O. WINSTON.

HEADLIGHT.

APPLICATION FILED OCT. 5, 1916.

1,273,969. Patented July 30, 1918.

Fig. 1

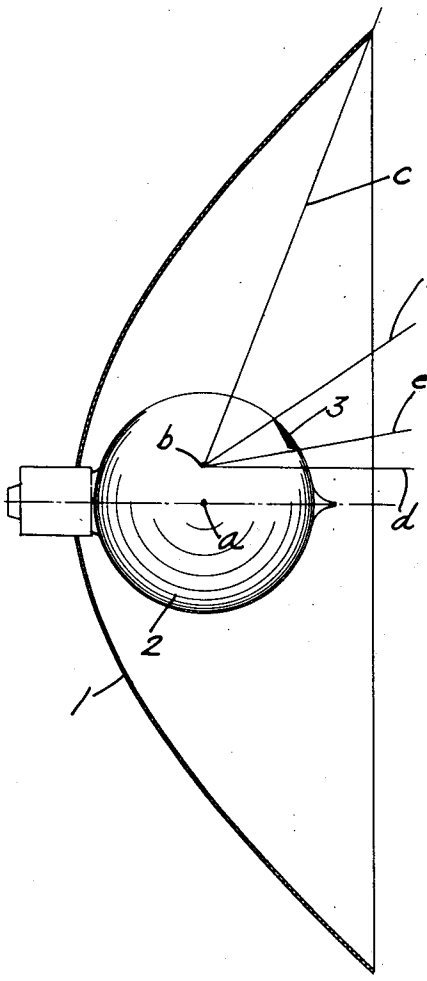
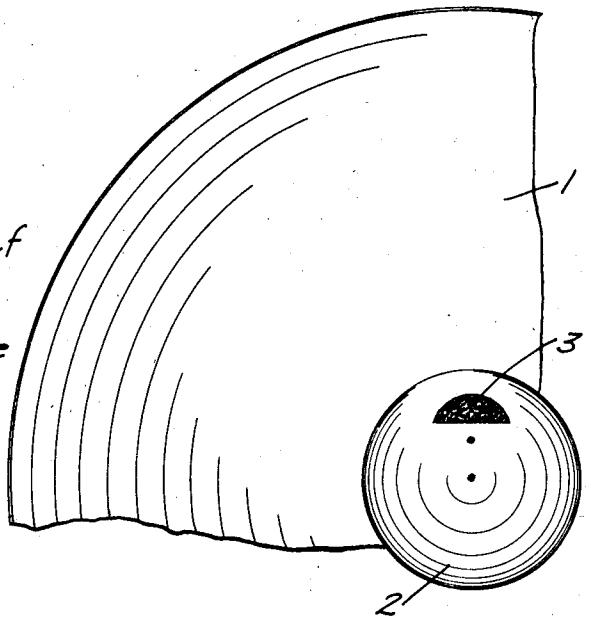


Fig. 2



WITNESSES
E. C. Wells
G. F. Williamson

INVENTOR
Overton Winston
BY HIS ATTORNEYS
Williamson & Machad

UNITED STATES PATENT OFFICE.

OVERTON WINSTON, OF MINNEAPOLIS, MINNESOTA.

HEADLIGHT.

1,273,969. Specification of Letters Patent. Patented July 30, 1918.

Application filed October 5, 1916. Serial No. 123,847.

To all whom it may concern:

Be it known that I, OVERTON WINSTON, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Headlights; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Particularly, my invention relates to headlights provided with shifting light sources within concave reflectors, and the invention provides, in combination therewith, a frosting or light dimming obstructing surface of novel relative arrangement, all as will hereinafter more fully appear.

The invention is illustrated in the accompanying drawings wherein like characters indicate like parts throughout the several views. Referring to the drawings:

Figure 1 shows the reflector in vertical section and a two-filament light bulb in side elevation; and

Fig. 2 is a front elevation of the headlight, parts of the reflector being broken away.

The reflector is indicated by the numeral 1 and the light bulb by the numeral 2. This light bulb has two filaments, the hot spots of which are indicated, one at *a* and the other at *b*. The hot spot of filament *a* is at the axis of the reflector and the hot spot of the filament *b* is vertically offset and materially above the axis of said reflector.

In practice, the two filament light bulb employed may be, and preferably is combined with electrical connections and switches, such, for example, as illustrated in my pending application, S. N. 86,852, filed March 27th, 1916, and entitled "Headlights".

In Fig. 1, line *c* radiates from *b* to the upper edge of the reflector; line *d* is a horizontal line or line parallel to the axis of the reflector and which intersects point *b;* and the lines *e* and *f* are lines radiating from point *b* at angles to lines *d* and *c*. The globe or the light bulb 2 is provided with a frosting or light dimming surface 3 on its upper front portion. This frosting 3, in a general way, may be described as approximately semicircular. Its lower edge is approximately in a plane that intersects line *e* and a horizontal line at *b*, but is preferably in a truly horizontal plane, so that in front elevation, the lower line of said frosting appears as straight. The upper edge of the said frosting 3 is curved and is described by oscillating line *f* on point *b* while keeping the same always at the constant angle to lines corresponding to *c* which radiate from *b* to the edge of the reflector. Inasmuch as the globe of the light bulb 2 will usually be spherical, the curved line of the upper edge of the frosting *c* will deviate slightly from a true circular curve.

For long beam projection, such as required for country road driving, the light source will be at filament *a*, while for city driving, where objectionable blinding effects must be avoided, the light source will be at filament *b*. Line *e* makes such angle to horizontal line *d*, that when light source is at *b* the direct rays projected below the frosting 3 will have only such elevation that they will reach the eyes of a person in a passing machine only at such long distance that there will not then be any serious blinding effect. All of the direct rays from source *b* which would tend to produce serious blinding effect are dimmed by frosting 3. Direct rays from *b* from above the frosting, or within zone *f*—*c*, are given such elevation that they will not strike the eyes of a person in a passing machine until the passing machine is so close that such rays will be from one side, and not directly in the line of vision of persons in a passing machine, and hence, will not produce serious blinding effect.

The frosting above described is about the smallest size capable of use in the prevention of serious blinding effects. This smallness of its size is, of course, important, because the less shadow or dimming produced in the long beam projection, the better for country road driving.

What I claim is:

In a headlight, the combination with a reflector, of a light bulb therein, said bulb having two filaments, one at the axis and the other above the axis of said reflector, and the globe of said bulb having a frosting or light dimming surface on its upper front portion terminated at its lower edge above a line that is parallel to the axis of the reflector and intersects said vertically offset filament, and the upper edge of which terminates below a line that radiates from said

offset filament and touches the rim of said reflector at its upper edge, the said frosting being approximately semicircular with its approximately straight edge at the bottom thereof, the curved upper edge of said frosting following a line intersected by an imaginary line oscillated from the hot spot of said offset filament and maintained always at a constant angle to another line drawn from said offset filament and intersecting the rim of said reflector.

In testimony whereof I affix my signature in presence of two witnesses.

OVERTON WINSTON.

Witnesses:
BERNICE G. WHEELER,
HARRY D. KILGORE.