

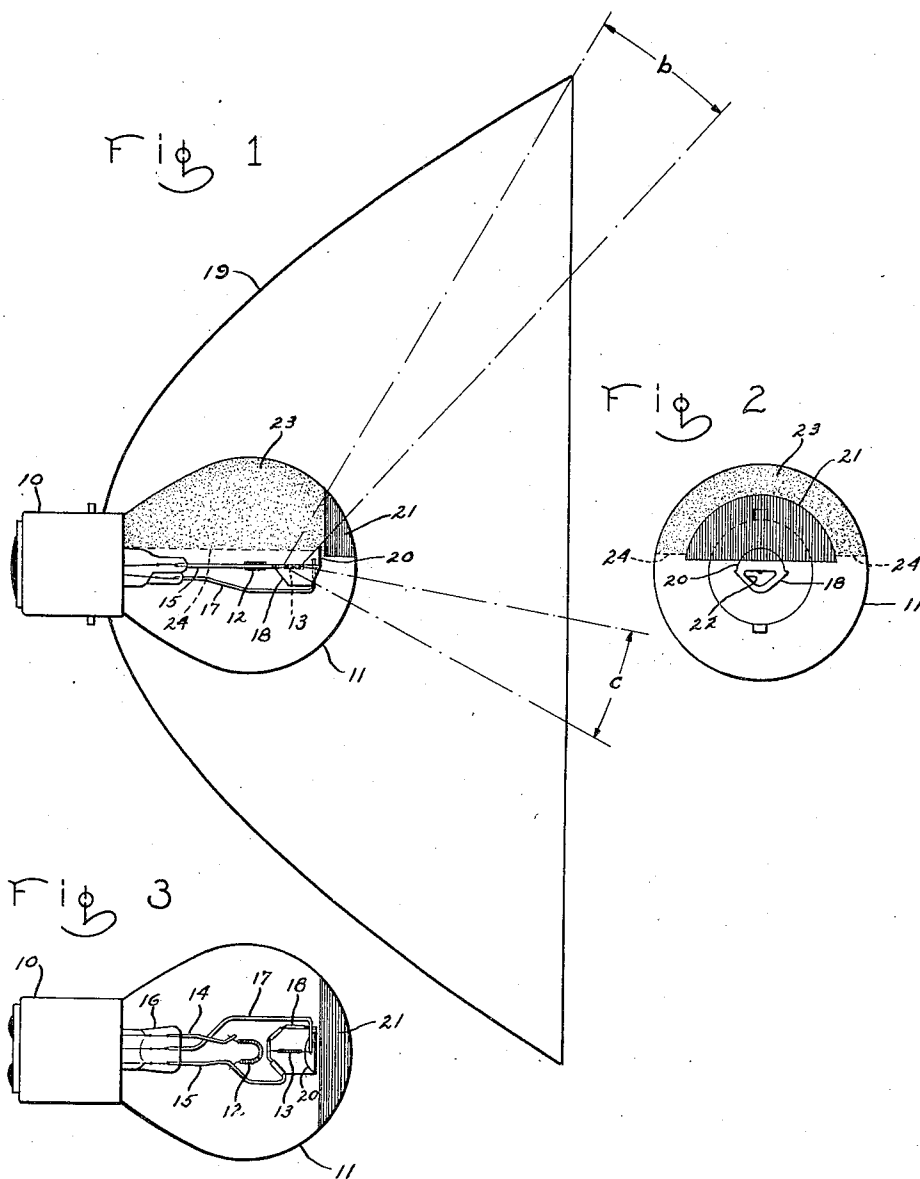
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ELECTRIC LAMP

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## UNITED STATES PATENT OFFICE

1,947,243

## ELECTRIC LAMP

Fritz Born, Berlin-Tempelhof, Germany, assignor  
to General Electric Company, a corporation of  
New York

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in Germany July 28, 1932

3 Claims. (Cl. 176—34)

My invention relates to electric lamps and more particularly to projection lamps for use in vehicle headlamps of the type comprising a "major" and a "minor" light source located longitudinally of the bulb with a concave reflector or shield disposed under the minor light source so as to direct the light from said source against the upper portion of the usual paraboloidal reflector which redirects the light downward to provide a depressed beam. The major light source is preferably disposed at the focal point of the reflector to provide a substantially horizontal beam of light for the main driving beam.

