C. SCHICKERLING.

ELECTRIC LAMP ATTACHMENT.

APPLICATION FILED FEB. 3, 1917.

1,250,030.

Patented Dec. 11, 1917.

2 SHEETS—SHEET 1.

Fig. 1,

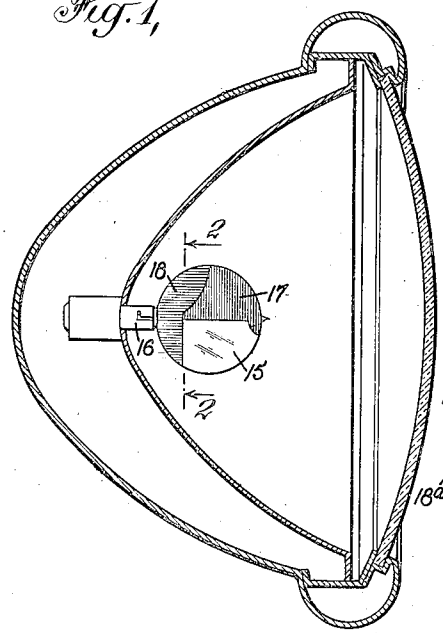


Fig. 2a,

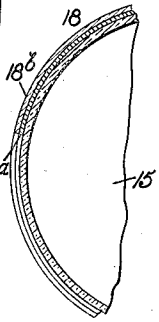


Fig. 2,

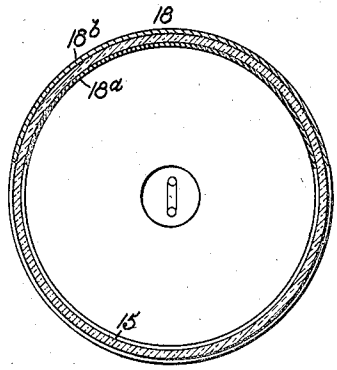


Fig. 4

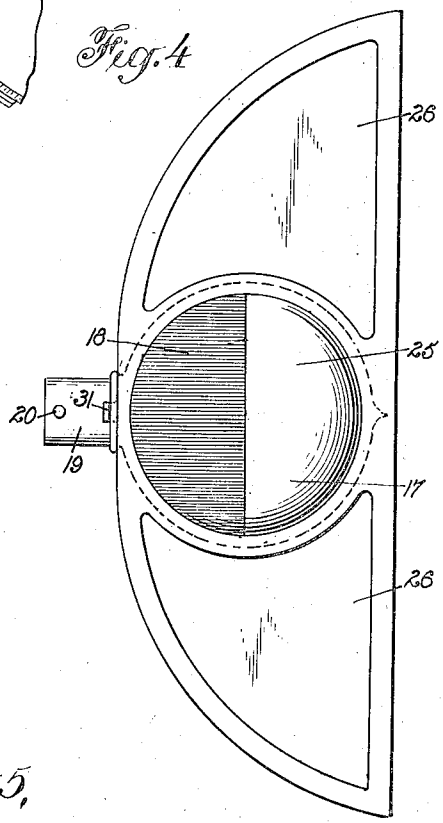


Fig. 3,

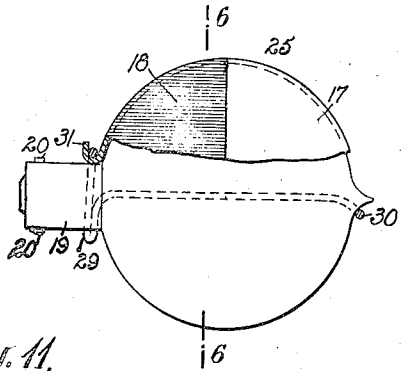


Fig. 11,

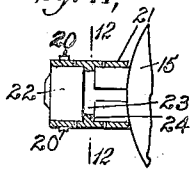


Fig. 12,

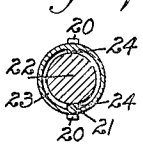
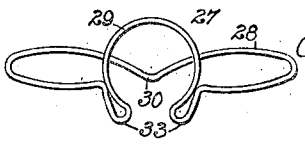


Fig. 5,



WITNESSES

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2 SHEETS—SHEET 2.

