Nov. 25, 1941. L. D. BRIDGE 2,264,109

SAFETY LIGHT FOR AUTOMOBILES

Filed Feb. 28, 1940

Fig. 1.

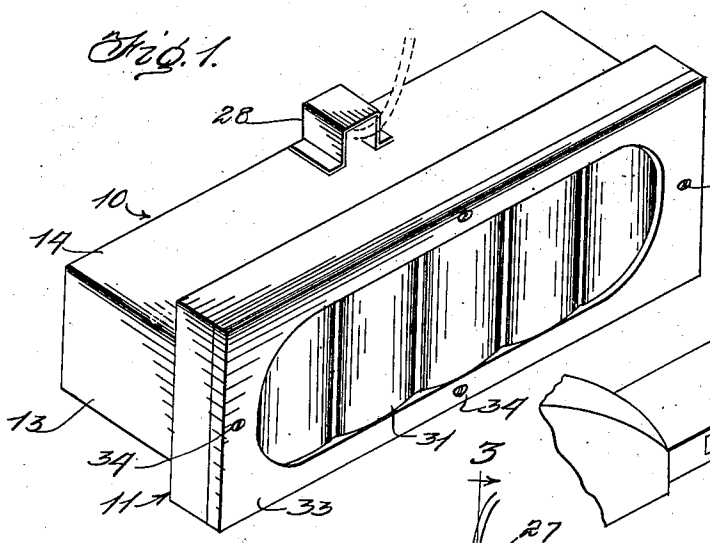


Fig. 4.

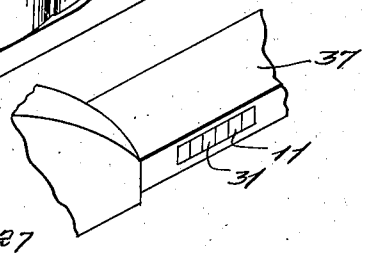


Fig. 2.

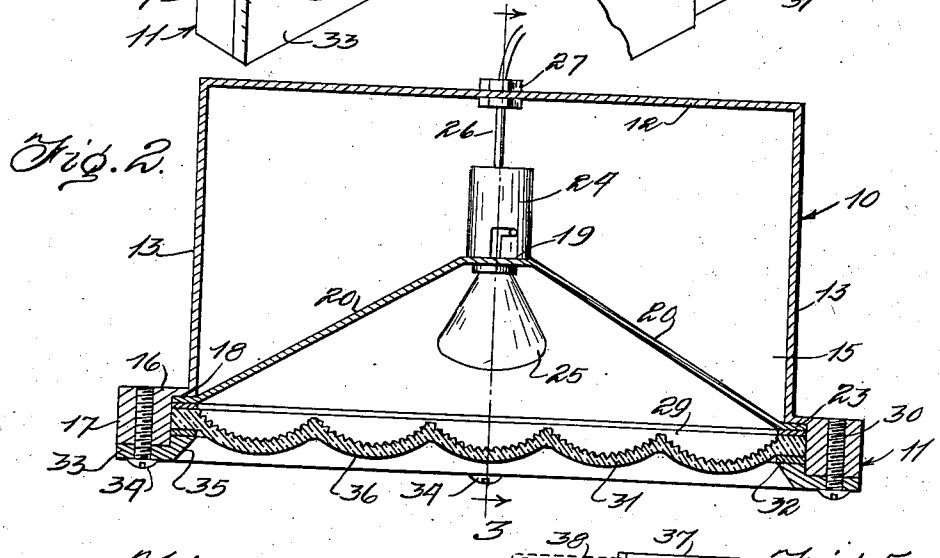


Fig. 3.

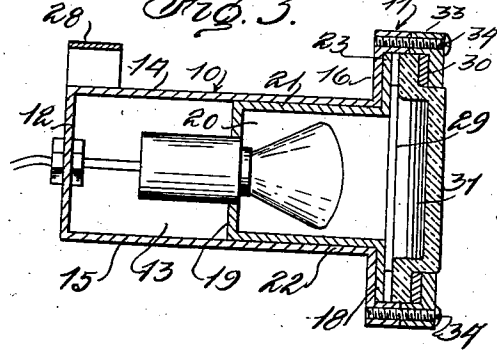


Fig. 5.

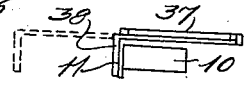
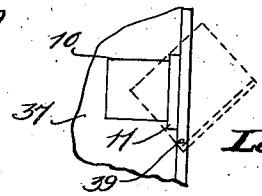


Fig. 6.



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UNITED STATES PATENT OFFICE

2,264,109

SAFETY LIGHT FOR AUTOMOBILES

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Application February 28, 1940, Serial No. 321,347

2 Claims. (Cl. 240—8.26)

This invention relates to lamps and has special reference to a vehicle lamp adapted for use on the running board, wheel guard, front or rear of the body, or within the body of a motor vehicle.

One important object of the invention is to provide an improved general construction of lamps having a novel lens arrangement whereby the lamp emits a broad and shallow beam.

A second important object of the invention is to provide a lamp of this character having a novel arrangement of reflection thereon.

A third important object of the invention is to provide a novel arrangement of reflector and lens for such a lamp.

With the above and other objects in view, as will be presently apparent, the invention consists in general of certain novel details of construction and combination of the parts hereinafter fully described and illustrated in the accompanying drawing and particularly pointed out in the claims.

