May 5, 1925. 1,536,146

A. P. SAFFERT

HEADLIGHT

Filed March 9, 1923

Fig. 1.

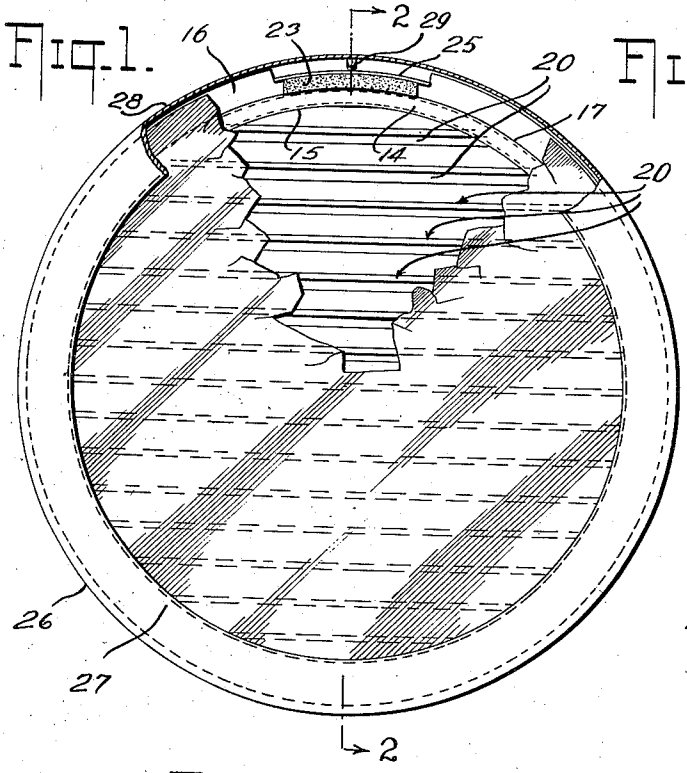


Fig. 2.

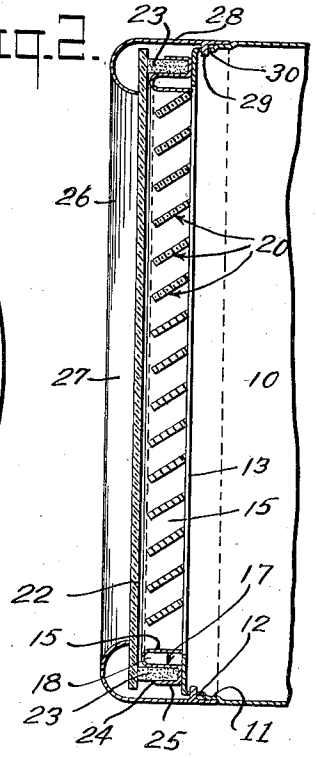


Fig. 3.

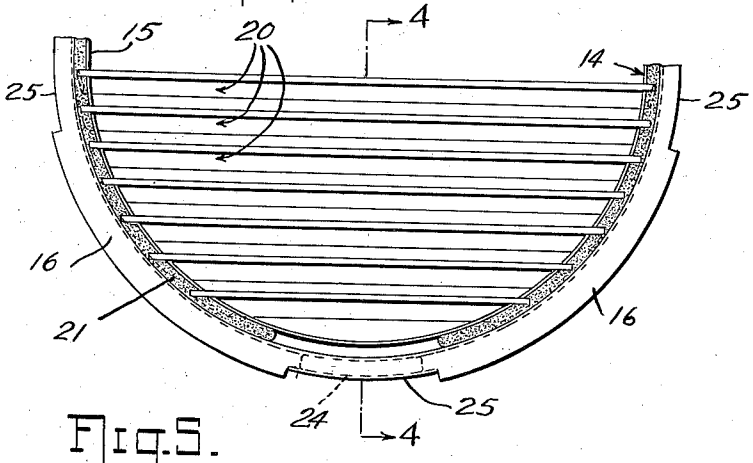


Fig. 4.