Fig. 6,

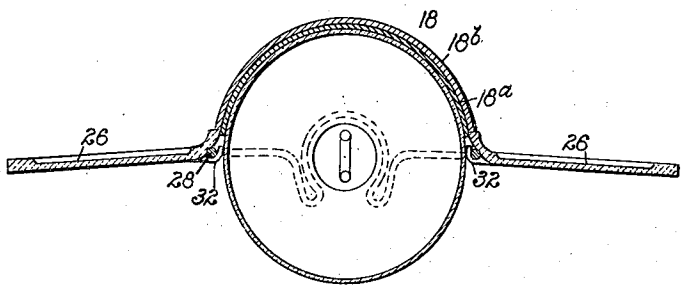


Fig. 7,

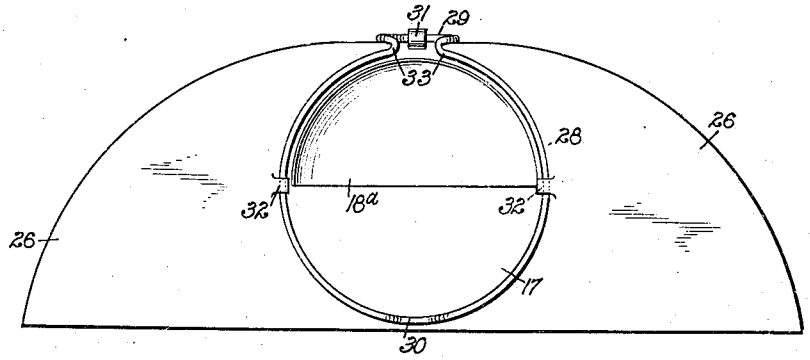


Fig. 8,

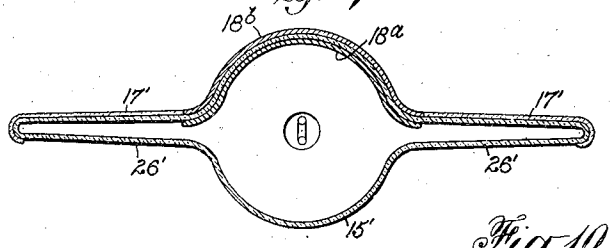


Fig. 9,

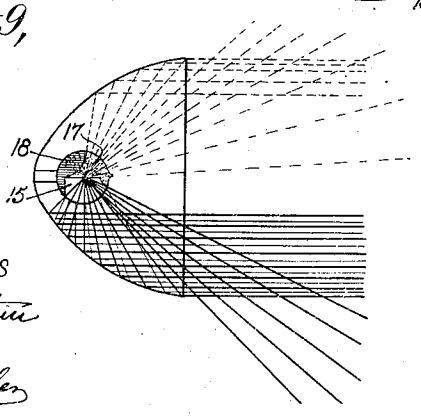
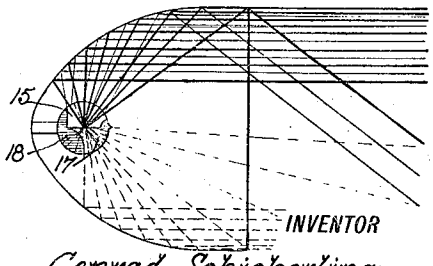


Fig. 10,



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CONRAD SCHICKERLING, OF WEEHAWKEN HEIGHTS, NEW JERSEY, ASSIGNOR TO LILLIE E. SCHICKERLING, OF WEEHAWKEN HEIGHTS, NEW JERSEY.

ELECTRIC-LAMP ATTACHMENT.

1,250,030. Specification of Letters Patent. Patented Dec. 11, 1917.

Application filed February 3, 1917. Serial No. 146,387.

To all whom it may concern:

Be it known that I, CONRAD SCHICKERLING, a subject of the German Emperor, and a resident of Weehawken Heights, in the county of Hudson and State of New Jersey, have invented a new and Improved Electric-Lamp Attachment, of which the following is a full, clear, and exact description.

This invention relates to electric lamps and has particular reference to such lamps as are designed for head-lights or other reflectors.

Among the objects of the invention is to provide an electric lamp bulb or attachment for a bulb which is so designed as to cut off or reduce the effect of all such objectionable light rays from a reflector as tend to produce a glare from the upper portion of the light or above the axis of the beam of light.

