

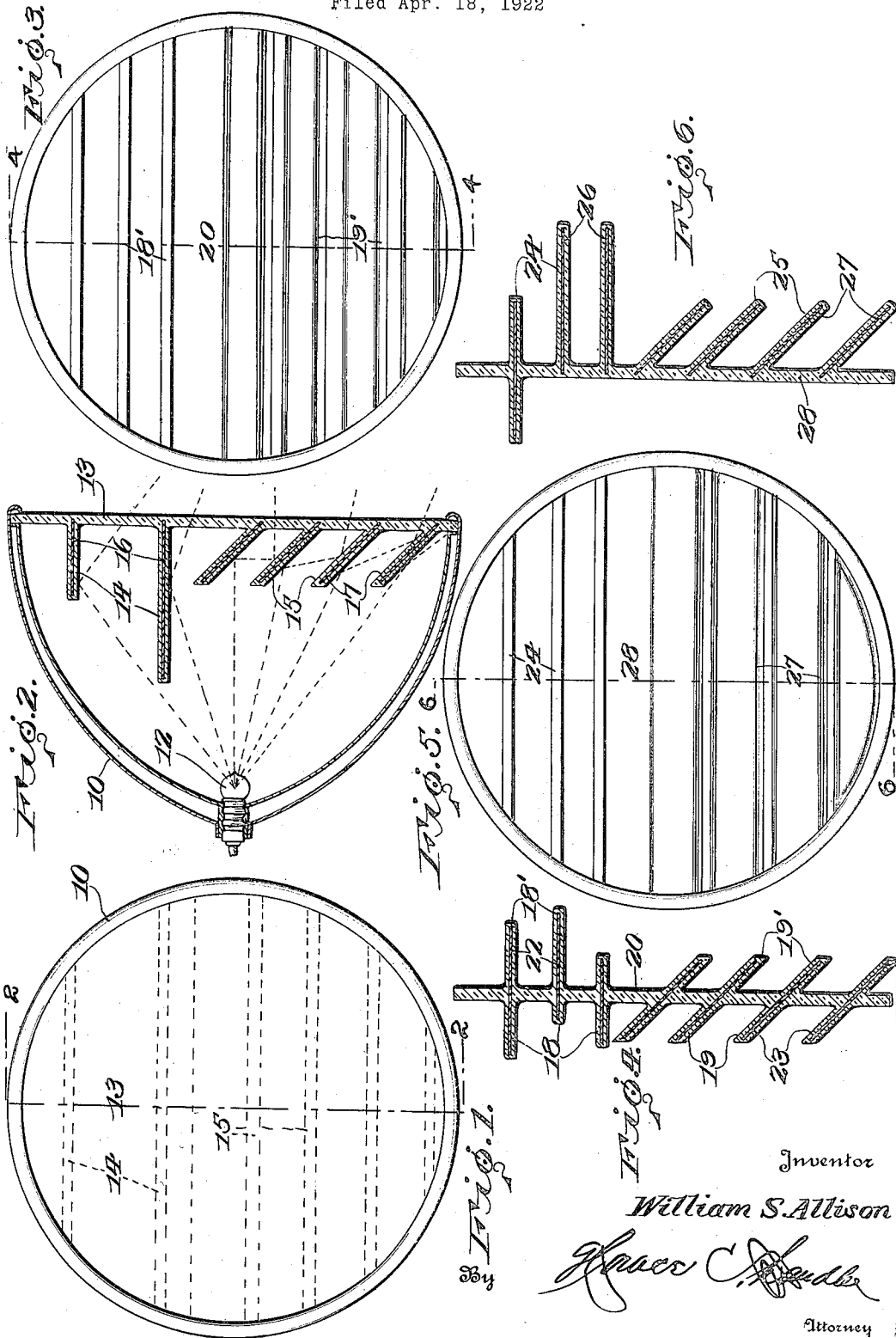
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W. S. ALLISON

HEADLIGHT LENS

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Inventor

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UNITED STATES PATENT OFFICE.

WILLIAM S. ALLISON, OF DENVER, COLORADO.

HEADLIGHT LENS.

Application filed April 18, 1922. Serial No. 554,582.

To all whom it may concern:

Be it known that I, WILLIAM S. ALLISON, a citizen of the United States, residing at Denver, in the county of Denver, State of Colorado, have invented certain new and useful Improvements in Headlight Lenses; 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.

This invention relates to new and useful improvements in head lights and particularly to the lenses therefor.

The principal object of the invention is to so construct a lens of this character that the rays of light, from the source within the lamp, will be bent so as to be directed downwardly, and thus be prevented from shining into the eyes of pedestrians.

