Aug. 19, 1941. F. L. PATTON 2,253,346

REFLECTOR DEVICE

Filed March 7, 1939

Fig. 1.

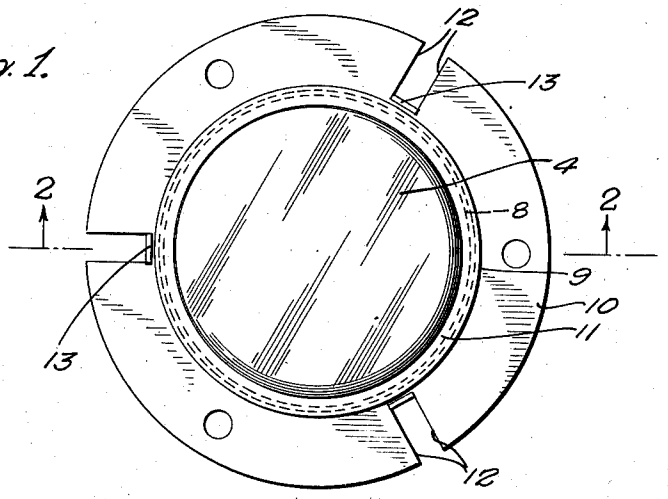


Fig. 2.

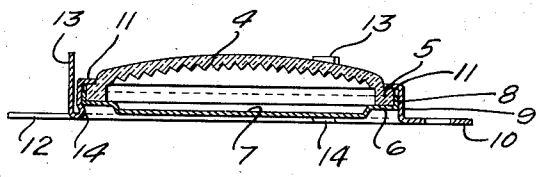


Fig. 3.

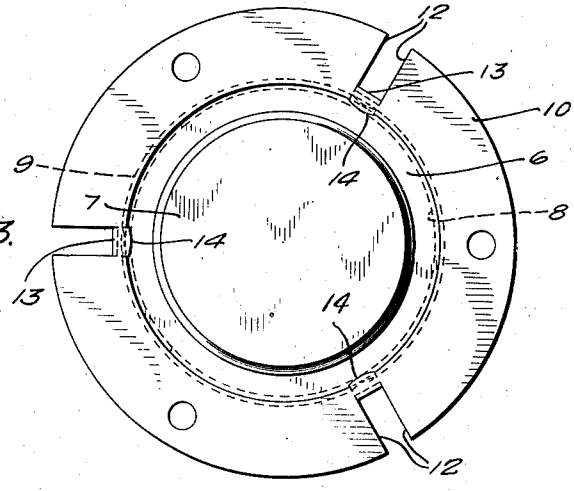
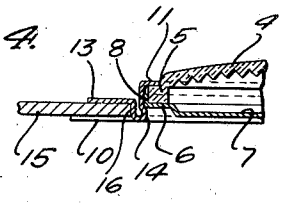


Fig. 4.



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REFLECTOR DEVICE

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Application March 7, 1939, Serial No. 260,251

1 Claim. (Cl. 88—78)

This invention relates to autocollimating reflecting devices, and more particularly to such devices used on advertising signs and so placed as to spell out words and form designs which become luminous in appearance from light reflected thereupon received from other sources. Advertising displays of this nature are usually placed at advantageous spots adjacent the roadside where the light rays projected from the headlights of passing vehicles will strike the reflecting devices. A great many of these reflecting devices may be used in a single display and it is an advantage to construct them so that they may be easily and quickly mounted and also so that they can be easily replaced if damaged.

It is an object of this invention to provide an improved structure for mounting reflecting devices on a support.

Another object is to provide a holder for a reflector device having struck-up portions integral with said holder which may be manipulated to conform to a supporting structure to mount the reflecting device thereon.

Other objects and advantages of this invention will be apparent from the specification and the accompanying drawing which shows one embodiment of the invention.

