

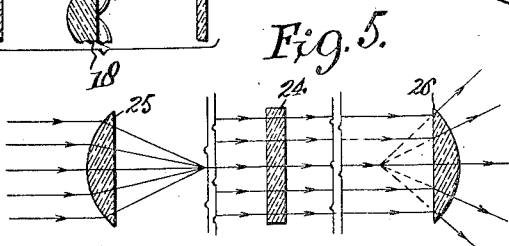
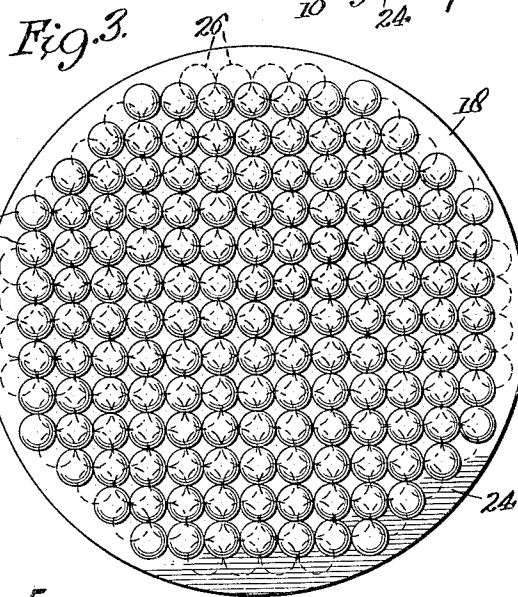
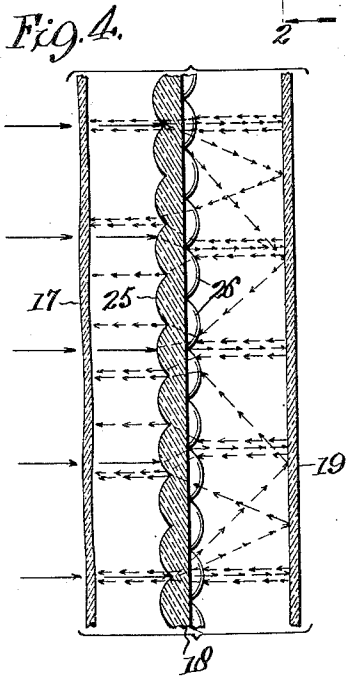
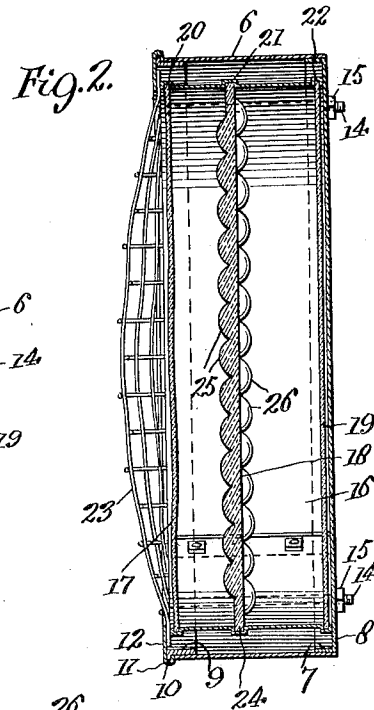
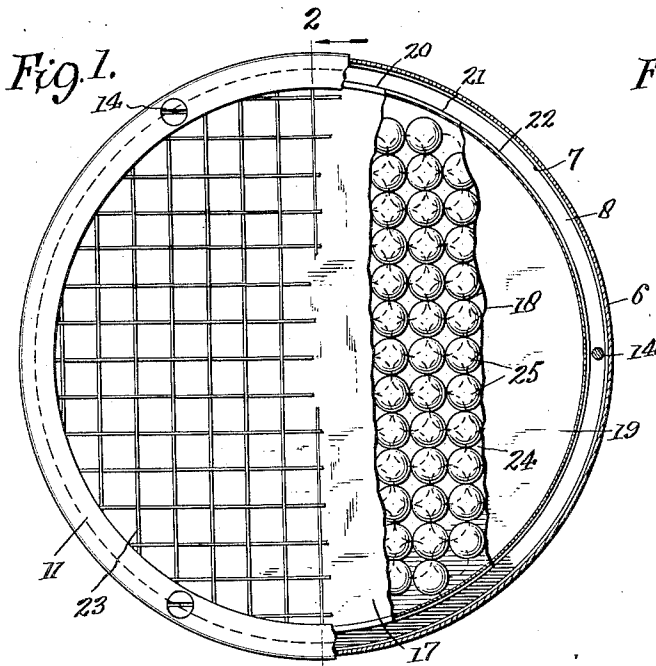
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ROAD SIGNAL

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UNITED STATES PATENT OFFICE.

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ROAD SIGNAL.

Application filed November 26, 1926. Serial No. 150,879.

The present invention relates to improvements in road signals and has for an object to provide a road signal of that type which is placed on the side of the road in advance of dangerous curves and other dangerous points whereby to catch the light rays from an approaching vehicle's lamps and to reflect and refract such light rays, and preferably to color same, for instance, red, all with a view to apprising the driver of the vehicle of his approach to the dangerous point referred to.

Another object of the invention is to provide an improved road signal of the type above set forth in which the construction is designed for compactness, simplicity and adds to its resistance to the elements.

The improved device may or may not be used in connection with advertising matter. With the foregoing and other objects in view, the invention will be more fully described hereinafter, and will be more particularly pointed out in the claims appended hereto.

In the drawings, wherein like symbols refer to like or corresponding parts throughout the several views,

Figure 1 is a front elevation partly broken away of an improved road signal constructed in accordance with the present invention;

Figure 2 is a vertical section taken on the line 2-2 in Figure 1;

Figure 3 is a plan view of the diffusion lens;

Figure 4 is a diagrammatic view showing the action of the light rays; and,

Figure 5 is also a diagrammatic view of the diffusion lens.