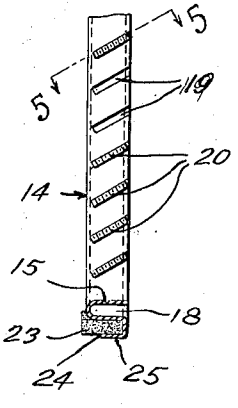
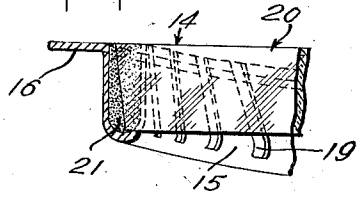


Fig. 5.



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UNITED STATES PATENT OFFICE.

ARMAND P. SAFFERT, OF CLIFFSIDE, NEW JERSEY.

HEADLIGHT.

Application filed March 9, 1923. Serial No. 623,969.

To all whom it may concern:

Be it known that I, ARMAND P. SAFFERT, a citizen of the United States, and a resident of Cliffside, in the county of Bergen and State of New Jersey, have invented certain new and useful Improvements in Headlights, of which the following is a full, clear, and exact description.

This invention appertains to certain improvements in head-lights generally, and more particularly to lens construction for use on head-lights of automobiles and the like.

The principal object of the invention is to provide for a lens structure of the type specified, and one designed to readily and efficiently meet the requirements of law, rule and regulation governing the projection of beams of light to the front of vehicles, particularly automobiles, whereby the uppermost edges of the beams, at a given distance in advance of the vehicle, will not strike a pedestrian, crossing the path of the forward travel of the vehicle, at a height much above his or her waist-line, so that all danger of temporarily blinding the sight of the pedestrian will be eliminated.

Another object of the invention is to provide for a lens construction of the character mentioned, and one of a novel arrangement and mounting of parts, as to be inexpensive to manufacture, cheap to repair in case of breakage to only one or more of its parts, and extremely easy to remove or replace from and to operative position.

With the foregoing and other equally important advantages and objects in view, the invention resides in the certain new and useful construction and arrangement of parts as will be hereinafter more fully described, set forth in the appended claims, and illustrated in the accompanying drawings, in which:—

Figure 1 is a front elevation, partly in section, of a head light embodying the improved lens construction and mounting therefor,

Figure 2 is a vertical section taken on the line 2—2 of Figure 1,

Figure 3 is a rear elevation of a lower half portion of slotted grid ring part of the lens,

Figure 4 is a vertical section taken on the line 4—4 of Figure 3, and,

Figure 5 is an enlarged fragmentary section taken on the line 5—5 of Figure 4.

Referring to the drawing, wherein similar characters of reference designates corresponding parts throughout the several views thereof, the numeral 10 indicates a head light casing of conventional form, preferably provided with an interiorly disposed parabolic reflector (not shown) for directing the light from a suitable light source (also not shown) mounted centrally of the inner side of the reflector and casing in the ordinary manner of such devices.

The edge of the lens receiving opening at the front of the casing 10 is preferably spun or otherwise depressed inwardly to form an inner annular shouldered portion 11 and an outer annular shouldered portion 12 spun or depressed inwardly to a slightly less diameter than the shouldered portion 11, both of said shouldered portions 11 and 12 being of substantial width as and for the purposes to be hereinafter more fully explained. The outer free end of the shouldered portion 12 is inturned to form an annular flange 13, also of a substantial width to function in the manner to be presently indicated for the same.

Adapted to seat against the outer face of the flange 13 is an annular member or grid ring 14, preferably formed of a single piece of sheet metal spun or die-stamped to provide an inner flange portion 15, an outer flange portion 16 and an intermediate wall portion 17 connecting the flange portions 15 and 16 in a manner to form a channel 18 opening inwardly of the member or grid ring 14 between the inner flange portion 15 and the intermediate wall portion 17, substantially as shown.

Formed in horizontal alignment in the inner flange 15, of the member or grid ring, 14, are a plurality of equidistantly spaced and forwardly declined openings or slots 19, in which are inserted the opposite ends of a number of light deflecting slats 20, the inserted ends of which are preferably embedded in a resilient packing 21 retained within the channel 18, and in a manner to be cushioned against breakage from shocks incident to the travel of the vehicle on which the head lights are to be mounted. These slats 20 are preferably made from a translucent material, such as colored glass or the like, and are spaced apart at a suitable distance to deflect a major portion of the reflected light from a lamp, contained within the headlight casing 10, in a down-

ward direction and progressively forward from the front of the vehicle. By making these slats 20 from a colored glass or other translucent material, a certain amount of the light rays will pass through the same sufficient to illuminate the road bed with a comparatively soft or subdued and non-glaring light ahead of the vehicle, while all direct parallel rays will be deflected in the downward direction and immediately onto the road bed.

