Oct. 27, 1942. F. BRIEHL 2,300,097

HEADLIGHT

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Fig. 1.

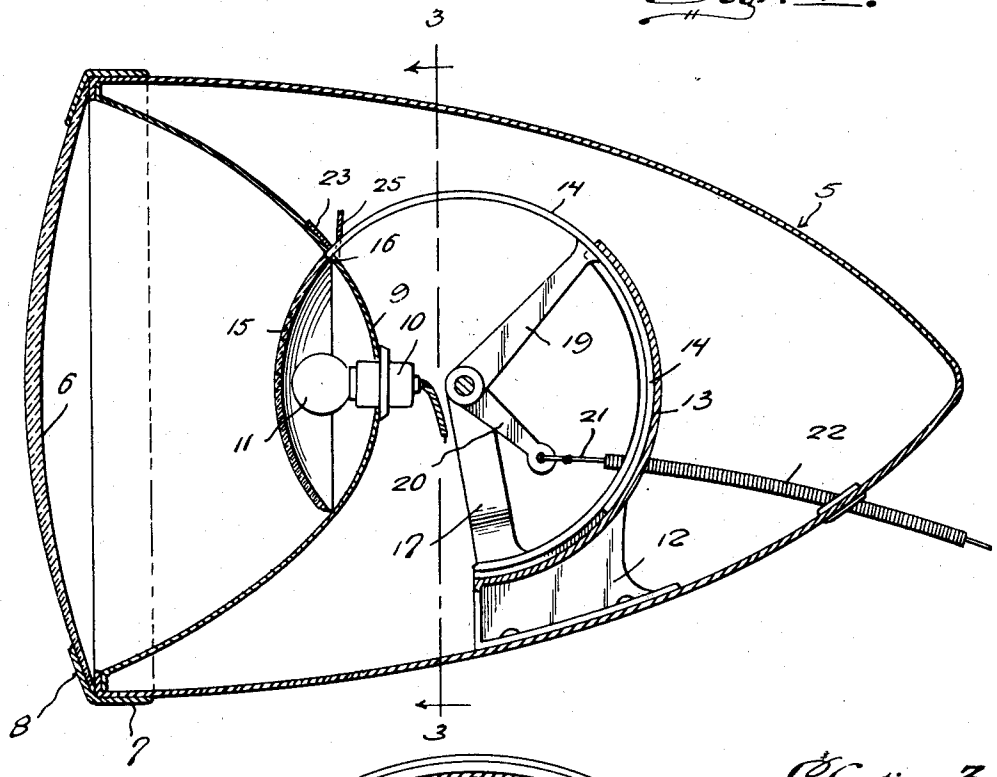
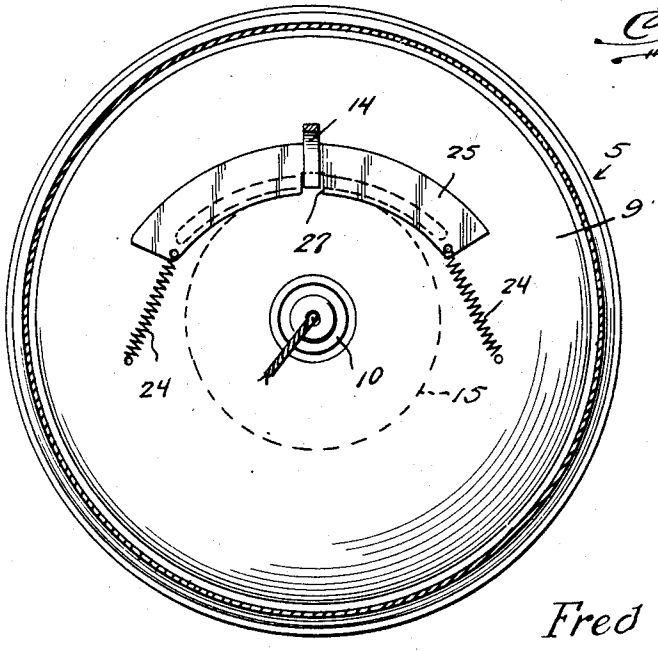


Fig. 3.



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Fig. 2.

