H. A. WILLIAMSON.

LAMP.

APPLICATION FILED JAN. 28, 1914. RENEWED MAR. 18, 1916.

1,180,748. Patented Apr. 25, 1916.

Fig. 1.

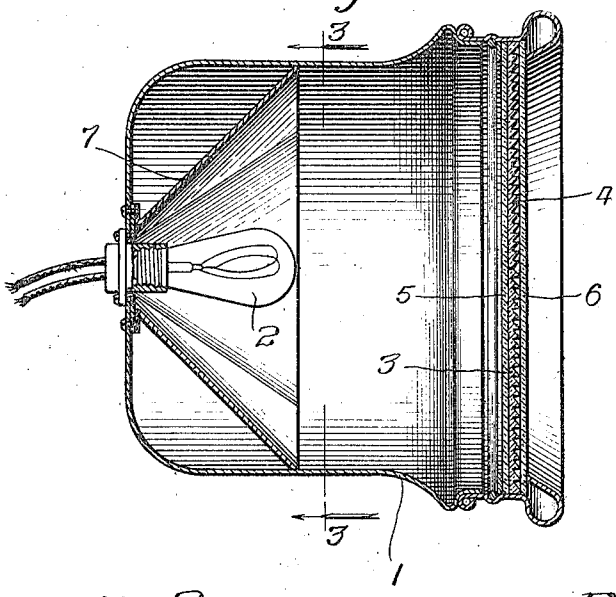


Fig. 2.

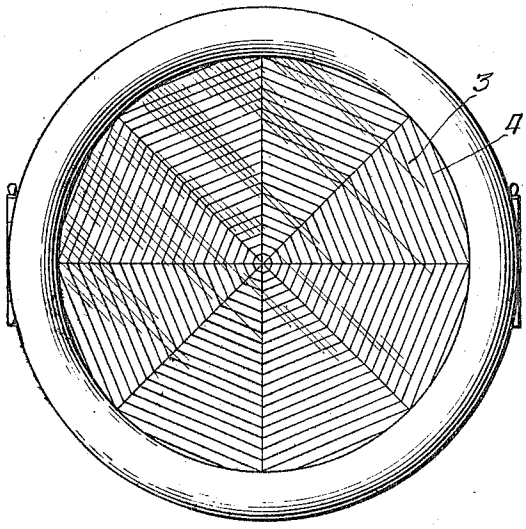
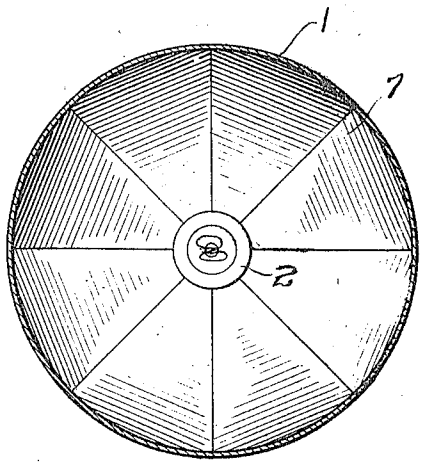


Fig. 3.



Witnesses:
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UNITED STATES PATENT OFFICE.

HENRY A. WILLIAMSON, OF CHICAGO, ILLINOIS.

LAMP.

1,180,748. Specification of Letters Patent. Patented Apr. 25, 1916.

Application filed January 28, 1914, Serial No. 814,855. Renewed March 18, 1916. Serial No. 85,199.

To all whom it may concern:

Be it known that I, HENRY A. WILLIAMSON, a citizen of the United States, residing at Chicago, county of Cook, State of Illinois, have invented a certain new and useful Improvement in Lamps, and declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention has for its object to produce a lamp by means of which the direction of the rays of light may be determined at will without producing a glare objectionable to the eyes even though a powerful light be used.

The various features of novelty whereby my invention is characterized will hereinafter be pointed out with particularity in the claims; but for a full understanding of my invention and of its object and advantages, reference may be had to the following detailed description taken in connection with the accompanying drawing, wherein:

Figure 1 is a central longitudinal section through an automobile lamp embodying my invention; Fig. 2 is a front view of the lamp; and Fig. 3 is a section taken on line 3—3 of Fig. 1.

Generally speaking, my invention consists in the use of a plurality of lens sections or segments provided with prismatic ribs, and a similar number of reflectors each adapted to reflect a predetermined portion of light from the source through one of the lens sections or segments.

In the drawings I have illustrated my invention in its simplest form and, for the sake of brevity, I shall confine the detailed description to this one form.

Referring to the drawing, 1 represents a casing open at the front and having in the rear end thereof a suitable lamp or other source of illumination. The front of the casing is closed by means of a lens made of a plurality of sections. In the present arrangement the lens is made of eight sections each having an angular width of forty-five degrees so that when placed together they form a complete disk. The sections are indicated by the reference character 3. Each section is provided with prismatic ribs, 4, extending transversely to the radial axis; the arrangement being such that when the several sections are assembled together the ribs thereon form a series of concentric octagons extending from the center to the periphery. The several sections may conveniently be held together by placing them between two disks of plain glass, 5 and 6.

Behind the lamp is arranged a reflector, 7, in the form of a truncated pyramid having as many sides as there are lens sections and so disposed that each side lies directly behind one of the lens sections. With this arrangement, each lens section receives light from a flat reflector portion, so that the light is uniformly distributed and, in passing through the lens, is positively directed, and there being at the same time sufficient diffusion to prevent an objectionable glare and prevent the light from being dazzling no matter from what point it is viewed and even though the source of light be a powerful one.

While I have illustrated and described with particularity only a single preferred form of my invention, I do not desire to be limited to the exact structural details thus illustrated and described, but intend to cover all forms and arrangements which come within the terms employed in the definitions of my invention constituting the appended claims.

I claim:

1. In a lamp, a lens composed of a plurality of segments each provided with prismatic ribs arranged transverse to the radial axis thereof, a reflector made of segments corresponding in number to the number of lens segments and each segment of the reflector being disposed directly behind one of the lens segments, and a light disposed between the reflector and the lens.

2. In a lamp, a lens composed of a plurality of segments each provided with parallel prismatic ribs arranged transverse to the radial axis thereof, a reflector made of segments corresponding in number to the number of lens segments and each segment of the reflector being disposed directly behind and in a plane parallel with long edges of the ribs of one of the lens segments, and a light disposed between the reflector and the lens.

3. In a lamp, a plurality of lens members provided with prismatic ribs, a reflector having a plurality of sections corresponding in number to the lens members and each arranged directly behind one of the lens mem-

bers, and a source of light disposed between the reflector and the lens members.

4. In a lamp, a lens composed of a plurality of segments arranged edge to edge and forming a complete disk, each segment being provided with prismatic ribs extending transversely to its radial axis, a reflector in the form of a truncated pyramid whose sides are equal in number to the number of lens segments, each side of the reflector lying directly behind one of the lens segments, and a source of light between the reflector and the lens.

5. In a lamp, a lens composed of a plurality of segments arranged edge to edge and forming a complete disk, each segment being provided with prismatic ribs extending transversely to its radial axis, plain glass disks lying on opposite sides of the lens segments for holding the segments together, a reflector in the form of a truncated pyramid whose sides are equal in number to the number of lens segments, each side of the reflector lying directly behind one of the lens segments, and a source of light between the reflector and the lens.

In testimony whereof, I sign this specification in the presence of two witnesses.

HENRY A. WILLIAMSON.

Witnesses:

WM. F. FREUDENREICH,

RUTH E. ZETTERVALL.