Another object of the invention is to produce by improved means an intensification of the light that is to be thrown downwardly upon the roadway or forwardly below the axis of the beam.

A still further object of this improvement is to provide an adapter for the coupling of my improved lamps to any standard socket.

With the foregoing and other objects in view the invention consists in the arrangement and combination of parts hereinafter described and claimed, and while the invention is not restricted to the exact details of construction disclosed or suggested herein, still for the purpose of illustrating a practical embodiment thereof reference is had to the accompanying drawings, in which like reference characters designate the same parts in the several views, and in which—

Figure 1 is a vertical longitudinal section showing one form of my improvement applied to a standard reflector;

Fig. 2 is a vertical transverse sectional detail on the line 2—2 of Fig. 1;

Fig. 2ª is a similar view, but indicating a slightly modified form or arrangement of the device;

Fig. 3 is a side elevation of a standard clear glass bulb having one form of my improvement applied thereto, parts of the same being broken away;

Fig. 4 is a plan view corresponding to Fig. 3;

Fig. 5 is a rear elevation of the wire yoke connector for the attachment indicated in Figs. 3, 4, 6, and 7;

Fig. 6 is a vertical transverse section on the line 6—6 of Fig. 3;

Fig. 7 is a bottom plan view of the attachment separated from the lamp;

Fig. 8 is a vertical transverse section, but showing a modified form of the invention from that of Fig. 6;

Figs. 9 and 10 are diagrams indicating the effect of my improvement with respect to the action of the light upon different types of reflectors;

Fig. 11 is a vertical longitudinal section of my coupling or adapter; and

Fig. 12 is a transverse sectional detail on the line 12—12 of Fig. 11.

In the automobile practice especially it is well understood that in different States or pursuant to the ordinances of different municipalities the lamps of the headlights must be so arranged or controlled as to vary the effect of the light or action of the headlights, and pursuant to the requirements in many jurisdictions the excess glare from the headlights emerging from the reflectors above the axis of the beam and which would ordinarily tend to confuse or blind a person in front of the vehicle, must be obscured or dispensed with. One of the principal objects, therefore, of this invention is to provide an electric lamp, preferably of the clear glass type but provided on one side, as for example at the top as indicated in Figs. 1 and 9, with a dull portion at the front and with a reflecting portion at the back. These modifications just referred to of the lamp are either made as features or parts of the lamp or else carried by an attachment in direct contact with the lamp bulb.

As shown therefore in Fig. 1, the bulb 15 adapted for connection in the usual manner to the socket 16 of conventional type, is provided at its upper and front part with a translucent section or portion 17 which may be formed by frosting or by the tinting of the glass itself or by the application of a coloring matter to either the inner or the outer surface thereof, usually for convenience the outer surface. The nature of this tinting or coloring may vary indefinitely so long as the particular color is not offensive to the requirements of the law. Any light rays therefore that pass through the portion 17 are so softened or reduced in intensity as to be unobjectionable.

18 indicates an opaque portion of the

lamp, the same being arranged mainly on the same side as the translucent portion 17, but the same may extend slightly below the base or axis of the lamp. The opaque portion 18 is designed to produce two distinct effects, first, to totally cut off those light rays from the filament that otherwise might emerge from the reflector in an upward direction, and, secondly, this opaque portion is constructed with a mirror like property, whereby the light rays last referred to instead of being thrown from the reflector in an objectionable manner are reflected directly the other way and coöperate with the rays of light emerging directly from the lamp in the usual manner. I provide therefore as a means to effect these results, a coating of silver, or its equivalent, 18^a applied directly to the glass of the lamp, either upon the inside of the bulb, as shown in Fig. 2, or on the outside, as shown in Fig. 2^a, making this portion 18 of the lamp in the nature of a mirror. Surrounding the silvered portion of the lamp is a layer or coating 18^b of heavy paint, or its equivalent, which guards and protects the silver. With this lamp arranged substantially as above indicated and applied to a shallow reflector, as shown in Figs. 1 and 9, the only intense light that emerges from the lamp is thrown downwardly directly upon the roadway or downwardly and thence horizontally in accordance with the usual effect of a parabolic reflector. In this connection it is to be noted that with a deep type or design of reflector, as indicated in Fig. 10, the improved lamp is preferably turned about its axis through 180 degrees, or with the opaque and translucent portions at the bottom. Under these conditions, the intense light is thrown from the lamp only by a reflection from the upper portion of the reflector.

