

Oct. 22, 1935.

T. B. SHANAHAN

2,018,155

LIGHT REFLECTOR

Original Filed Oct. 26, 1931



FIG. 1.

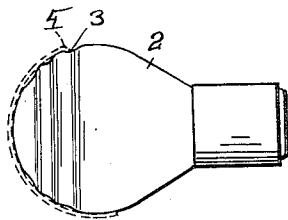


FIG. 2.

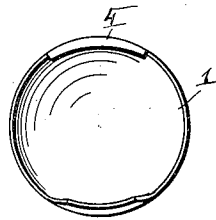


FIG. 3.

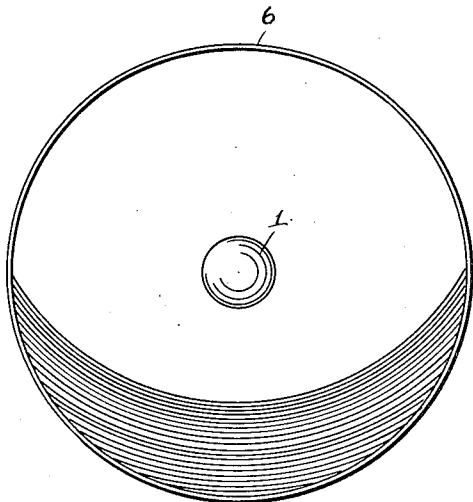


FIG. 4.

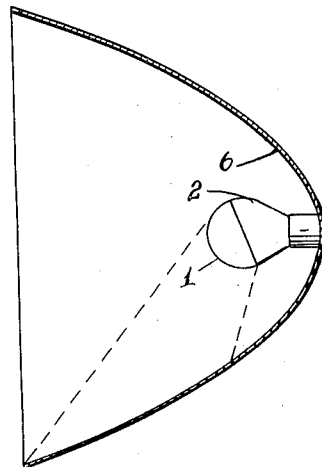


FIG. 5.

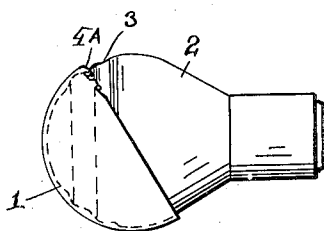


FIG. 6.

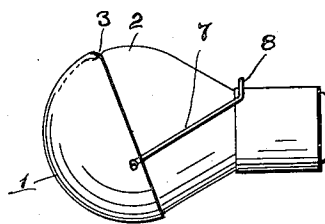


FIG. 7.

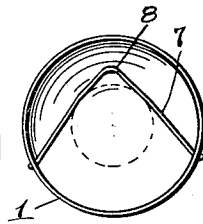


FIG. 8.

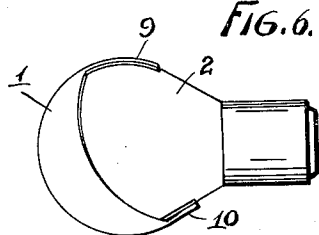


FIG. 9.

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## UNITED STATES PATENT OFFICE

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## LIGHT REFLECTOR

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Renewed March 16, 1935

## 1 Claim. (Cl. 240—48.6)

This invention relates to reflectors for incandescent lights, especially for those used on automobile head lights and the invention has for its object to provide an adjustable and removable reflector for such lights which, when attached to the light, will shade a portion of the reflector of the headlight and reflect the intercepted light rays onto the remainder of the headlight reflector to intensify the light projected from this portion of the reflector.

Another object of this invention is to make the reflector adjustable on the bulb of the incandescent light to shade a predetermined portion of the headlight reflector so that no light rays are reflected from the headlight reflector above a predetermined horizontal line.

Another object of this invention is to provide the reflector with clamping means with which it can be clamped in place on the bulb of an incandescent light.

These and other objects will become more readily apparent from a detailed description of the invention which follows, reference being had to the accompanying drawing in which

Figure 1 is a side elevation of one of my reflectors.

Figure 2 is a side elevation of an incandescent light with the reflector indicated in dotted lines on the bulb thereof.

Figure 3 is a rear elevation of the reflector in the position in which it is attached to the incandescent light.

Figure 4 is a front elevation of a headlight reflector with an incandescent light having my reflector mounted thereon located in the focal point thereof.

Figure 5 is a sectional view of the headlight reflector with the incandescent light carrying my reflector located in the focal point thereof.

Figure 6 is a side elevation of an incandescent light with a slightly modified form of my reflector attached thereto.

