

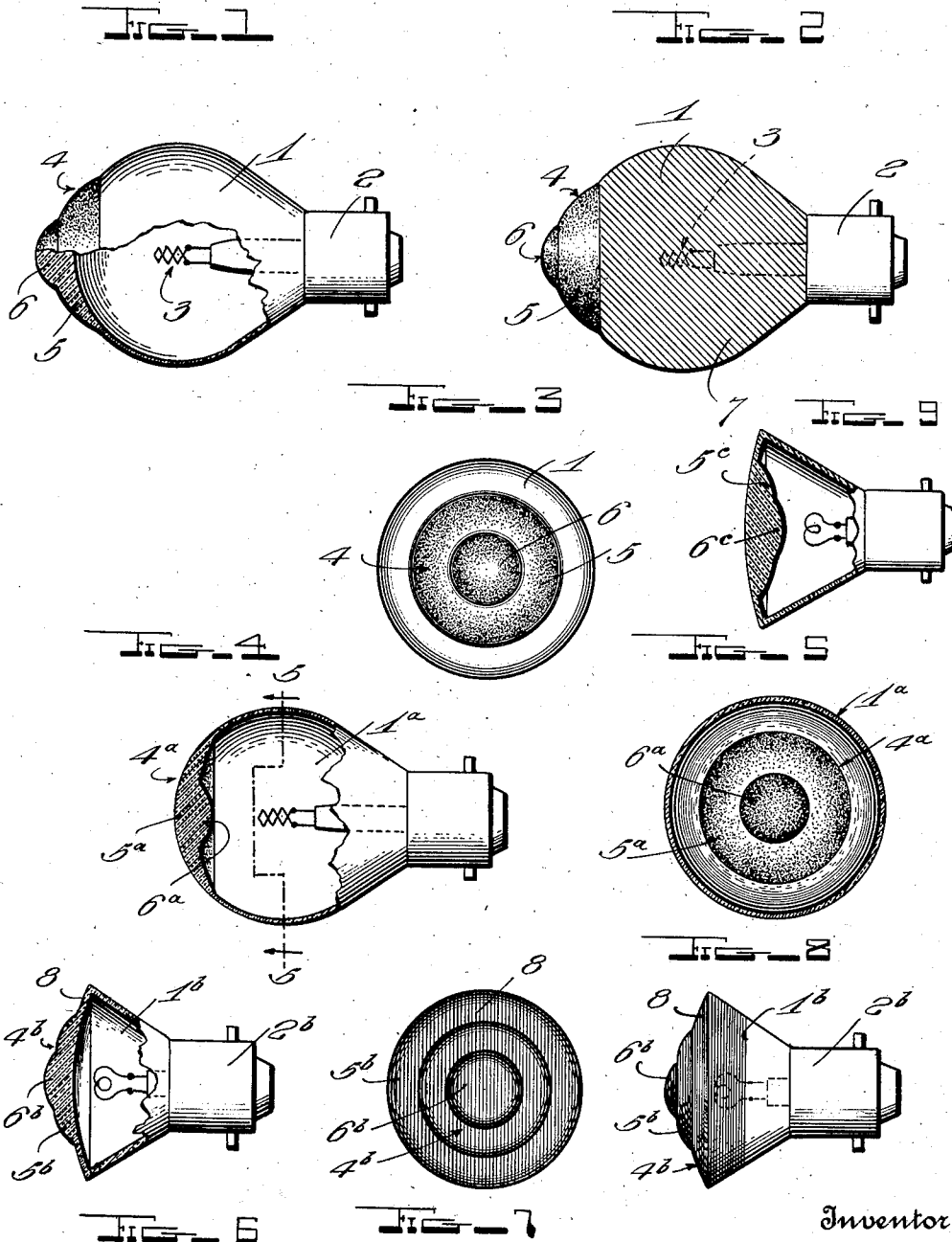
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ELECTRIC LIGHT BULB

Filed Nov. 26, 1923



Witness

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UNITED STATES PATENT OFFICE.

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ELECTRIC-LIGHT BULB.

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My invention relates to improvements in electric light bulbs and has reference more particularly to bulbs designed primarily for use in connection with the head and tail lights of automobiles and other vehicles.

The principal object of the invention is to provide a bulb which will not project glaring rays onto the highway and consequently will not produce the usual bright spot on the road, with danger of blinding the drivers of other vehicles.

