading to the electric lamp 18 suitably mounted in reflector 14.

The principal feature of the present invention, however, is the formation of the reflector 14 which is so constructed that while

the front margin lies in a vertical plane, none of the reflected rays of light will be obstructed and neither will any of them be reflected along such lines that they will affect the vision of a person approaching from the front of the vehicle, but, on the other hand, all the reflected rays will be directed to the roadway, thus giving the lamp a high illuminating power.

The reflector 14 may be described as having a reflecting surface consisting of an inner or bowl portion 19 which is paraboloidal in contour and an outer portion 20 forming a continuation of the inner portion 19. Preferably, this outer portion 20 differs in formation from the inner portion in that it extends in straight lines tangentially from the inner portion, the diametrically opposed portions thereof diverging from the axis, indicated at 21, of the inner paraboloidal portion. As stated, the outer portion 20 of the reflecting surface, preferably extends in straight lines, but if desired, said reflecting surface may be slightly curved, such a construction being deemed to be within the scope of the present invention. The directrix of the inner paraboloidal portion 19 is disposed at an angle to the vertical and the length of the outer portion 20 gradually increases from the top of the reflector to the bottom thereof so that the front edge 22 of the reflector lies in a vertical plane.

The directrix of the paraboloidal portion being disposed at an angle to the vertical, the axis of said portion is inclined so that the rays reflected by this portion will be directed downwardly and the outer portion 20 will also reflect the rays downwardly and will tend to concentrate them. With such a construction none of the reflected rays and only one-third of the unreflected rays can pass upward a sufficient distance to affect one's vision, but these unreflected rays, of course, do not have the blinding effect that the reflected rays have.

Furthermore, the outer portion 20 of the reflecting surface being so constructed that its front edge 22 lies in a vertical plane gives the lamp, as a whole, a very much neater appearance than a lamp of the usual construction, tilted downward, would have.

What I claim is:

An automobile head light comprising a casing, a source of light within the same, a

reflector having the axis of its reflecting surface arranged to direct each reflected ray of light from said source of light downwardly to the roadway, said reflector having a central parabolic portion merging into a tangential outer portion of constantly increasing cross sectional area taken in planes per-

pendicular to the axis of the reflector and having its flanged marginal face in a vertical plane, and means overlying said flanged face and having frictional engagement with said casing for closing the open side of said reflector. 10

HOWARD R. J. THOMPSON.