

July 22, 1941.

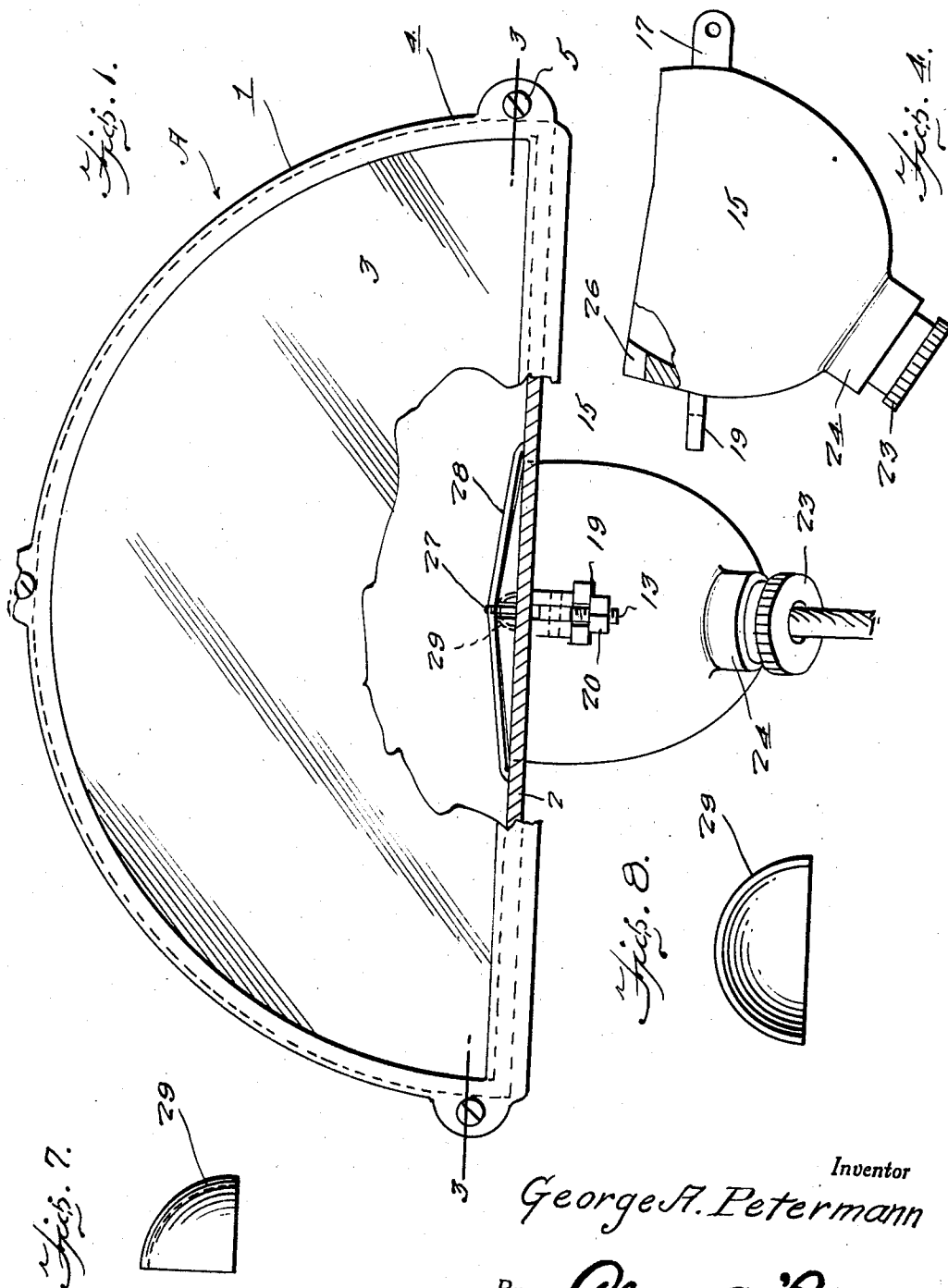
G. A. PETERMANN

2,249,908

HEAD LAMP

Filed Feb. 3, 1940

3 Sheets-Sheet 1



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3 Sheets-Sheet 2

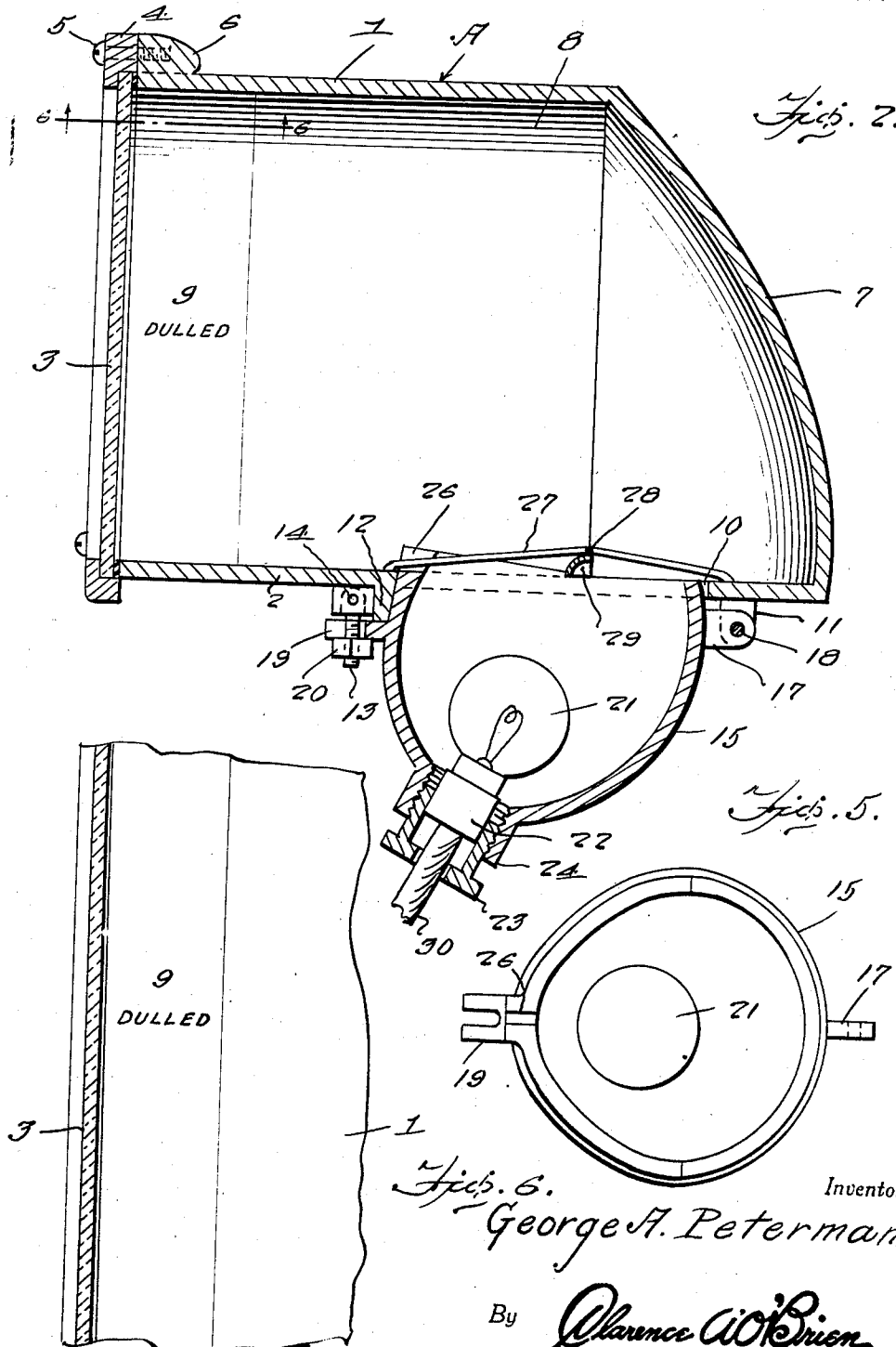


Fig. 6.
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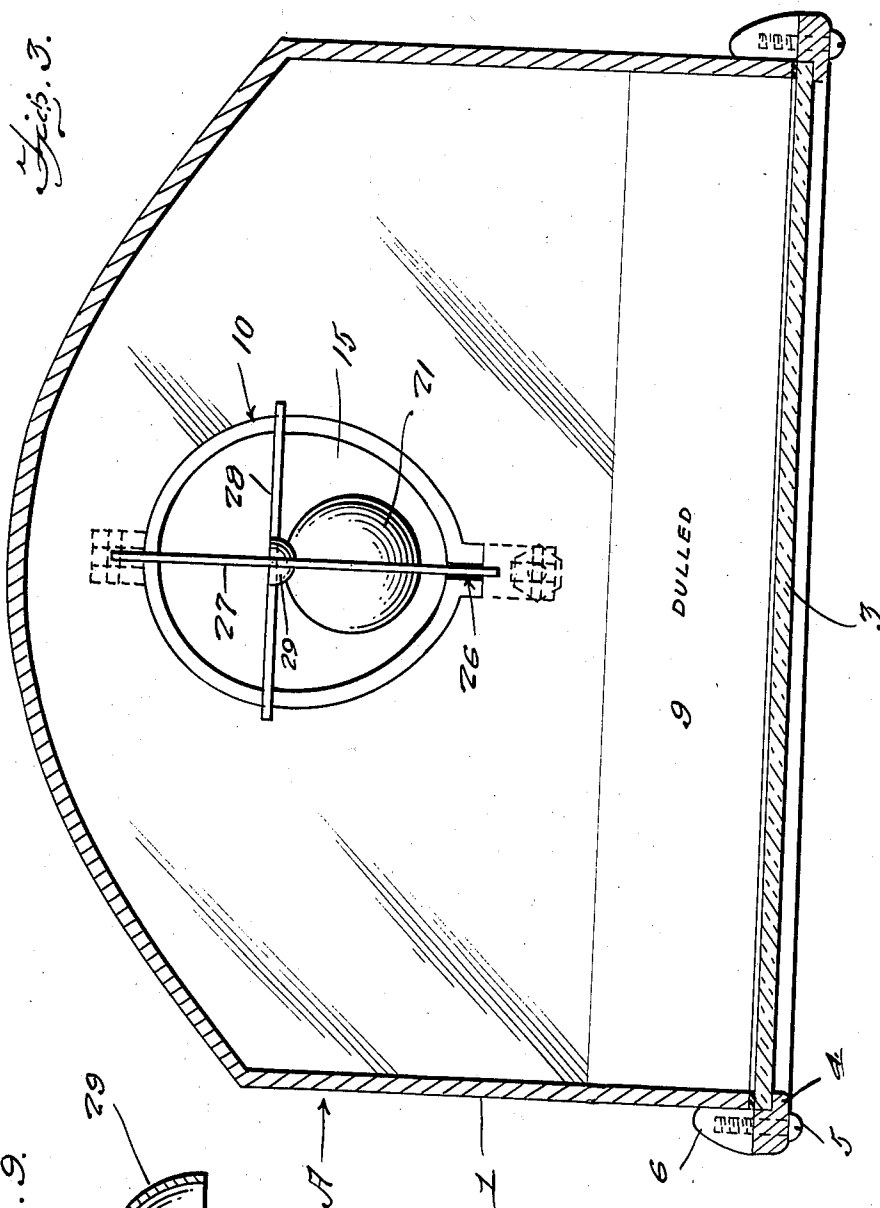
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UNITED STATES PATENT OFFICE

2,249,908

HEAD LAMP

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Application February 3, 1940, Serial No. 317,185

2 Claims. (Cl. 240—41.1)

This invention relates to a headlamp for motor vehicles, and the general object of the invention is to provide a lamp which will give the maximum illumination of the road without glare and with a comparatively small bulb.

This invention also consists in certain other features of construction and in the combination and arrangement of the several parts to be hereinafter fully described, illustrated in the accompanying drawings and specifically pointed out in the appended claims.

In describing the invention in detail, reference will be had to the accompanying drawings wherein like characters denote like or corresponding parts throughout the several views, and in which:

Figure 1 is a front view with parts broken away of the improved lamp.

Figure 2 is a vertical sectional view through Figure 1.

Figure 3 is a section on the line 3—3 of Figure 1.

Figure 4 is a side view of the lower and bulb carrying member with a portion broken away to show the wire receiving notch.

Figure 5 is a top plan view of said member.

Figure 6 is a section on line 6—6 of Figure 2.

Figure 7 is an end view of the partial sphere member.

Figure 8 is a front view of such member.

Figure 9 is a vertical view of such member.

