

March 15, 1927.

1,621,360

R. N. FALGE
INCANDESCENT LAMP
Filed April 22, 1922

FIG. 1

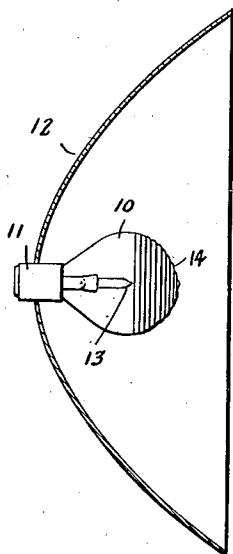


FIG. 2

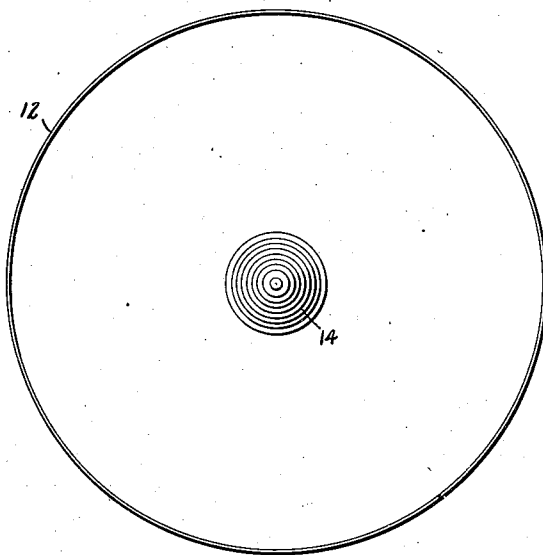


FIG. 3

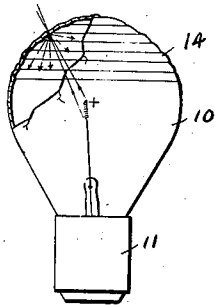


FIG. 5

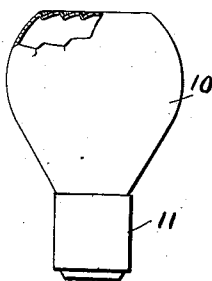


FIG. 7

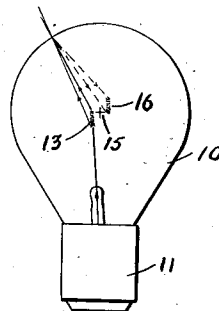


FIG. 4

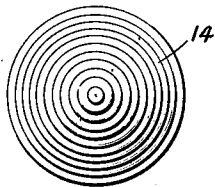
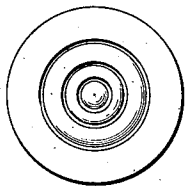


FIG. 6



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UNITED STATES PATENT OFFICE.

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INCANDESCENT LAMP.

Application filed April 22, 1922. Serial No. 556,080.

My invention relates to electric incandescent lamps for projection purposes and more especially to such lamps for use in automobile or other vehicle headlamps, although my invention is of advantage in any case where glare is objectionable. It has been the practice in most cases to use clear glass bulbs for such lamps and, because such construction is desirable from the standpoint of manufacture and on account of the possession of desirable characteristics such as greater strength and freedom from strain, such bulbs have been made with the front portion thereof conforming substantially to the surface of a sphere. When the filament is accurately positioned in the center of such sphere, no particular trouble arises. However, if the filament is not at the center, the image of the filament is not reflected back upon the filament from the front portion of the bulb but is reflected back to a position at one side of the filament and this causes trouble. No-glare devices which are used, for instance in automobile headlamps, ordinarily require a definite position of the light source and the creation of a secondary light source spaced from the filament tends, obviously, to cause such devices to fail in their function. The result is a glaring spot which appears on the reflector. A similar result will also be obtained where the bulb departs slightly from the spherical contour although the filament may be accurately positioned. In both cases the trouble arises chiefly from the fact that a more or less definite image of the filament is reflected back. The object of my invention is to correct this trouble.

According to my invention, in its preferred form as applied to bulbs of the usual shape, the bulb is rippled so as to cause the light rays which are reflected back from the substantially spherical front portion to follow multitudinous directions, or in other words, to disperse or diffuse the same and prevent the formation of a definite image of the filament.

In the drawing Figure 1 is a partially vertical section showing a lamp embodying my invention, suitably mounted in a para-

bolic reflector; Fig. 2 is a front elevation of the same; Fig. 3 is a plan partially in section showing the lamp and indicating the directions taken by the reflected rays; Fig. 4 is a front elevation of the same; Figs. 5 and 6 are similar views of a modification; and Fig. 7 is a view showing diagrammatically the reflection of light rays in a lamp as heretofore constructed.

Referring to the drawing, 10 is the bulb of an electric incandescent lamp having the usual base 11, said lamp being mounted in a headlamp of which is shown the parabolic reflector 12. The filament of the lamp is shown at 13. The front portion of the said bulb, which is substantially a portion of a sphere, is covered with a series of corrugations or ripples 14 which may be concentric as shown. In Fig. 3 the effect of such corrugation or rippling of the bulb is shown. That portion of the light rays which is reflected back from the front surface of the bulb is dispersed or diffused and this prevents the formation of a definite image of the filament. In Figs. 5 and 6 is illustrated a modification in which the front of the bulb is flattened, and it is provided with corrugations or ripples. In Fig. 7 is illustrated the undesirable results obtained with the construction of bulb heretofore used. The filament 13 in this particular case happens to be offset from the center 15 of the spherical front portion of the bulb. This results in the formation of a definite image 16 of the filament, which, as hereinbefore explained, tends to cause objectionable glare.

What I claim as new and desire to secure by Letters Patent of the United States, is:—

1. An electric incandescent lamp for vehicle headlamps comprising a base, a concentrated filament and a clear glass bulb having its wall of substantially uniform thickness throughout and having that portion thereof opposite to the base of the lamp of substantially spherical contour but slightly rippled so as to prevent the back reflection of a definite image of the filament without affecting appreciably the light transmitted therethrough.

2. An electric incandescent lamp for ve-

hicle head-lamps comprising a base, a concentrated filament and a clear glass bulb having its wall of substantially uniform thickness throughout and having that portion thereof opposite to the base of the lamp of substantially spherical contour but having thereon a plurality of slight concentric ripples so as to prevent the back reflection of a definite image of the filament without affecting appreciably the light transmitted therethrough.

In witness whereof, I have hereunto set my hand this 20 day of April, 1922.

ROBERT N. FALGE.