May 24, 1955 J. C. DE SHAZOR, JR 2,708,858

REFLECTING MARKER

Filed Oct. 16, 1950

2 Sheets-Sheet 1

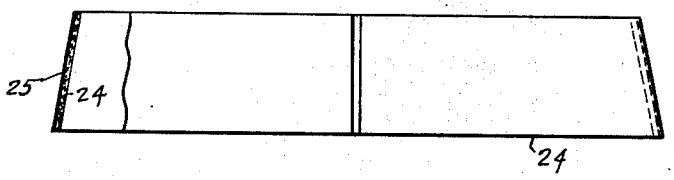


FIG. 3

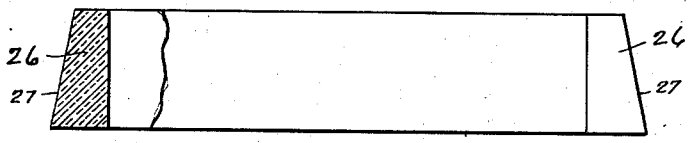


FIG. 4

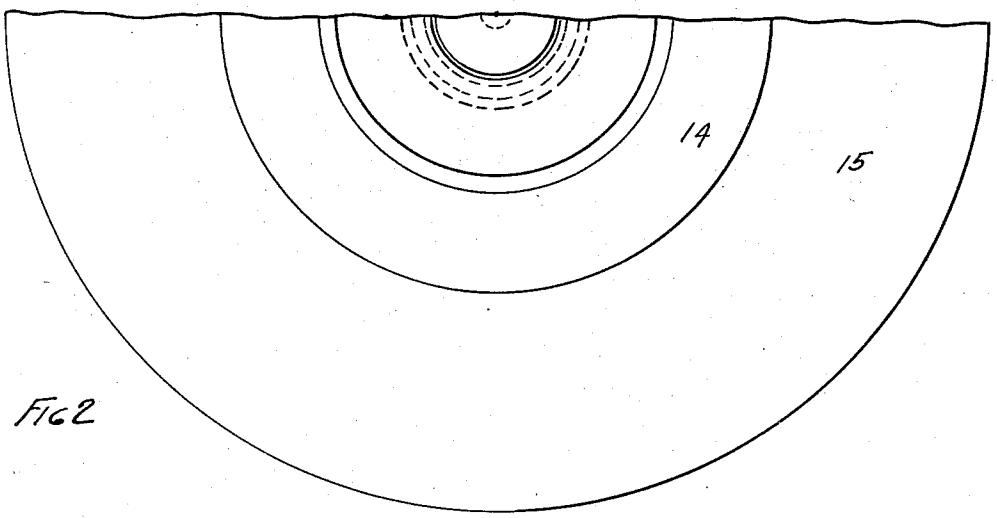


FIG 2

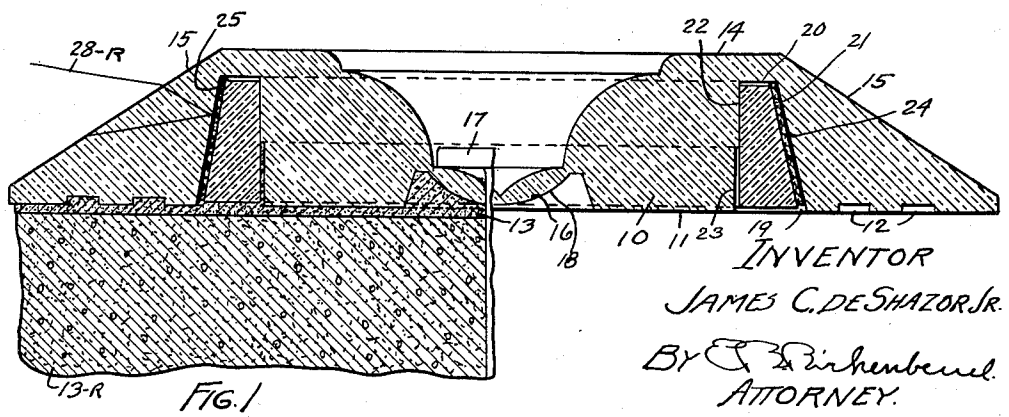


FIG. 1

INVENTOR
JAMES C. DE SHAZOR JR.
BY Birchenbaum
ATTORNEY.

