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F. P. RAMPP  
SPOTLIGHT DEFLECTOR  
Filed June 6, 1923

Fig. 1.

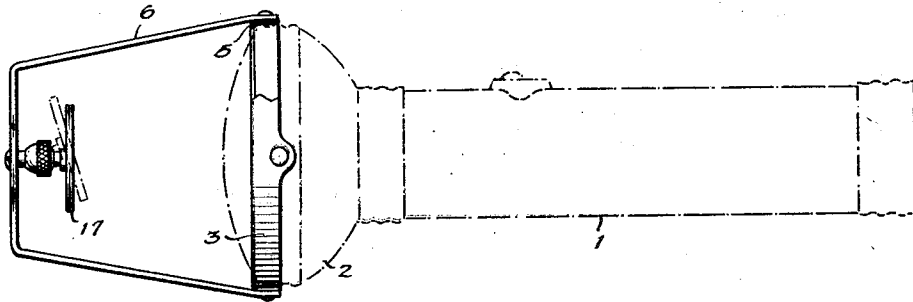


Fig. 2.

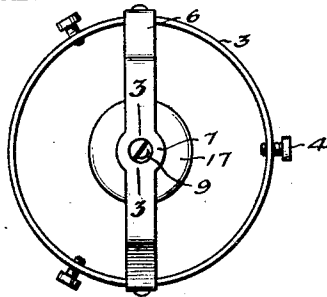


Fig. 3.

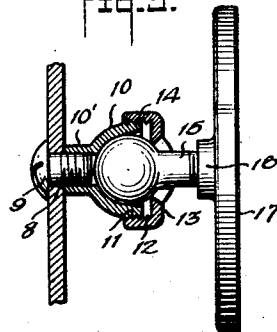


Fig. 4.

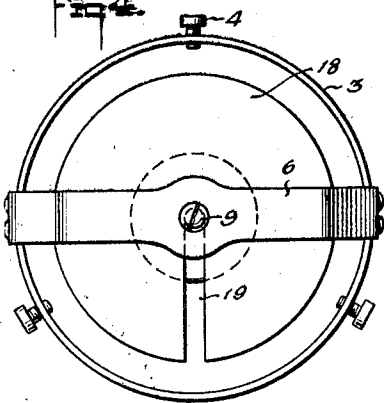
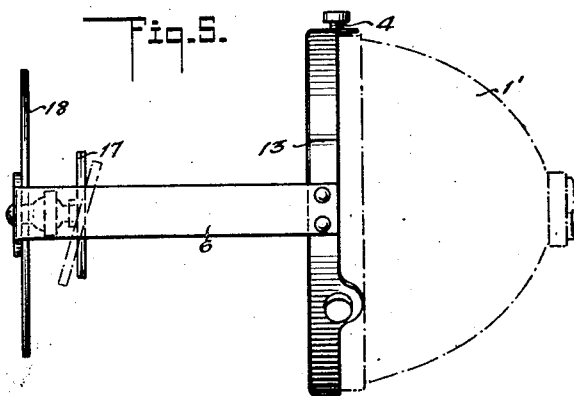


Fig. 5.



WITNESSES

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## UNITED STATES PATENT OFFICE.

FRANK P. RAMPP, OF NEW YORK, N. Y.

## SPOTLIGHT DEFLECTOR.

Application filed June 6, 1923. Serial No. 643,725.

*To all whom it may concern:*

Be it known that I, FRANK P. RAMPP, a citizen of the United States, and a resident of the city of New York, borough of the Bronx, in the county of Bronx and State of New York, have invented a new and Improved Spotlight Deflector, of which the following is a full, clear, and exact description.

This invention relates to deflectors for spot lights of the kind used on automobiles or other vehicles and also of the kind used in the hand and particularly to a structure which may be quickly applied and removed.

The object of the invention is to provide a deflector for spot lights which is arranged to deflect part of the light at any desired angle without shutting off the usual spot produced by the spot light.

Another object of the invention is to provide a deflector for spot lights in which a manually adjustable deflecting member is provided arranged on the axis of the spot light but of such a diameter as to deflect only part of the light so that part will be deflected to a given spot and the remainder to a spot directly ahead.

A still further object of the invention is to provide a deflector for spot lights in which a deflecting member is used for deflecting part of the light from the spot light and means associated therewith which will shut off the remaining light.

In the accompanying drawing—

Figure 1 shows a side elevation with certain parts broken away of a deflector disclosing an embodiment of the invention, the same being shown as applied to a hand spot light.

Figure 2 is a front view of the structure shown in Figure 1.

Figure 3 is a sectional view through Figure 2 on line 3—3, the same being on an enlarged scale.