According to the type of the reflector, therefore, the lamp obviously can be attached thereto in a particular manner so as to get the desired results. In practice, the socket to which the base of the standard clear glass bulb lamp is connected by means of bayonet slot connections, as indicated in the drawings, may be disposed at any angle with respect to the axis of the lamp. Therefore, I provide an adapter or coupling member whereby I may apply my lamps to any standard sockets and adjust the lamps as I herein suggest with the reflecting portions either up or down as would be required, irrespective of the exact location of the bayonet slots in the sockets. Whereas the base 19 of the lamp is ordinarily provided with lugs or pins 20 diametrically opposite each other in coöperation with the bayonet slots, I provide a sleeve 21 adapted to be applied to the base 22 of my lamps, said base being provided with a circumferential groove 23, into which lugs 24 formed on the interior of the sleeve 21 are adapted to project. This base 22 is made as much smaller than the internal diameter of the standard socket as the thickness of the sleeve, so that when the sleeve is applied to the base 22, as shown in Fig. 11 and with the sleeve provided with the lugs 20, the lamp thus equipped may be applied to the standard socket in the usual manner, and since the lugs 20 carried by the sleeve do not extend into the base of the lamp, the lamp may be adjusted around its axis as may be desired and may be so held frictionally.

In most of the figures of the drawings, I show a lamp or lamp attachment comprising all of the features above referred to respecting the light intensifier, and in addition thereto a pair of wings which lie in substantially the same horizontal plane on opposite sides of the lamp bulb. In Figs. 3 to 7, this attachment is indicated as comprising a sort of hood or hemisphere 25 having the translucent portion 17 and the opaque reflecting portion 18 as previously described. The attachment is preferably made of glass or some other equivalent material. The wing portions thereof 26 are preferably of translucent glass, celluloid or the like, and the hemispherical portion 25 is made as an integral part thereof or attached in any suitable manner thereto. The edges of the wings may be reinforced either by the thickening of the material or otherwise and the curved edges thereof are adapted to fit close to the reflecting surface of the reflector. The wings, as well as the translucent portion 17, serve to modify any light rays which tend to pass therethrough, and the opaque reflecting portion serves the purposes already stated. As a means for applying this attachment to any standard clear glass lamp bulb, I indicate a yoke 27. See Figs. 5 and 7. Said yoke is made preferably of endless wire and comprises essentially two circular portions, one 28, a horizontal portion, and the other 29, a vertical portion. The front part of the loop 28 is preferably deflected downwardly at 30, so as to take under the nipple portion of the bulb. The top of the loop 20 and the side portions of the loop 28 are fitted into or under a set of clips 31 and 32 formed as fixed parts of the hemisphere. The fingers 33 constituting the connecting point between the two loops 28 and 29 are of a flexible nature and are adapted to snap around the base of the lamp close to the bulb after the part 30 is slipped beneath the nipple. By this means the attachment is secured in its proper place, subject to adjustment as may be desired around the axis of the lamp.

In Fig. 8, I show a special form of lamp bulb constructed or blown so as to include the wing portions 26′ as parts of the hollow body, the main bulb portion being indicated

at 15′. These wings are rendered translucent along one side thereof, as for example the upper side, by tinting of any suitable nature, as indicated at 17′, and coats of silver 18ª and paint, or its equivalent, 18ᵇ are applied directly to the glass.

I claim:

1. An incandescent lamp comprising a transparent bulb having a forward clear section at one side of its longitudinal axis, and a forward translucent section, means applied to the rear portion of the bulb to render the same opaque above and below said axis and adjoining the rear portions of the translucent and clear sections, and means to form a reflecting surface around the inner portion of the opaque section, all for the purpose described.

2. An incandescent lamp comprising a transparent bulb having a forward clear section at one side of its longitudinal axis, and a forward translucent section at the opposite side of its longitudinal axis, means applied to the rear portion of the bulb to render the same opaque above and below its said longitudinal axis and adjoining the rear portions of the translucent and clear sections, and means to form a reflecting surface around the inner portion of the opaque section, all for the purpose described.

CONRAD SCHICKERLING.