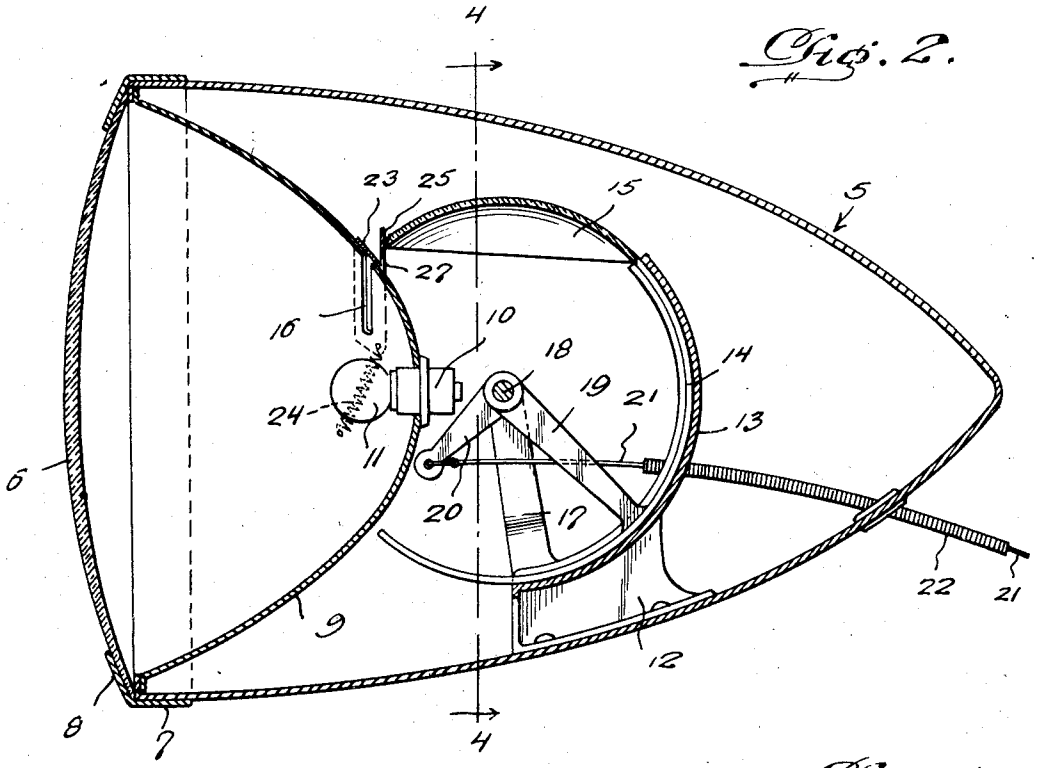
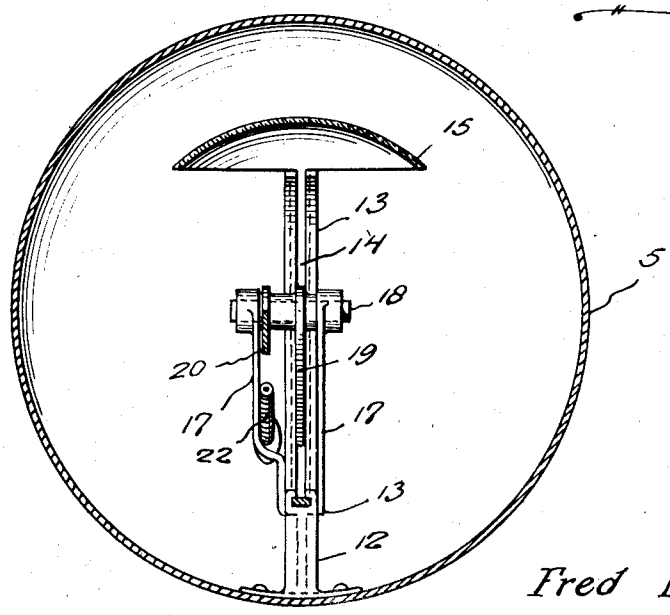


Fig. 4.



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UNITED STATES PATENT OFFICE

2,300,097

HEADLIGHT

Fred Briehl, Wallkill, N. Y.

Application May 1, 1942, Serial No. 441,361

3 Claims. (Cl. 240—45)

This invention relates to headlights and similar road illuminating devices for automobiles, and has for the primary object the provision of a device of the above stated character which will have all of the advantages of a conventional headlight and of the type now in use on automobiles with means for assisting in the illumination of a roadway in fog and other inclement weather which may be encountered, said means being readily brought into operation at any time needed by the driver of the automobile without leaving a driving position and will not interfere with normal operation of the headlight when not in use.

With these and other objects in view as will become more apparent as the description proceeds, the invention consists in certain novel features of construction, combination and arrangement of parts as will be hereinafter more fully described and claimed.

For a complete understanding of my invention, reference is to be had to the following description and accompanying drawings, in which

Figure 1 is a vertical sectional view illustrating a headlight constructed in accordance with my invention and showing the auxiliary or secondary lens in operative position.

Figure 2 is a view similar to Figure 1 showing the secondary or auxiliary lens in inoperative position.

Figure 3 is a transverse sectional view taken on the line 3—3 of Figure 1.

Figure 4 is a transverse sectional view taken on the line 4—4 of Figure 2.

Referring in detail to the drawings, the numeral 5 indicates a headlight casing or shell of a conventional construction and shape, having the open end thereof closed by a lens 6 of any selected well known type. The lens 6 is removably mounted on the shell 5 by a band 7 including a flange 8 to engage with the lens while the band fits over the shell 5 with a frictional fit and may be provided with any suitable fastening means for detachably securing the same to the shell.