Figure 7 is a side elevation of an incandescent light with another modified form of the reflector attached thereto.

Figure 8 is a rear elevation of the modified reflector illustrated in Figure 7.

Figure 9 is a side elevation of another modified form of my reflector.

In the several figures like reference numerals indicate like parts.

The reflector for incandescent lights forming the subject matter of my present invention is adapted to concentrate the light rays projected from the incandescent light and when used in

connection with an automobile headlight will project the light in front of the car and thus eliminate the glare caused by light rays that are projected upwardly instead of downwardly onto the road directly in front of the car.

As illustrated in the figures the reflector comprises a substantially semi-spherical cup 1 which is formed up of sheet material with a preferably polished surface provided on the inside for the reflecting surface. The form of reflector illustrated in Figures 1, 2, 3, 6, 7 and 8 is especially adapted for use with incandescent lights having a bulb 2 which is provided with one or more concentric grooves 3, 3. For this reason the cup shaped reflector is provided with an inwardly bent locking flange 4 on the perimeter thereof. This locking flange is adapted to engage into one of the grooves 3 on one side of the bulb while the remainder of the reflector embraces the outer end of the bulb in a predetermined angular position as illustrated in Figures 2 and 6. In this position the side of the reflector opposite to the locking flange projects beyond the middle of the spherical portion of the bulb 2 and this engagement of the cup operates to draw the locking flange into the groove 3 and locks the cup to the bulb in the form of an angular cap. The locking effect of the reflector on the bulb may be increased by compressing the perimeter of the reflector so that it will be slightly oval shaped before it is telescoped over the electric bulb. In this way the sides of the reflector spring in place over the electric bulb and hold the locking flange in engagement in the groove of the bulb.

The reflector is placed on the light bulb as illustrated in Figure 5 in which position the reflector throws a moon shaped shadow onto the lower portion of the headlight reflector 6 as illustrated in Figure 4. The light rays thus intercepted by the reflector 1 are reflected then against the upper portion and sides of the headlight reflector in order to more brilliantly illuminate the remainder of the headlight reflector and have this reflector concentrate all of the light rays over a predetermined area in front of the headlight.

To prevent too much of the light from the bulb from being shut off from the sides of the headlight reflector, each side of the reflector may be cut back as illustrated at 5 in Figure 1. In this way only the undesirable light rays may be shut off from the lower portion of the headlight reflector and reflected onto the upper portion thereof.

In Figure 6 I have illustrated the locking flange of the reflector separated into a series of locking

lugs 4A, 4A which may be bent to produce the desired locking effect between the reflector and the grooves in the incandescent bulb.

5 In Figures 7 and 8 the reflector is provided with an additional locking element in the form of a spring wire formed up into a locking bale 7. The free ends of this locking bale are pivotally anchored into the sides of the reflector cup 1 near the outer edge thereof and preferably below the center line thereof. The inner end 8 of the locking bale is bent angularly to the bale proper at the point where it partially encircles the cylindrical portion of the incandescent light so as to provide a spring effect for the locking bale which permits the sides of the bale to slightly move in or out to adjust themselves against the sides of the bulb when the reflector and its locking bale are attached thereto.

10 In this way the locking bale operates to draw the lower portion of the reflector against the bulb of the light while the upper portion of the reflector is held in a predetermined position on the bulb by the engagement of the locking flange 4 into one of the concentric grooves 3 of the bulb. The reflector is thus positively locked in the desired angular position on the incandescent bulb in order to reflect part of the light rays as above described and concentrate the reflected light in front of the car.

In Figure 9 I have illustrated another modified form of the reflector in which the locking means for locking it in place on the incandescent bulb comprise rearwardly projecting fingers 9 and 10 which engage the incandescent bulb behind the center of the spherical portion of the bulb in order to keep the reflector from sliding off therefrom after it is once applied thereto.

While I have described the application of my reflector especially to automobile headlights it is understood that the reflector may be used in combination with incandescent lights for other specific or general illuminating purposes.

I claim:

15 An anti-glare shield for electric light bulbs having a groove in the end thereof, said anti-glare shield comprising a substantially semi-spherical reflector adapted to snugly fit over the end of said light bulb, an inwardly projecting locking member provided on the rim of said reflector and adapted to engage into the groove of the bulb on one side of the light bulb and a spring bale pivotally mounted on said reflector and adapted to engage the light bulb on the same side as said locking member in order to yieldingly draw the reflector against the opposite side of said light bulb.

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