Figure 4 is a front view of a deflector embodying the invention shown applied to a spot light of the kind commonly used on automobiles.

Figure 5 is a side view of the structure shown in Figure 4.

Referring to the accompanying drawing by numerals, 1 indicates a spot light of any desired construction provided with a head 2 on which the ring 3 is clamped by any suitable means, as for instance, the various

clamping screws 4. The ring 3 is preferably formed with a turned down annular flange 5 so as to limit the distance it may be forced onto the head 2. A substantially U-shaped supporting frame 6 is riveted or otherwise secured to the ring 3 and is preferably provided with an enlargement 7 formed with an aperture in line with the axis of the spot light 1. The aperture 8 in the enlargement 7 accommodates a screw 9 which is threaded into a socket 10 as shown in Figure 3, which socket is provided with an externally threaded section 11 accommodating the internally threaded section 12 of the clamping cap 13, which clamps the ball 14 in socket 10. The ball 14 is provided with a shank 15, which shank is preferably threaded at its outer end so as to be screwed into the boss or enlargement 16 of the frame of the mirror 17. It will be understood, however, that the mirror 17 may be connected to the shank 15 in any desired manner whereby it is properly held as shown in full lines in Figure 1 or in dotted lines in Figure 1 or in fact in any other desired adjusted position for deflecting part of the light from the spot light 1.

In forming the deflector 17, the same may be a mirror or other desired material but is made appreciably smaller than the reflecting surface in head 2 so that part of the light from said head will pass around the mirror and be focused at a point in line with but beyond the center of the mirror while that part of the light striking the mirror or other reflecting means will be deflected to form a spot at an angle to the spot formed by the light passing around the deflector. In this way, two spots of light are formed from the light of the head 2, one directly ahead in the usual manner and the other at an angle determined by the angle of the deflector 17.

The device could be applied upon a spot light 1' as shown in Figures 4 and 5, which spot light is a comparatively large device and mounted to be swung around a given point. The spot light 1' is of the type usually found on automobiles and is provided in order to illuminate an object at the side or a long distance ahead which would not be illuminated by the ordinary head lights on automobiles.

When applying the invention to the spot light shown in Figure 5, a disk 18 is provided which is formed with a slot 19 ex-

tending to the center, said disk being adapted to be slipped over the tubular section 10' of the socket 10 and act as a blind for preventing any of the rays of light from the spot light 1' to be projected straight ahead. The deflector 17 acts to deflect part of the light to form a spot at one side according to the angle of the deflector. Where the device is used on a spot light mounted on an automobile, it is desirable to set the deflector 17 to illuminate a spot along side of the road whereby the driver may always know at night his relative position on the road.

Along the sides of many country roads, a white line is provided or whitened stones are arranged so that drivers may see the limits of the road and thereby remain properly in the road. Where a white light or white stones are provided along side of a road, the deflector 17 would be set to project the light against this white line or white stones.

When the device is used as shown in Figure 1, the light is deflected to illuminate some point which is more or less inaccessible and at the same time permits part of the light to illuminate objects straight ahead so that the spot light may be used in the ordinary manner without removing the deflector and at any time used to project light to a substantially inaccessible place.

What I claim is:—

1. A deflector for spot lights, comprising a deflecting member, a frame carrying said deflecting member, and a ring for supporting said frame on a spot light, said deflecting member being connected to said frame by a universal support whereby it may be adjusted to occupy substantially any de-

sired angle in respect to the spot light to which the device is connected.

2. A spot light deflector, comprising a ring adapted to fit the head of a spot light, a plurality of clamping screws carried by the ring for locking the ring in place, a frame rigidly secured to said ring and formed with a transverse bar positioned in line with and in front of the center of the spot light, a deflector adjustably mounted on said transverse bar with the center of the deflector substantially positioned on the axis of the spot light, said deflector being of a size to deflect only part of the light from the spot light.

3. A spot light deflector, comprising a ring, means for connecting the ring to a spot light, a frame connected with said ring, a deflector adjustably mounted on said frame in line with and in front of a spot light, said deflector being of a size to deflect only part of the light from the spot light, and a blind arranged adjacent the deflector and of a size appreciably larger than the deflector for absorbing all the rays of light from the spot light except those engaging the deflector.

4. A deflector for spot lights, comprising a ring adapted to be removably mounted on the head of a spot light, a substantially U-shaped frame extending forwardly from said ring, a ball and socket support connected to the center of said frame and in axial alignment with the spot light, and a deflector connected with said ball and socket support, said deflector being capable of movement by reason of the ball and socket support so as to deflect light from the spot light at different angles.

FRANK P. RAMPP.