Mounted in the shell 5, rearwardly of the lens 6, is a reflector 9 of a substantially parabolic shape supporting an electric lamp socket 10 carrying an electric lamp 11. The parts described are well known in the art and provide a headlight capable of giving normal illumination of a roadway in clear weather.

Mounted in the shell rearwardly of the reflector 9 is a bracket 12 supporting an arcuately curved guide 13 in which is slidably mounted an arcuately curved member or arm 14, carrying at one end a secondary or auxiliary lens 15 having the characteristics of assisting in the illumination of the roadway during a foggy condition or any other inclement weather.

To bring the secondary lens 15 into operative position, that is between the electric lamp 11 and the lens 6, the reflector is provided with a slot 16 through which the lens 15 and its arm 14 may move freely.

The bracket 12 includes a post 17 for rotatably supporting a shaft 18 to which arms 19 and 20 are secured. The arms are angularly disposed with respect to each other and the arm 19 is formed on the member or arm 14. The free end of the arm 20 is apertured to permit securing thereto a Bowden wire 21 located within a flexible housing 22 and extending rearwardly through the shell 5 to a suitable hand button or operating medium preferably located upon the instrument board of the automobile in convenient reach of the driver.

The operating means described in the foregoing will permit the driver to readily move the secondary or auxiliary lens 15 into operative and inoperative positions, as shown in Figures 1 and 2 of the drawings.

In order that the slot 16 may not affect the reflecting of the rays of light from the electric lamp 11 by the reflector 9 when the lens 15 is in an inoperative position, a closure or slide 23 is slidably mounted on the outer face of the reflector and is provided with a mirrored surface next to the slot. The slide 23 is caused to conform to the curvature of the reflector 9 and is sustained thereon for sliding movement by coil springs 24 connected to the ends thereof and to the reflector preferably below the plane of the electric lamp. An angularly disposed extension 25 is formed on the slide and engages with the lens 15 for limiting the movement of the slide under the influence of the springs and to permit the slide to close the slot 16 when the lens 15 is in an inoperative position. However, when the lens 15 is moved toward an operative position it imparts sliding movement to the slide against the action of the springs 24 to uncover the slot and thereby permit the lens 15 to move through the slot into operative position.

The slide 23 has a notch 27 therein to receive the arm or member 14 when the lens 15 is in operative position, as shown in Figure 1, and which permits the slide to assume slot-closing position as shown in Figure 3. A reverse movement of the lens 15 or toward inoperative position, imparts sliding movement to the slide allowing the lens to move freely through the slot.

From the foregoing description, taken in connection with the accompanying drawings, it will be seen that a headlight has been provided which will have all of the advantages of a conventional headlight for the purpose of illuminating a roadway and still possess means for the illumination of the roadway when atmospheric conditions are bad or the existence of fog.

Further, it will be seen that the present invention eliminates the use of separate headlamps on a motor vehicle that are employed for illuminating the roadway during a foggy condition.

The present invention as illustrated and described in the foregoing specification may also be employed for eliminating glare to approaching traffic by the movement of the auxiliary lens into full operative position or into a position partly lying between the electric lamp and the main lens.

While I have shown and described the preferred embodiment of my invention, it will be understood that minor changes in construction, combination and arrangement of parts may be made without departing from the spirit and scope of the invention as claimed.

Having thus described my invention, what I claim is:

1. In a headlight, a casing including an illuminating medium and a main lens, a reflector in the casing supporting the illuminating medium and having a slot, a secondary lens movable to pass through the slot to assume an operative position between said illuminating medium and the main lens and an inoperative position outwardly of the reflector within the casing, a bracket in the casing, a semi-circular shaped guide carried by said bracket, a semi-circular shape member slidable in said guide and attached to the secondary lens for movably supporting the latter, a post carried by said guide, a shaft journaled on said post, angularly disposed integrally connected arms secured to said shaft and one of said arms formed on said member, and an operating means connected to the other arm.

2. In a headlight, a casing including an illuminating medium and a main lens, a reflector in the casing supporting the illuminating medium and having a slot, a secondary lens movable to pass through the slot to assume an operative position between said illuminating medium and the main lens and an inoperative position outwardly of the reflector within the casing, means for movably supporting said secondary lens, means for imparting movement to the secondary lens, and a slide mounted on the reflector for opening and closing the slot and actuated by the movement of the auxiliary lens.

3. In a headlight, a casing including an illuminating medium and a main lens, a reflector in the casing supporting the illuminating medium and having a slot, a secondary lens movable to pass through the slot to assume an operative position between said illuminating medium and the main lens and an inoperative position outwardly of the reflector within the casing, means for movably supporting said secondary lens, means for imparting movement to said secondary lens, a slide mounted on the reflector for opening and closing the slot and actuated by the movement of the auxiliary lens, said slide being yieldably supported on the reflector and curved to conform to the contour thereof and including an angularly disposed flange having riding contact with the secondary lens.

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