Another object is to provide a lens of this character having a plurality of reflecting surfaces disposed at such angles as to permit the maximum of reflected light to pass therethrough, while at the same time preventing any direct rays of light to pass therethrough.

Other objects and advantages will be apparent from the following description when taken in connection with the accompanying drawing.

In the drawing:

Figure 1 is a front elevation of one form of the lens.

Figure 2 is a vertical central sectional view on the line 2—2 of Figure 1.

Figure 3 is a view similar to Figure 1, showing a modified form of the lens.

Figure 4 is a vertical central sectional view through the lens on the line 4—4 of Figure 3.

Figure 5 is a front elevation of a further modification of the lens.

Figure 6 is a vertical central sectional view on the line 6—6 of Figure 5.

Referring particularly to the accompanying drawing, and especially to Figures 1 and 2, 10 represents a lamp casing having the usual parabolic reflector and the light source 12 projecting from the center or concave face thereof.

The lens, which is properly secured within the front open end of the casing 10 comprises a transparent discal body 13, from the inner face of the upper portion of which project the integral glass webs 14, said webs

extending transversely of the inner face of the body and in parallel planes. Formed integrally with the lower portion of the body 13, and projecting inwardly and upwardly from the inner face of the body are the glass webs 15, these webs being in parallel relation to each other. Embedded in each of the webs 14, and extending from the inner longer edges thereof and through the webs, in parallel relation to the upper and lower faces thereof are the plates 16, each of which has its upper and lower faces highly polished, to act as reflectors. Similarly embedded in each of the webs 15 is a double reflecting surfaced plate 17.

In this construction the rays of light emanating from the source 12, strike the lower reflecting faces of the plates 14, and are reflected outwardly and downwardly through those portions of the body 13, lying between the webs, such direction being toward the ground, so that the rays of light will not be directed into pedestrians' eyes. The rays of light which strike the lower reflecting faces of the plates 15, are deflected downwardly on to the upper reflecting faces of the plates 15 of the webs below, and from thence the light rays are reflected downwardly and outwardly through the portions of the body lying between these webs.

In the form shown in Figures 3 and 4, each of the webs 18 and 19, which correspond to the webs 14 and 15, have continuations 18' and 19', respectively, which project from the front face of the body 20, of the lens. In this form the rays of light are doubly reflected, as indicated by the lines 21, from the lower faces of the reflecting plates 22 and 23, to the upper faces of the plates therebelow, and thence outwardly and downwardly through the portions of the body between the webs. Some of the rays of light in this form of the lens, will, after being reflected from the lower faces of the plates 23, pass through the portions of the body between the webs and then be reflected from the upper faces of the portions of the plates 23, lying within the forward portions of the webs. It will be noted that these plates 22 and 23, extend transversely through the body 20 of the lens.

In the form shown in Figures 5 and 6, the webs 24 and 25 having therein the double reflecting plates 26 and 27, respectively, are formed similarly to the webs 14 and 15, of the first form but project from the outer

face of the lens body 28. The light rays, in this form reflect from the lower face of one plate to the upper face of the next lower plate, and thence outwardly and downwardly in a manner similar to that of the first form, except that the light rays pass through the body of the lens before striking the reflecting plates.

What is claimed is.

10 1. A headlight lens comprising a transparent body having webs projecting from opposite faces thereof and extending transversely of the said faces, the webs of one face being in the same plane as the corresponding webs of the other face.

15 2. A headlight lens comprising a transparent body having webs extending from opposite faces thereof and in parallel planes, said webs having opposite reflecting faces.

20 3. A headlight lens comprising a transparent body having webs projecting from opposite faces thereof and in parallel planes, the webs of one face being continuations of the webs of the other face and having opposite reflecting surfaces.

25 4. A headlight lens comprising a transparent body having oppositely projecting integral webs extending transversely of the faces of the body and each having a reflecting element embedded therein for reflecting

light rays from one web to the next adjacent lower web.

5. A headlight lens comprising a transparent body from the opposite faces of which project webs, said webs extending transversely of the faces of the body and being in parallel planes with those of one face, and reflecting elements embedded in the webs and extending through the body, the webs and reflecting elements being arranged at such angles with respect to the rays of light as to produce compound reflection between the reflecting elements to bend the rays.

6. A headlight lens comprising a transparent body having integral webs projecting from its face and extending transversely of the body, each of the webs having a double faced reflecting element embedded therein.

7. A headlight lens comprising a transparent body having integral webs projecting from its face, each of the webs having a double faced reflecting element embedded therein.

In testimony whereof, I affix my signature, in the presence of two witnesses:

WILLIAM S. ALLISON.

Witnesses:

HORACE HULL,

CLARENCE WILSON.