In lamps of the type described, a small portion of the light rays from the minor filament is directed upward in front of the upper edge of the reflector. Although these rays may not generally blind persons approaching the vehicle, due to their steep upward inclination, yet in foggy weather they will of course be diffused by the vapor particles, causing a glaring light which is particularly troublesome to the driver of the car equipped with the lamp. One of the features of my invention is the avoidance of this glare by the provision on the front of the bulb of an opaque screen adapted to intercept the light rays causing the glare. The said screen is made comparatively small so that the main driving beam is substantially unaffected thereby.

Another feature of my invention is the provision of an opening at the front of the concave reflector or shield through which light rays pass directly from the minor light source to the ground in front of the vehicle without being redirected by the paraboloidal reflector.

Still another feature is the provision of a translucent coating on the upper part of the bulb to modify the light from minor filament. In order to decrease as much as possible the effect of said coating on the main driving beam, it is preferably terminated on a line above the axis of the bulb.

In the drawing, Fig. 1 is a side view of a lamp comprising my invention mounted in a reflector; Fig. 2 is a front view of the lamp; and Fig. 3 is a plan view thereof.

Referring to the drawing, the lamp comprises a base 10 and bulb 11 having a major filament 12 and minor filament 13 sealed therein. Said filaments 12, 13 are preferably located in the longitudinal axis of the lamp with filament 13 foremost. Filament 12 is mounted on lead wires 14, 15 which are mounted in a stem press 16. Filament 13 is mounted on a lead wire 17 and on the lead wire 15 which also supports a concave reflector or shield 18 mounted below said filament 13. The lamp is mounted in a reflector 19 so that the filament 12 lies at the focal point thereof and the reflector 18 is so disposed as to direct all the light from the filament 13 toward the upper half of said reflector 19. A small upwardly extending tab 20 is formed at the front of the reflector 18 to intercept some of the forwardly projected rays without adding too much to the weight of the internal structure. However, light rays in the form of a small cone are directed from filament 13 beyond the upper edge of the reflector 19 and tend to blind the driver of the vehicle, particularly in foggy weather. Therefore, I provide on the front of the bulb 11 a segment-shaped screen 21, preferably an opaque coating, with the base line thereof parallel to, and preferably above, the horizontal plane through the axis of the lamp. Said screen 21 effectively intercepts the upwardly directed light rays and has substantially no effect on the driving beam produced by the major filament 12. A small opening 22 is provided at the front of the reflector 18 to allow the projection of a cone *c* of rays from the filament 13 directly toward the ground in front of the vehicle without being redirected by the reflector 19. The upper portion of the bulb 11 may also be provided with a translucent coating 23, preferably a yellow coating, so as to modify the character of the light beam and render it more efficient in penetrating fog. The longitudinal boundaries 24 of the said coating 23 are preferably located slightly above the axis of the lamp so as to lessen its effect on the driving beam produced by filament 12. What I claim as new and desire to secure by Letters Patent of the United States is:

1. An electric lamp for vehicles comprising a bulb, a pair of light sources disposed in the longitudinal axis of said bulb, a concave reflector disposed below the forward light source, and an opaque screen on the upper front portion of said bulb adapted to intercept upwardly directed rays from said forward light source.

2. An electric lamp for vehicles comprising a bulb, a pair of light sources disposed in the longitudinal axis of said bulb, a concave reflector disposed below the forward light source, an opening at the front of said reflector for direct transmission of light rays therethrough, and an opaque screen on the upper front portion of said bulb adapted to intercept upwardly directed rays from said forward light source.

3. An electric lamp for vehicles comprising a bulb, a pair of light sources disposed in the longitudinal axis of said bulb, a concave reflector disposed below the forward light source, an opening at the front of said reflector for direct transmission of light rays therethrough, an opaque screen on the upper front portion of said bulb adapted to intercept upwardly directed rays from said forward light source, and a translucent coating on the upper portion of said bulb, the longitudinal boundaries of said coating lying slightly above the axis of said lamp. 80

FRITZ BORN.

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