Arranged to enclose the outer side of the grid ring 14 is a lens 22, in the form of a circular plate of transparent material, such as sheet glass or the like, and the same is preferably cushioned against breakage from shock, incident to the travel of the vehicle, by means of resilient packing material 23 supported within outwardly opening pockets or seats 24 formed by the outturning of spaced portions 25 of the outer flange portion 16 of the grid ring 14. This packing 23 preferably projects for a sufficient distance outwardly of the front side of the grid ring 14 whereby to maintain the lens 22 free from contact with the metal from which the latter is made.

The grid ring 14 and lens 22 are to be retained in position by means of a metal rim 26, which is formed to provide an inwardly curved portion 27 at its forward side to bear against the front face of the lens 22 and a rearwardly directed straight flanged portion 28 to snugly engage over the inner shoulder portion 11 of the headlight casing 10. Projecting radially inward of the flange portion 28, of the rim 26, are a series of bayonets or lugs 29 which engage in suitable seats or openings 30 formed in the outer shouldered or stepped portion 12 of the head light casing 10, whereby to detachably secure the rim in its lens holding position.

From the foregoing, it will be readily apparent that, while a preferred embodiment of lens and lens mounting for headlights has been described and illustrated in specific terms and details of construction and arrangement of parts, various changes in and modifications of the same may be resorted to without departing from the spirit of the invention, or the scope of the claims appended hereto.

Having thus fully described the invention, what is claimed, is:—

1. In a headlight, a casing having a lens receiving opening therein, a ring-shaped member disposed at the edge of the said opening, a plurality of horizontally disposed translucent slats mounted within the opening of the member and arranged in vertically spaced and forwardly declined relation one with respect to the other, means carried by said member for cushioning the engaged ends of said slats, a lens adapted to cover the opening of said member at the outer side thereof, and means for detachably securing said member and lens in position.

2. In a headlight, a casing having a lens receiving opening therein, a ring-shaped member disposed at the edge of the said opening, a plurality of horizontally disposed translucent slats mounted within the opening of the member and arranged in vertically spaced and forwardly declined relation one with respect to the other, means carried by said member for cushioning the engaged ends of said slats, a lens adapted to cover the opening of said member at the outer side thereof, means also carried by said member for cushioning the lens against contact therewith, and means for detachably securing said member and lens in position.

3. In a headlight, a casing having a lens receiving opening therein, a flange inturned from the edge of the said opening, a ring-shaped member adapted to be disposed in abutting relation with the outer face of said flange, a plurality of horizontally disposed translucent slats mounted within the opening of said member and arranged in vertically spaced and forwardly declined relation one with respect to the other, means carried by said member for cushioning the engaged ends of said slats against breakage incident to shocks to which the headlight may be subjected in use, a lens adapted to be arranged in abutting relation with the outer side of said member, means also carried by said member for cushioning said lens against actual contact therewith, and means adapted to be engaged over the open end of said casing for detachably securing said member and lens in position.

4. In a headlight, a casing having a lens receiving opening at the forward end thereof, inner and outer annular shouldered portions formed inwardly of the edge of the said opening, both of said portions being a lesser diameter than said casing and the outer thereof of a lesser diameter than the inner of the same, a flange inturned from the free edge of the outer of said shouldered portions, a ring-shaped member adapted to be abutted against the outer face of said flange, a plurality of horizontally disposed slats mounted within the opening of said member one in spaced and forwardly declined relation to the other, a lens adapted to be abutted against the outer side of said member, a rim member adapted to engage over the inner of said shouldered portions for securing said member and lens in position, and cooperative means carried by said rim and the outer of said shouldered portions for detachably retaining the rim against accidental displacement from its engaged position.

ARMAND P. SAFFERT