Referring more particularly to the drawings, 6 designates a cylindrical casing of sheet metal or other appropriate material welded or otherwise secured about the forwardly turned cylindrical flange 7 upon the back disk wall 8. The forward portion of the casing 6 receives therewithin a ring 9 which may be welded or left unsecured. This ring 9 carries the out-turned flange 10 received between the U-shaped end 11 of the cover flange 12. Bolts 14 in any suitable number pass through this cover flange 12 and through the back disk 8, nuts 15 being run on the bolts and taking against the back wall 8 to hold the parts in assembled position.

Within the casing is mounted a unit tube 16 for holding the front color panel 17, the

intermediate diffusion lens 18 and the rear mirror 19. These three members are spaced apart and the edges of the same are fitted in out-turned troughs or grooves 20, 21 and 22, provided by offsetting the metal of the tube 16 outwardly. The tube 16 may be a seamless cylinder if desired, but possessing sufficient elasticity to admit of the springing of the same outwardly to receive the members referred to, or the tubes may be split and united by bolts or other fastenings. This light treating unit may be assembled independently and bodily introduced into the casing before the cover flange 12 is applied and preferably, such unit tube is welded to the back disk 8.

A wire cage 23 is mounted in front of the device and it is preferably of a concavo-convex construction, bulging outwardly in front of the color panel 17. The edge of the guard 23 may be secured within the cover flange 12 and the same may be removable with the flange.

The mirror 19 is a polished plate mirror and the front panel 17 may be of a light pigeon-blood red and rough or smooth texture.

The diffusion lens is composed of an intermediate body portion 24 of glass or other appropriate material, having bulbs 25 on its exterior face and complementary bulbs 26 on its interior face. By reference to Figure 3, it will be seen that the bulbs 25 and 26 are relatively offset so that a single front bulb 25 encompasses segments of four adjacent inner bulbs 26. The offset relation of the bulbs is also shown in section in Figures 2 and 4.

The action of the device is as follows, and is shown diagrammatically in Figures 4 and 5:—

The bull's-eye or bulb on the front surface of the diffusion lens, otherwise known as the breaker and magnifying lens, picks up the incoming rays, focusing them at a given point, or in other words, acting as a condenser; which action magnifies the rays going through the center of the lens to opposite bull's-eyes 26.

The bull's-eyes 26 on the back of the breaker and magnifier lens receives the magnified rays from the front bulbs, and breaks and diffuses them, causing light rays to impinge against practically the entire surface of the mirror 19. The mirror causes the refracted light rays to be thrown back at

angles shown in Figures 4 and 5, covering substantially the entire surface of the bull's-eyes 26. The diffusion lens acts to shoot out the rays over the entire surface of the colored panel 17, thus giving a full reflex. In other words, the same action takes place with the outgoing ray as that which describes the first penetration of a single or more than one beam of light coming in.

10 The incoming rays pass through the colored panel 17 first, thus striking the breaking and magnifying lens, through which they pass as heretofore described, and it is this colored panel from which our actual color is derived, there being enough distance allowed between the color panel, break-up and magnifying lens and mirror reflector to secure the breaking-up, color, magnification and throw-back of the incoming beam. 15 Such spacing or distance between the three lens as outlined is essential and necessary in allowing space for travel of incoming rays from the color lens, through break-up and magnifying lens, to mirror reflector, which induces or brings about such angle as is required in order to obtain full reflex or light covering the entire outer surface. The beams are thus magnified and shot back in volume, securing distance at which light can be seen. The action of the light is limited only by the distance at which lights are picked up; in other words, it reflects from any distance at which an incoming beam will touch its surface. this action only being necessary to give back a full reflex covering the entire surface of the device.

It will be obvious that many changes in the construction, combination and arrangement of parts could be made, which could be used without departing from the spirit of my invention, and I do not mean to limit the invention to such details, except as particularly pointed out in the claims.

45 Having thus described my invention, what I claim and desire to secure by Letters Patent of the United States is:—

1. A road signal comprising a housing,

a colored panel therein for initially receiving the incident light rays, a mirror in the back of the housing for reflecting back said light rays, and a diffusion lens interposed between said panel and mirror and having bulbs extending from both faces thereof for diffusing the light rays to all parts of said mirror and panel. 50 55

2. A road signal comprising a housing, a colored panel therein for initially receiving the light rays, a mirror for reflecting back said colored rays, and a diffusion lens interposed between said panel and mirror and having bull's-eyes on its front and rear faces, the bull's-eyes on the front being offset relatively to the bull's-eyes on the back of said lens. 60 65

3. A road signal comprising a housing, a colored panel therein for initially receiving the light rays, a mirror for reflecting back said light rays, and a diffusion lens between said panel and mirror and spaced therefrom, said lens having convex bull's-eyes on both front and rear faces, the bull's-eyes on the front face being so disposed as to encompass segments of four of the bull's-eyes on the rear face. 70 75

4. A road signal comprising a casing, a tube in said casing having pressed-out portions providing spaced troughs, a colored panel mounted in the front trough, a mirror mounted in the rear trough and a diffusion lens mounted in the intermediate trough, and a cover for securing said tube in the casing. 80

5. A road signal comprising a cylindrical casing, a rear disk having a forward flange fitting within said casing and secured thereto, a flanged ring fitting in the forward part of the casing, a cover ring having an U-shaped portion fitting about the flange of said first-mentioned ring, means to secure said cover ring to the back disk, a guard carried by said cover ring, and a light treating unit mounted in said casing and confined by said ring. 85 90

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