U. G. CASSADY & L. W. GEORGE.

DIMMING HEADLIGHT LENS.

APPLICATION FILED APR. 27, 1916.

1,230,669. Patented June 19, 1917.

Fig. 1.

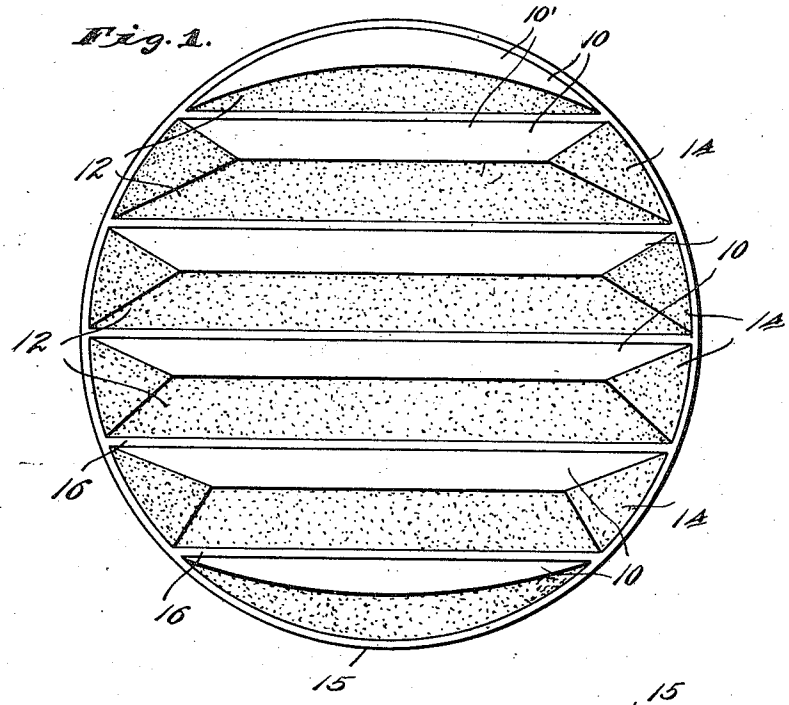
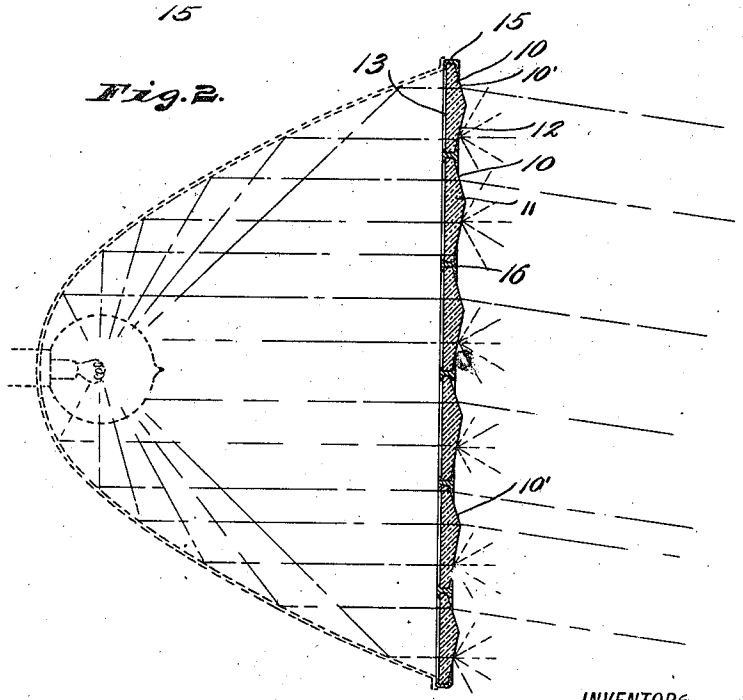


Fig. 2.



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DIMMING HEADLIGHT-LENS.

1,230,669. Specification of Letters Patent. Patented June 19, 1917.

Application filed April 27, 1916. Serial No. 93,828.

To all whom it may concern:

Be it known that we, ULYSSES G. CASSADY and LAWRENCE W. GEORGE, citizens of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented a new and useful Dimming Headlight-Lens, of which the following is a specification.

The object of our invention is to produce a prismatic face for automobile lamps, of such character as to concentrate a portion of the light rays upon a comparatively restricted area of the road a short distance in front of the vehicle and to diffuse the remainder of the light rays both forward and at each side, the arrangement being such that no distinct glare can reach the eyes of the drivers of oncoming vehicles.

The accompanying drawings illustrate our invention. Figure 1 is an elevation of one face of our device, and Fig. 2 a vertical section, the lamp reflector and source of light being indicated in dotted lines.

In the drawings, 10 indicates a series of clear glass prisms which have relatively oblique front and rear faces, the front faces being shown slanting upward and backward, and the prisms being arranged horizontally with their thin edges upward. Beneath each prism 10 is a horizontal glass section 11, one face 12 of which is ground so as to diffuse all light passing through portion 11. As a convenience in manufacture, portion 11 may be made integral with an adjacent portion 10, and we find it desirable to make the portion 11 prismatic, with relatively oblique front and rear faces and its thin edge downward, the front faces of the prisms 11 slanting downward and backward, or oppositely from the front faces of the prisms 10. The face 13 of the member 10—11 is plain and clear, and the series of members 10—11 are preferably so arranged that all of the plain faces 13 are in alinement, although, so far as ultimate effect is concerned, either side of the prismatic member may be presented to the source of light without varying the effect. As a consequence, the structure may be arranged either face out, and the members 10—11 might be alternated in arrangement, if desired.