In the accompanying drawing like characters of reference indicate like parts in the several views, and—

Figure 1 is a perspective view of the improved lens.

Figure 2 is a horizontal section on the central plane of the lens.

Figure 3 is a section on the line 3—3 of Figure 2.

Figure 4 is a fragmentary perspective view of a portion of the vehicle's running board and showing the lamp applied thereto.

Figure 5 is a schematic section through a running board showing the lamp applied thereto and provided with a shield or cover.

Fig. 6 is a schematic view showing one manner of mounting the lamp so that it may pivot to throw the beam in different directions.

In the embodiment of the invention here shown there is provided a lamp casing or housing having a rear portion 10 and a forward portion 11. This rear portion 10 has a vertical rear wall 12 and vertical end walls 13 extending forwardly at right angles to rear walls 12, the walls 12 and 13 being of uniform heighth throughout. Furthermore the rear portion 10 has a top wall 14 and a bottom 15 which is parallel to the top wall. The forward portion 11 has its rear side formed by a flange 16 projecting at right angles to the walls 13, 14 and 15 of the rear portion, and projecting from the periphery of this flange is a rectangular frame 17 which is an offset from the walls 13, 14 and 15 to provide a shoulder 18.

Within the casing thus described there is mounted a reflector having a flat rear wall 19 from the ends of which extend forwardly and outwardly a pair of side walls 20. From the top and bottom edges of the wall 19, top and bottom walls 21 and 22 extend forwardly between the side walls 20. The walls 20, 21 and 22 are provided at their forward ends with a peripheral flange 23 which seats on the shoulder 18. The reflector thus formed is of such size that it fits snugly between the walls 14 and 15 of the casing and it will be observed that the walls 20 converge rearwardly from the forward open end of the casing. Walls 20, 21 and 22 are provided with reflecting surfaces on their inner sides. Fixed to the wall 19 is a lamp socket 24 wherein may be deposited a lamp 25 and from this lamp socket extends the usual conductor 26, an insulating bushing 27 being provided in the rear wall 12 to permit passage of the conductor outwardly. On top of the rear part of the casing is a clip or loop 28 which may be used to guide the conductor 26. Mounted on the forward face of the flange 23 is a gasket 29 on which rises the rim 30 of a lens 31 which is preferably of the character described thereupon in my co-pending application No. 321,348 for improvements in lenses filed of even date herewith. On the rim 30 rests a second gasket 32 and a securing frame 33 is held to bear against this gasket 32 and to rest on the wall 17 by means of screws 34. The inner edges of the frame 33 are bevelled as at 35 and it will be observed that the lens 31 has curvature faces 36 which closely approach the outer face of the frame 33 so that very wide dispersion of light from the lamp 25 is obtained.

As shown in Figure 4 this lamp may be located beneath the running board 37 and may be provided (Figure 5) with an adjustable shield or cover 38, operable manually or by any preferred means not deemed necessary here to be shown, from within the vehicle.

Also, as shown in Figure 6, the lamp may be pivoted to the running board 37 or other part of the vehicle by a pivot 39 so that it may swing between a position which is shown in full lines to any desired position or angle as indicated generally in dotted lines in said figure. Obviously any other pivot arrangements may be used and what is here shown is merely typical in order to illustrate the pivotal mounting.

It is now to be observed that with this arrangement of the reflector and lens, light from the lamp 25 will be reflected from the walls 20 in such manner that the light rays will strike the inner side of the lens 31 in many directions, such rays intersecting each other at numerous points

so that the entire inner surface of said lens will receive substantially uniform illumination and this illumination will be refracted by the prisms on the inside of the lens and then divergingly directed by the convex lens portions. The reflecting surface at the top and bottom of the reflector aids in preventing loss of light through absorption at these surfaces.

It is obvious that changes may be made in the form and construction of the invention without departing from the material points thereof. It is not therefore desired to confine the invention to the exact form herein shown and described, but it is desired to include all forms which properly come within the scope of the appended claims.

What is claimed is:

1. In a vehicle lamp adapted for use on a running board as a side lamp to provide a vertically narrow and laterally spread light beam, a vertically narrow and laterally elongated lamp casing having an open front, a laterally elongated lens member closing said front and having vertically extending convex light distributing portions on its front face and vertical prismatic light refracting areas on its inner face and arranged side by side, a retaining frame resting on the periphery of the lens member and secured to the casing, said frame having an opening therein into which the said convex portions project to extend substantially flush with the plane of the front face of the frame, and a reflector in said casing having a pair of plane reflecting surfaces converging rearwardly from the lateral ends of the opening in the casing front.

2. In a vehicle lamp adapted for use on a running board as a side lamp to provide a vertically narrow and laterally spread light beam, a vertically narrow and laterally elongated lamp casing having an open front, a laterally elongated lens member closing said front and having vertically extending convex light distributing portions on its front face and vertical prismatic light refracting areas on its inner face and arranged side by side, a retaining frame resting on the periphery of the lens member and secured to the casing, said frame having an opening therein into which the said convex portions project to extend substantially flush with the plane of the front face of the frame, and a reflector in said casing having a pair of plane reflecting surfaces converging rearwardly from the lateral ends of the opening in the casing front, and having parallel top and bottom reflecting surfaces.

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