July 24, 1928. 1,678,408

C. H. TUMEY, SR

HEADLIGHT LENS

Filed March 4, 1926

FIG. 1.

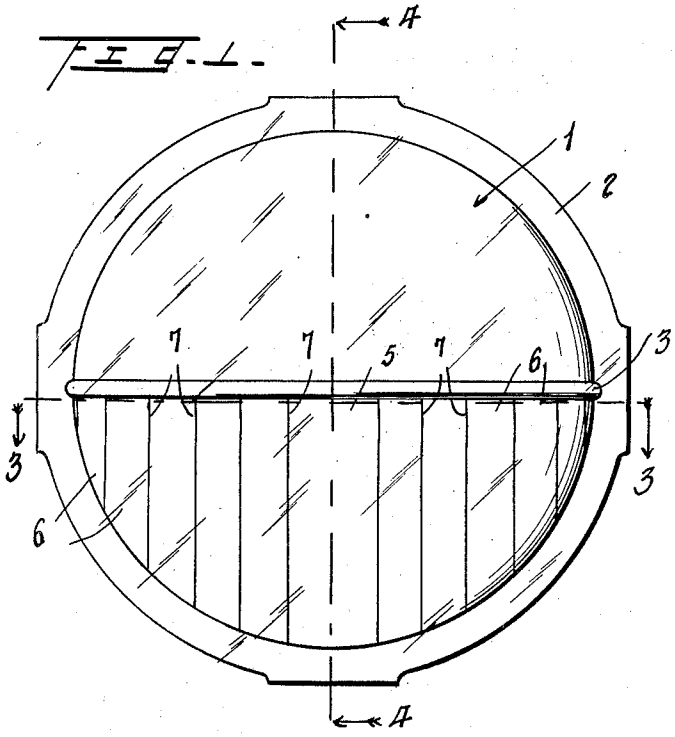


FIG. 2.

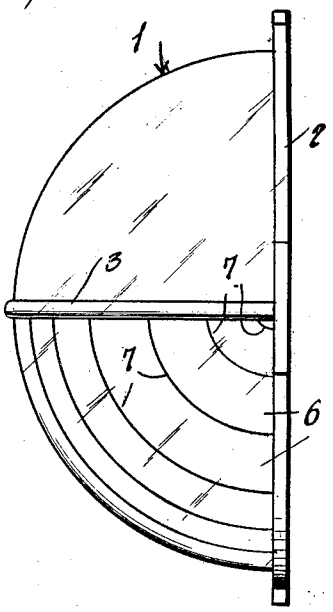


FIG. 3.

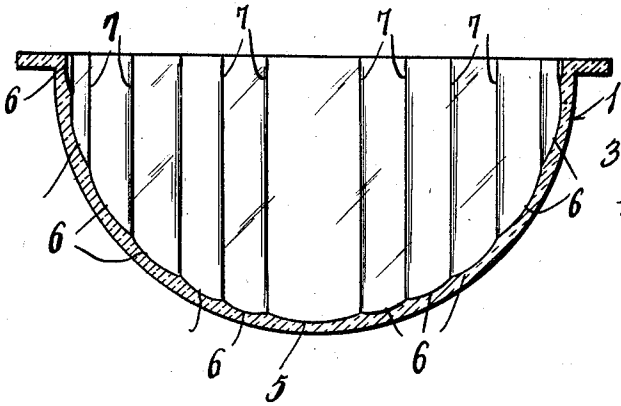
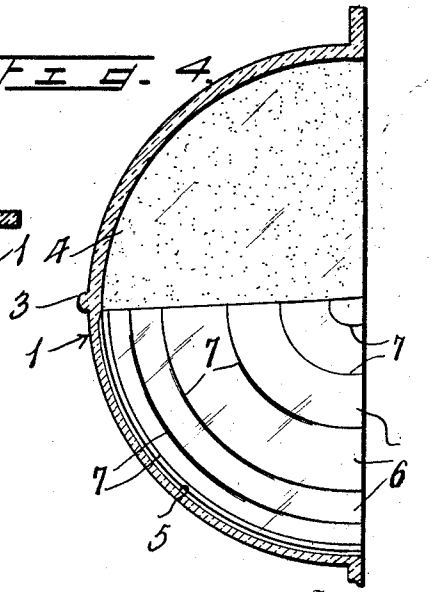


FIG. 4.