In order to extend the arc of diffused light, the inclined faces of the members 10—11 are arranged outwardly and the ends of the middle members are outwardly beveled and left translucent, as indicated at 14.

Rays of light striking the clear surface 13 normally will pass practically without deflection through the body of the sections 10 and 11. The rays which emerge from the clear surface 10′ of the member 10 will be deflected away from the normal to said surface, and will thus be deflected downwardly, striking the ground a short distance in front of the lamp. The rays of light which reach the surface 12 will be diffused by the grinding of said surface so that said surface becomes a new source of light from which rays of light will radiate in all directions thus producing a diffused light through a spherical arc of 180° horizontally. The rays of light which reach the outwardly beveled surfaces 14 will be diffused at such surfaces, thus producing new sources of light, from which light rays radiate in all directions forward from the planes of such beveled surfaces, and as such planes are outwardly flared with relation to the direction of movement of the car, consequently the horizontal segment of the total diffused light from the lens will exceed 180° by twice the angle of bevel of the surfaces 14.

While it is possible and practicable, and contemplated by our invention, to produce an integral glass comprising all of the bars 10—11, in practice it is often desirable to form the screen from a series of sections, as shown, these sections being held in proper relationship to each other by a suitable frame 15 and cross bars 16. Moreover, the prismatic portions may or may not be straight, but may be curved if desired, as in order to produce the effect of a general spherical segment, so long as the optical prismatic effect described is produced.

We claim as our invention:

1. A glass lamp face comprising a plurality of transverse clear prismatic portions each having a slanting face, and adjacent interspersed translucent portions, both the prismatic and translucent portions having material lateral extent.

2. A glass lamp face comprising a plurality of transverse clear prismatic portions each having a slanting face, and a plurality of adjacent interspersed oppositely arranged prismatic portions, each having a translucent face.

3. A glass lamp face comprising a plurality of transverse clear prismatic portions each having a slanting face, and a plurality of adjacent interspersed oppositely arranged

prismatic portions, each having a translucent face, the ends of some of said portions being outwardly beveled.

4. A lamp glass comprising a plurality of transverse clear prismatic portions each having a slanting face, and a plurality of interspersed oppositely placed prismatic portions, one face of each of such last-mentioned portions being ground and translucent.

5. A lamp glass comprising a plurality of transverse clear prismatic portions each having a slanting face, and a plurality of interspersed prismatic portions, one face of each of such last-mentioned portions being ground and translucent.

6. The combination with a lamp and its casing, of a glass face therefor comprising a plurality of clear transverse prisms with their thin edges upward, and a plurality of interspersed prisms with their thin edges downward and one face translucent and outwardly beveled translucent ends.

7. The combination with a lamp and its casing, of a glass face therefor comprising a plurality of clear transverse prisms with their thin edges upward, and a plurality of interspersed prisms with their thin edges downward and one face translucent.

8. The combination with a lamp and its casing, of a glass face therefor, said glass face comprising a plurality of transverse sections, the upper portion of each of which is prismatic with its thin edge upward, and the lower portion of which is prismatic with its thin edge downward and provided with one translucent face.

9. The combination with a lamp and its casing, of a glass face therefor, said glass face comprising a plurality of transverse sections, the upper portion of each of which is prismatic with its thin edge upward, and the lower portion of which is provided with one translucent face.

10. The combination with a lamp and its casing, of a glass face therefor, said glass face comprising a plurality of transverse sections, the upper portion of each of which is prismatic with its thin edge upward, and the lower portion of which is prismatic with its thin edge downward and provided with one translucent face, the middle sections having their ends outwardly beveled and translucent.

11. The combination with a lamp and its casing, of a glass face therefor, said glass face comprising a plurality of transverse sections, the upper portion of each of which is prismatic with its thin edge upward, and the lower portion of which is provided with one translucent face, the middle sections having their ends outwardly beveled and translucent.

12. A glass lamp face formed of a plurality of transverse glass sections, a portion at one edge being clear and prismatic, with the thin portion of the prism at the edge, and the remaining portion of which has a ground face.

13. A glass lamp face formed of a plurality of transverse glass sections, a portion at one edge being clear and prismatic, with the thin portion of the prism at the edge, and the remaining portion of which has a ground face, said ground face being beveled, with the thin portion at the other edge of the section.

14. A glass lamp face formed of a plurality of transverse glass sections, a portion at one edge being clear and prismatic, with the thin portion of the prism at the edge, and the remaining portion of which has a ground face, the outer ends of the middle sections being outwardly beveled and having ground faces.

15. A glass lamp face formed of a plurality of transverse glass sections, a portion at one edge being clear and prismatic, with the thin portion of the prism at the edge, and the remaining portion of which has a ground face, said ground face being beveled, with the thin portion at the other edge of the section, the outer ends of the middle sections being outwardly beveled and having ground faces.

16. A lamp glass, comprising a plurality of horizontally extending clear prismatic portions having their front and rear faces at an oblique vertical angle to each other, said clear portions being thinner at the top, and a plurality of interspersed translucent portions.

17. A lamp glass, comprising a plurality of horizontally extending clear prismatic portions having their front and rear faces at an oblique vertical angle to each other, said clear portions being thinner at the top, and a plurality of interspersed translucent portions, said translucent portions having ground surfaces in a plurality of planes so that a diffused light is obtained through a greater arc than 180°.

18. A lamp glass, comprising a plurality of interspersed clear and translucent portions, said clear portions comprising horizontally extending prisms which are thinner at the top and have front and rear faces which are at a relatively oblique vertical angle to each other.

In witness whereof, we have hereunto set our hands at Indianapolis, Indiana, this twenty-second day of April, A. D. one thousand nine hundred and sixteen.

ULYSSES G. CASSADY.
LAWRENCE W. GEORGE.