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S. H. PELLAR

2,489,499

HIGHWAY SAFETY MARKING DEVICE

Filed April 8, 1947

FIG. 1

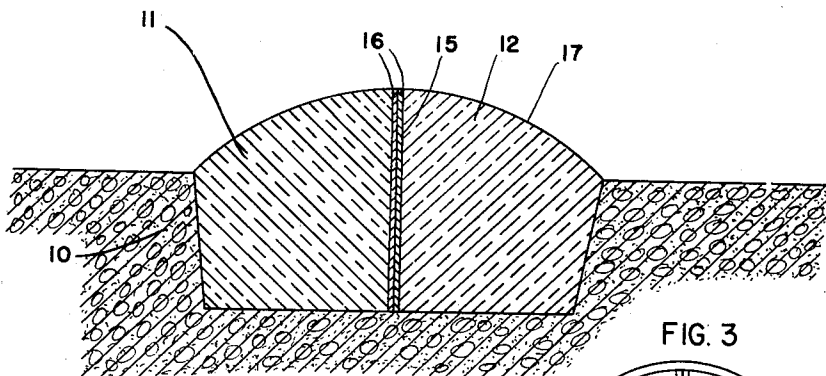


FIG. 2

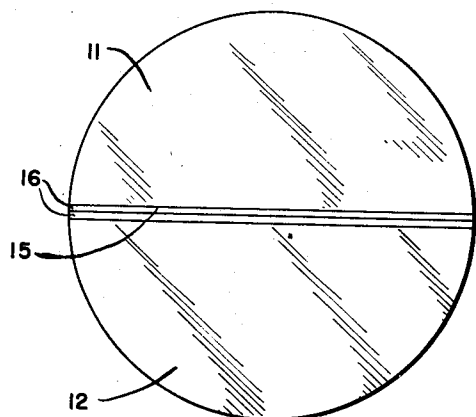


FIG. 3

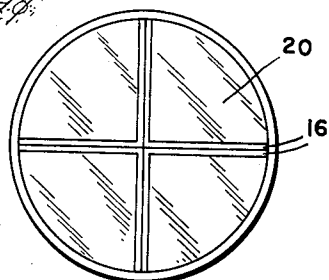


FIG. 4

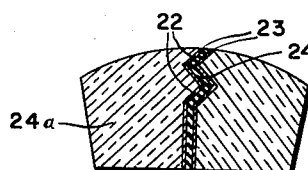


FIG. 5

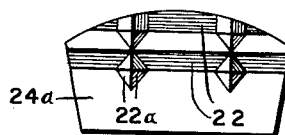


FIG. 6

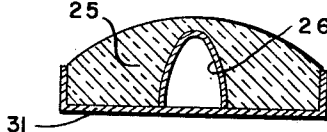


FIG. 7

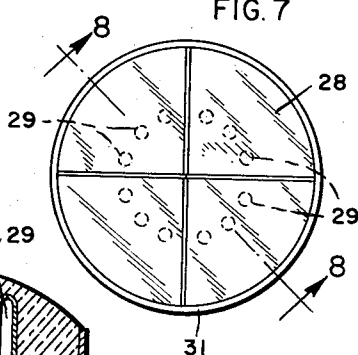
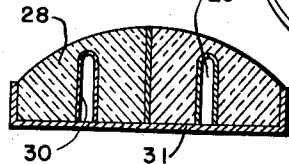


FIG. 8



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UNITED STATES PATENT OFFICE

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HIGHWAY SAFETY MARKING DEVICE

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7 Claims. (Cl. 88—79)

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My invention relates to highway marking devices, and one object of the present application is to provide a signal which is mounted in the pavement and formed in a manner to reflect light from the head lamps of approaching motor cars.

A further object is to design a novel signal in the form of a lens assembly which is mounted in a pavement cavity.

A still further object is to construct a novel signal with efficient integral means for reflecting light.

An important object is to construct a novel signal along lines of compactness and simplicity.

Briefly considered, my invention contemplates a device in the form of a plug or the like adapted to be mounted in the surface of a pavement and molded of durable transparent material, such as glass or the like, and formed of a plurality of interlocking sectors, the inner faces of said sectors being correspondingly deformed so that they may be snugly interfitted when assembled, so as to provide a rugged, compact element which will, for a long period of time, withstand the severe pressures of heavy road traffic without becoming broken or dislodged; at the same time, said inter-fitting deformations will serve effectively as light reflecting surfaces, so as to impart to an approaching driver a brilliant jewel-like effect which will instantly arrest his attention. Said light reflecting effect may be enhanced by modifying said surfaces, as by application of silvering or metal foil thereto. Said deformations may take various forms, as, for example, by molding said inner surfaces in the form of prisms disposed in vertical or horizontal planes or combinations thereof, or otherwise.

With the above objects in view, and any others which may suggest themselves from the description to follow, a better understanding of the invention may be had by reference to the accompanying drawing, in which—

Fig. 1 is a vertical cross-section of one form of the improved signal including a portion of surrounding pavement;

Fig. 2 is a plan view;

Fig. 3 is a plan view of a modification;

Fig. 4 is a vertical section of a second modification;

Fig. 5 is an internal elevation of one component of the same;

Fig. 6 is a cross-section of a third modification;

Fig. 7 is a plan view of a fourth modification; and

Fig. 8 is a section on the line 8—8 of Fig. 7.