In the accompanying drawing:

Fig. 1 shows a plan view of the reflecting device;

Fig. 2 shows a section taken on line 2—2 of Fig. 1;

Fig. 3 shows a bottom view of the device; and

Fig. 4 shows a partial section similar to Fig. 2 of the device mounted on a support.

In accordance with the present invention the support for a display of a plurality of the reflecting devices may be made up of a relatively thin sheet of suitable material mounted on supporting struts or posts in the ground or on other available structure. The thin sheet is provided with a plurality of apertures disposed relative to each other in suitable formation to form a design or letters of a word or the like, these apertures being of a diameter slightly larger than the diameter of the housing of the reflecting device. The reflecting devices are placed in these apertures from the rear of the sheet with the reflecting lens protruding to the forward side. Clamps which may be manually manipulated are then bent down to secure and clamp the reflector device in position in the aperture.

Referring now to Figs. 1 and 2, such a reflecting device comprises a unit which includes a reflecting lens 4 having an annular offset flange 5. The annular flange 5 rests in a circular carrier 6 which is relieved at 7 and which has its outer edge turned upwardly as at 8 to form a cup-shaped member into which lens 4 is seated with the upturned edge 8 fitting snugly against the flange 5. A housing is provided having a cylindrical portion 9 provided with an outwardly flaring annular flange 10 and an inwardly projecting annular flange 11. The inside diameter of the cylindrical portion 9 is slightly larger than the outside diameter of the upwardly turned edge 8 of the circular carrier 6, the difference in the two diameters being such that the plate 6 carrying the reflector disk 4 will fit snugly, with a friction fit, into the cylindrical section. The carrier member and lens is thus forced tightly into the cylindrical section until the top of the annular flange 5 of the lens abuts against the inwardly projecting flange 11. In the outwardly flaring flange 10 there are cut a plurality of radial slits as at 12 and the narrow section of the flange extending between the slits is struck upwardly as at 13 and the point at which this section joins the cylindrical portion 9 is crimped inwardly as at 14 to form a slight bulge at the bottom of the cylindrical wall. This bulge projects slightly beyond the lower edge of the carrier 6 and impinges thereon to hold the carrier and reflector disk securely within the cylindrical portion. The various elements just described and thus assembled constitute a unitary structure of a reflecting device ready for mounting on a support.

The support may consist in part of a plate 15 (Fig. 4) suitably mounted on a building or other supporting structure. The plate may be provided with a plurality of apertures 16 only one of which is shown, which may be arranged therein in a manner to form a design or a series of numerals. The diameter of the aperture is such as to receive the reflecting device including the upwardly turned flange sections 13 with a minimum of clearance between the periphery of the aperture and the flange section.

The reflecting device is inserted in one of the apertures from the rearward side of the plate with the lens 4 and the flange sections 13 extending through the aperture to the forward side of the plate and with the outwardly flaring flange 10 against the rearward side of the plate. The flange sections 13 are then bent outwardly and downwardly against the forward side of the plate 15 to secure the reflector device rigidly in place.

While the fundamental novel features of the invention as applied to a single modification have

been shown, described and pointed out, it will be understood that various omissions and substitutes and changes in the form and details of the device illustrated and in its operation may be made by those skilled in the art without departing from the spirit of the invention. I intend to be limited, therefore, only as indicated by the scope of the following claim.

I claim:

In combination with a supporting plate having an opening therein, a reflecting disk-shaped lens having a circular radial flange, a cylindrical lens carrier for receiving the lens, and a housing therefor comprising a cylindrical portion adapted to fit over the said flange and having an inturned flange at its front edge adapted to engage the front face of said lens flange, and an outturned flange at its rear edge adapted to engage the rear face of the supporting plate, the said lens carrier being disposed within said housing and coaxial thereof, a plurality of tongues struck up from the rear flange and bent parallel to the axis of the cylindrical portion and adapted to be bent outwardly and engage the front face of the supporting plate, the said cylindrical portion of the housing being displaced inwardly adjacent the points of juncture thereof with the struck up tongues to provide yieldable retainers for the lens carried within the housing.

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