Inventor

C. H. Tumey Sr.

By A. Randolph Jr.

Attorney

Patented July 24, 1928. 1,678,408

UNITED STATES PATENT OFFICE.

CHARLES H. TUMEY, SR., OF SAN ANTONIO, TEXAS.

HEADLIGHT LENS.

Application filed March 4, 1926. Serial No. 92,204.

The invention relates to lenses for headlights of motor vehicles and has for its object the provision of a lens that will permit the use of bright lights on automobiles without subjecting the drivers of approaching vehicles to glare from the headlights.

In carrying out the invention a lens of approximately hemispherical shape is provided and adapted to be secured to the lamp casing, the upper portion of the lens being frosted to retard the light rays from the lamp to prevent passage of glaring light rays therethrough, while the lower portion of the lens is clear to permit free passage of the rays of light therethrough and formed in a series of concaved bands on its inner surface to deflect the light rays passing through the sides of the lens towards the sides of the road, thus resulting in the utilization of all of the light rays to illuminate the roadway and dispensing with the objectionable glare.

The invention will be described in detail hereinafter and will be found illustrated in the accompanying drawings in which

Figure 1 is a front view in elevation of the improved headlight lens,

Figure 2 is a side view in elevation,

Figure 3 is a horizontal sectional view on a plane indicated by the line 3—3 of Figure 1, and

Figure 4 a vertical sectional view on the plane indicated by the line 4—4 of Figure 1.

In the drawings similar reference characters will be used to designate corresponding parts throughout the several views.

The lens illustrated in the drawings comprises a substantially hemispherical portion 1 having its edge provided with a flange 2 for securing the lens in position in front of a lamp casing (not shown), the hemispherical portion 1 bulging outwardly from the casing when the lens is in position. The outer surface of the hemispherical portion 1 is provided with a horizontal bead 3 arranged substantially midway between the upper and lower portions of said hemispherical portion, and the inner surface of the part of the lens above the bead 3 is roughened or frosted as shown at 4 to retard the passage of light rays therethrough and thus prevent glaring light rays striking through the upper portion to interfere with the vision of the drivers of approaching vehicles. The inner surface of the hemispherical portion 1 below the bead 3 is formed in a series of bands concaved as shown in Figure 3, there being one concaved band designated 5 in the middle of the lens and a series of narrower bands 6 on each side of the middle band 5 forming ridges 7 that are parallel to one another and on substantially vertical planes.

It will be apparent that in use, that as only the lower half of the hemispherical portion 1 is clear to permit light rays to pass directly therethrough, the upper portion being frosted as heretofore described, no glaring rays passing through the upper portion, and the lower portion being formed with the concaved bands 6 forming the ridges 7, the light rays passing through the lower portion will be deflected so as to diffuse the light over the surface of the roadway in advance of the vehicle and also to the sides of the roadway thus adequately illuminating the roadway in advance of the vehicle.

What is claimed is:—

1. A headlight lens, comprising a hemispherical body having its upper portion provided with means to retard the passage of light rays therethrough, the lower portion being transparent, and having its inner surface formed in a series of parallel transversely concaved bands forming ridges therebetween, said ridges being arranged on vertical planes, and the band arranged in the middle of the lower portion being wider than the bands on either side thereof and adapted to direct light rays in front of the lens, said concaved bands on the sides of the middle band being adapted to deflect light rays towards the sides of the lens.

2. A headlight lens, comprising a hemispherical body having an outstanding horizontal rib extending entirely around the body and dividing it into two portions, the portion above the rib being frosted to retard the passage of light rays therethrough, the portion below the rib being transparent and formed into a plurality of vertically arranged light deflecting bands transversely concaved on the inner surface of the lens, the middle of said bands being wider than the bands on either side thereof to direct light rays in advance of the lens, and the other bands by following the curvature of the lens body deflecting the rays of light therethrough to the sides of the lens.

In testimony whereof I affix my signature.

CHARLES H. TUMEY, SR.