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Primarily, the novel signal is designed with a multiple lens assembly. Thus, in the specific embodiment of Figs. 1 and 2, the signal is shown as a pair of cooperating semi-circular lens sectors 11 and 12 assembled along a diametrical line. The sectors may be plain or uncolored; or one may be green to indicate safety, while the other is red to indicate danger ahead. In addition, reflecting surfaces are employed to illuminate the lenses when they are in the path of light beams from the head lamps of approaching motor cars.

The contiguous inner surfaces 15 of the lenses 11 and 12 occur on a diametrical line; and such surfaces are given silver coatings 16 to cause the signal to reflect light in opposite directions. Also, the lens assembly is convex above the ground as shown at 17, this feature lending the lens more visibility and permitting the reflecting coatings 16 to be extended upwardly to increase their factors of visibility and reflection.

The signal just described is suitable for installation where only going and returning traffic is involved. However, in the case of a crossing, it may be desirable to reflect light in four directions. Therefore, the lens assembly may also be made with quarter sections 20, as indicated at Fig. 3, and the contiguous surfaces of these coated for reflecting purposes.

Fig. 4 shows a modification in which means to diffuse the reflected light are contained. Thus, the inner surfaces of the lens sectors are formed with a series of horizontal ridges 22 which interlock. Also, a series of vertical ridges 22a will intersect the horizontal ridges. These surfaces may be silvered; or, they may be lined with highly polished sheets 23 of tin, silver or aluminum foil. A gasket 24 of rubber is located between the foil sheets. The signal is extended downwardly with a tapered portion 24a which is designed to be pressed into a cavity in the surface of the highway. The rubber sheet 24 will become compressed in this event, sealing the joint between the lenses against the entrance of dust and water. It is apparent that the ridged reflector formation will break up and spread the reflected light. Further, the interlocking of the ridges will prevent relative slippage of the lenses in vertical and lateral directions, so that the signal is always tight, and its gasket seal is unbroken.

Fig. 6 shows a modification employing a signal lens 25 which is hollowed out in the center to receive a silver coating 26. This coating therefore reflects light in all lateral directions.

Figs. 7 and 8 show a signal for the center of

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a crossing, such signal being basically constructed similarly to the one in Fig. 3. However, the lenses 28 are made with a group of cavities 29 whose walls are silvered, as indicated at 30, creating the added feature of fingers or columns whose inner surfaces will reflect light. Metallic containers 31 are provided for the signals of Figs. 6 to 8 for purposes of reinforcement.

In conclusion, it may be said that the novel signal is economical by utilizing either sunlight or the light of the head lamps of the motor cars for the casting of reflected light as an indication of safety or danger to drivers. Further, the signals are laid in the surface of the pavement where they form no obstruction; and their top convexity is not so pronounced as to form a driving hazard. Further, the signals are made of inexpensive materials and of a character to be readily assembled and serve efficiently over a long period.

While I have described the invention along specific lines, various minor changes or refinements may be made therein without departing from its principle, and I reserve the right to employ all such changes and refinements as may come within the scope and spirit of the appended claims.

I claim:

1. A signal for highway motor traffic comprising an assembly of lenses, the lower end portion of said assembly being mountable in a highway cavity, said assembly comprising a plurality of complementary lenses disposed in abutting relation and separated along generally vertical planes, ridges formed on the abutting surfaces of said lenses for interlocking one lens with the other to prevent slippage and forming transparent prisms, and reflecting coatings on said abutting surfaces and applied along the vertical line of separation to direct rays in opposite directions.

2. A device as defined in claim 1 wherein said ridges on each of the abutting surfaces extend in different directions so as to prevent vertical as well as horizontal relative slippage between said lenses.

3. A signal for highway motor traffic, comprising an assembly of lenses, the lower portion of said assembly being mountable in a highway cavity, said assembly comprising a plurality of complementary lenses disposed in abutting relation and separated along substantially vertical planes, means comprising interlocking portions formed

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in the abutting faces of said lenses for preventing slippage of said lenses, and reflecting coatings on the interlocked surfaces of each of said lenses to direct rays in various directions.

4. A signal for highway motor traffic, comprising an assembly of lenses, the lower portion of said assembly being mountable in a highway cavity, said assembly comprising a plurality of complementary lenses disposed in abutting relation and separated along substantially vertical planes, means comprising interlocking portions formed in the abutting faces of said lenses for preventing slippage of said lenses, and means disposed between said lenses providing reflections therefrom.

5. A highway safety marking device comprising a plug-like member adapted to be inserted in the surface of a pavement and formed of molded transparent material, said member comprising a plurality of interlocking sectors, each of said sectors having inner surfaces disposed in generally vertical planes, portions of said surfaces of adjacent sectors being correspondingly deformed from a vertical plane whereby adjacent sectors may interfit with each other to provide a firm unit when the sectors are assembled, and means disposed between said sectors providing reflections from said deformations.

6. An article as defined in claim 5, wherein said deformations form prisms disposed vertically and horizontally.

7. An article as defined in claim 5, wherein said means is a gasket.

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