In these views the letter A indicates the major portion of the lamp housing which is formed of a semi-cylindrical front part 1 having its flat bottom forming part 2 lowermost and this member has its front end open and such end is closed by a transparent plate 3 held in place by the rim 4 which is connected by screws 5 to the lugs 6 formed on the front end of the housing. The rear end of the housing is formed of a paraboloid 7 and the major portion of the interior surface of the part 1 and the interior surface of the part 7 are mirrored as shown at 8 but the front portion of the part 1 has its interior surface of a dull finish as shown at 9, this dull finish forming a band at the front end of the part 1. The flat bottom forming portion 2 has an opening or hole 10 therein which extends into the bottom of the part 7 and lugs 11 extend from the bottom at the rear of the opening and a projecting part 12 extends downwardly from the bottom at the front of the opening, portions of this part 12 having a bolt 13 pivoted thereto as shown at 14. A reflector member 15 forms an ellipsoid and has its upper end fitting in the opening with a pro-

jection 17 extending rearwardly therefrom which is pivoted between the lugs 11 by a pin 18 and a forked projection 19 extends from the front of the member 15 between the prongs of which the bolt 13 passes, a nut 20 being screwed on the bolt for holding the member 15 in the position shown in Figures 1 and 2 but by loosening or removing the nut from the bolt the member 15 can swing downwardly on the pivot pin 18 so that the lamp bulb 21 in the member 15 can be removed and replaced by a new one or the parts cleaned or repaired. This bulb 21 is carried by the usual socket 22 which is, in turn, carried by a screw cap 23 threaded into a boss 24 depending from the member 15 so that by turning the cap 23 the position of the bulb in the member 15 can be adjusted. The interior surface of this member 15 is mirrored also and its front part at the top thereof is formed with a notch 26 through which passes the front end of a wire 27 which has its front end connected with the bottom part 2 and its rear end connected with the bottom part of the member 7 and a second wire 28 extends at right angles to the wire 27 over the member 15 and is connected to the bottom part of the housing and a member 29 of the shape of a quarter of a sphere having its inner face mirrored is supported at substantially the central portion of the top of the member 15 by these wires. As shown in Figures 2 and 4 the member 15 has the rear of its top part substantially straight and the rest of the top part sloping upwardly and forwardly to a slight extent. The conductor for the bulb is shown at 30.

The bulb is so placed in the member 15 that its filament is on the lower focal point of the ellipsoid. The center of the quarter sphere 29, the focus of the paraboloid 7 and the upper focus of the ellipsoid 15 must all be one and the same point. As before stated this lamp will give the maximum illumination while eliminating glare so that the driver of a car equipped with this lamp can readily see the road and the drivers of other cars will not be blinded as the parts are so arranged that none of the rays of light from the lamp can pass upwardly and outwardly from the front of the housing 1.

It is thought from the foregoing description that the advantages and novel features of the invention will be readily apparent.

It is to be understood that changes may be made in the construction and in the combination and arrangement of the several parts provided that such changes fall within the scope of the appended claims.

Having described the invention, what is claimed as new is:

1. A lamp of the class described comprising a housing having a major part of semi-cylindrical form with its flat part lowermost and with its front end open, a transparent member closing said front end, the rear end of the housing being in the shape of a paraboloid, said housing having an opening in its bottom, a portion of which extends into the bottom of the rear part of the housing, a reflector member forming an ellipsoid having its upper open end fitting in the opening, a bulb in said reflector member with the filament of the bulb on the lower focal point of the reflector member and a member of the shape of a fourth of a sphere located at the top of the reflector member, the center of the sphere, the focus of the paraboloid and the upper focus of the ellipsoid being at the same point, means for hingedly connecting the reflector member at its rear edge to the rear part of the housing, latch means for holding the reflector member in the opening, wires passing over the reflector member at the top thereof for supporting the quarter sphere at approximately the center of the top of the reflector member.

2. A headlamp of the class described comprising a housing of substantially semi-circular shape in cross section with its flat part lowermost, the front end of the housing being open and the rear end of the housing being in the shape of a paraboloid, a reflector member forming an ellipsoid having its open upper end in communication with the rear portion of the bottom of the housing, a bulb socket having a bulb therein carried by the lower end of the reflector member with the bulb and its socket lying in a plane which slopes upwardly and rearwardly and a member in the shape of a quarter of a sphere supported at substantially the center of the top of the reflector member and above the bulb for intercepting rays of light passing upwardly and outwardly from the rear of the reflector member, the inner face of the quarter sphere, the inner face of the reflector member and the major portion of the interior of the housing having reflective surfaces, said housing having a dull interior surface at its front end.

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