A further object of my invention is to provide a lamp the bulb of which is so formed that the necessity for employing a lens screen is obviated.

A further object is to provide a tail light preferably of the same general nature as the headlights, but provided with a red glass portion to display a red light toward the rear of the vehicle even if the usual red lens should be lost or broken, the remainder of the tail-light bulb however being formed of clear glass to effectively illuminate the license plate or plates.

With the foregoing in view, the invention resides in the novel subject matter herein-after described and claimed, the description being supplemented by the accompanying drawing.

Figure 1 is an elevation partly in section of one form of headlight bulb constructed in accordance with my invention.

Figure 2 is a view showing a bulb similar to Fig. 1, which however is ornamented.

Figure 3 is an end elevation of the bulb shown in Fig. 1.

Figure 4 is an elevation partly in section showing a slightly different form of construction.

Figure 5 is a transverse sectional view as indicated by line 5-5 of Fig. 4.

Figure 6 is a sectional view partly in elevation of the tail light bulb.

Figure 7 is a rear end view of the bulb shown in Fig. 6.

Figure 8 is a side elevation of the tail light bulb.

Figure 9 is a view similar to Fig. 6 but showing a slightly different form of construction.

In the construction shown in Figs. 1, 2 and 3, the numeral 1 designates a clear glass headlight bulb having the usual attaching plug 2 at its rear end, and containing an appropriate filament 3. The front end of the bulb 1 is formed with an integral

light diverging and modifying means 4 consisting of a relatively large, substantially convexo-concave lens 5, and a comparatively small convex lens 6 at the center of the convex surface of said lens 5. The lenses 5 and 6 may be colored, ground, or otherwise treated to prevent the projection of blinding rays therethrough, from the filament 3, and if desired, the major portion of the bulb, may be ornamented, as indicated at 7 in Fig. 2.

In Figs. 4 and 5, the bulb 1^a is provided at its front end with a light diverging and modifying means 4^a constituting lenses 5^a and 6^a, similar to the lenses 5 and 6. Whereas, the lenses 5 and 6 are at the exterior of the bulb however, the lenses 5^a and 6^a are at the interior thereof, the action being substantially the same.

The tail light disclosed in Figs. 6, 7 and 8 comprises a frusto-conical bulb body 1^b having the usual attaching plug 2^b at its smaller end, while its rear side is closed by a convex wall 8 whose central portion is formed with an integral light diverging and modifying means 4^b comprising lenses 5^b and 6^b, such as those above described. As indicated by the vertical shade lines in Figs. 7 and 8, the entire wall 8 and about half the side wall are of red glass and thus, even though the usual red lens of the tail light casing should be lost or broken, a red light will be displayed at the rear of the vehicle whether the bulb is positioned horizontally or vertically in the tail light casing. The clear glass portion of the sides of the bulb permits rays of light to be projected to illuminate the usual license plate or plates.

In Fig. 9, the tail light bulb is the same as in Figs. 6, 7 and 8, except that the lens portions 5^c and 6^c are at the interior of said bulb.

In all illustrated embodiments of the invention, the lenses, instead of concentrating the light rays from the filaments as one would suppose, diverge or spread them, so that the bulbs themselves constitute anti-glare lamps and do not have to be used in connection with anti-glare screens or lenses.

It will be seen from the foregoing that I have provided simple constructions for attaining the objects of the invention in an effective manner, and while the details disclosed are preferably followed, minor changes may be made. Also, it may be pointed out that if desired, bulbs such as

those indicated at 1^a and 1^b may be ornamented, in any desired manner.

I claim:

1. A non-glare screenless lamp for illuminating a field with a central portion of one intensity and a surrounding field of another intensity, said lamp consisting of a light source and an enclosing bulb therefor, said bulb being provided with a lens the axis of which includes the light source, and a second lens superimposed upon said first named lens, whereby the light transmitted through the superimposed lens will be brought to a different focus from that transmitted through the first named lens.

2. A non-glare screenless lamp for producing an illuminated field the central portion of which is illuminated with one intensity and the surrounding field with another intensity, said lamp consisting of a light source and an enclosing bulb therefor, said bulb being provided with a central lens the axis of which includes the light source, and a surrounding lens of annular form of a different focal power than said first named lens, both of said lenses having a light diffusing surface.

In testimony whereof I have hereunto affixed my signature.

FRANK T. SKOGLAND.