May 24, 1955 J. C. DE SHAZOR, JR 2,708,858

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2 Sheets-Sheet 2

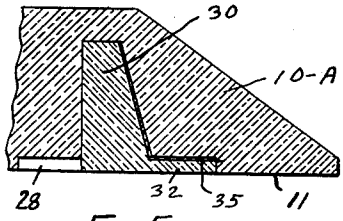


FIG. 5

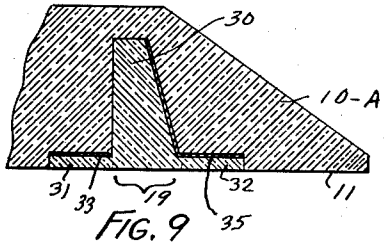


FIG. 9

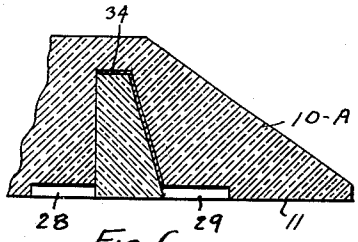


FIG. 6

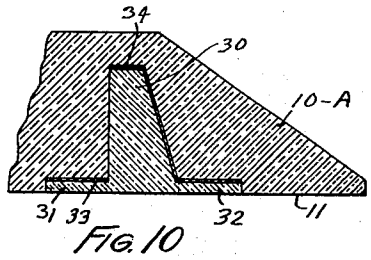


FIG. 10

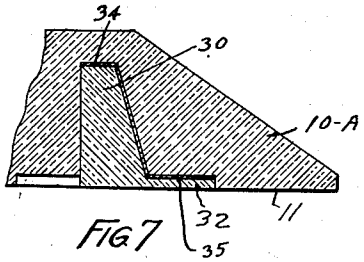


FIG 7

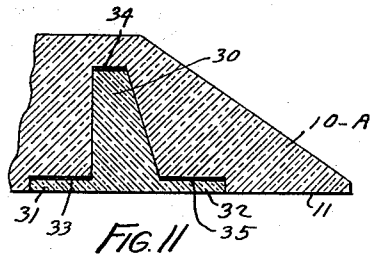


FIG. 11

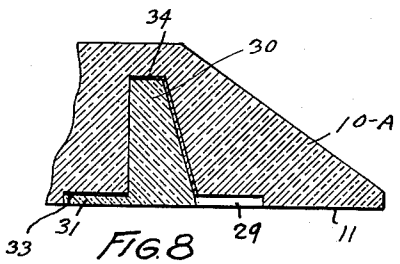


FIG. 8

INVENTOR
JAMES C. DE SHAZOR JR.
BY R. F. Rittenberg
ATTORNEY

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2,708,858

REFLECTING MARKER

James C. De Shazor, Jr., Portland, Oreg., assignor to Columbia Basin Plastics Company, Portland, Oreg.

Application October 16, 1950, Serial No. 190,424

3 Claims. (Cl. 88—79)

This invention relates generally to highway marking devices and particularly to a reflecting marker.

The main object of this invention is to construct a low cost marker which will sharply define the limits or divisions of a roadway.

The second object is to utilize the lights of a car for indicating marker positions regardless of the angle of approach.

The third object is to so construct the marker that it is not affected by a turning movement frequently caused by the rolling action of the tires and by blows struck by the tires, as well as by a braking action applied to the tires.

The fourth object is to so construct the marker that its size can be reduced to a minimum, and that it may be easily and securely fastened to any type of pavement.

The fifth object is to so construct the marker that the reflecting element is completely sealed within the marker and that this surface is held in close contact with the enclosing body of the marker.

The sixth object is to construct a marker which is readily converted into various forms for different purposes such as guard rails, building corners, posts and signs.

I accomplish these and other objects in the manner set forth in the following specifications as illustrated in the accompanying drawing, in which:

Fig. 1 is a vertical section through the marker showing a portion of it mounted on pavement.

Fig. 2 is a partial plan of Fig. 1.

Fig. 3 is a side elevation of the reflecting element with a portion broken away in section.

Fig. 4 is a side elevation of the wedging ring with a portion broken away in section.

Fig. 5 is a fragmentary section showing a modified form of the marker using, in addition to the conical ring, a flat outer ring.

Fig. 6 is a similar view showing the use of a flat middle ring.

Fig. 7 is a view showing the use of a middle and flat outer ring.

Fig. 8 shows the use of the inner, middle and conical rings.

Fig. 9 shows the use of the inner, conical and outer rings.

Fig. 10 shows the use of the inner, middle, conical and outer rings.

Fig. 11 shows the use of the inner, middle and outer rings.

Like numbers of reference refer to the same or similar parts throughout the several views.

Referring in detail to the drawing there is shown a circular base **10** having formed in its under side **11** the annular grooves **12** which assist in holding the marker in place in the mastic **13** by means of which it may be positioned on the roadway **13**–R.

The top of the marker is flat and the sides **15** are inclined at approximately 30° from the horizontal. This angle may, of course, be varied either way.

In the center of the top side **14** is formed a countersunk opening whose lowermost end **16** is thin enough to permit its easy perforation by the nail **17** when a hold-down fastening is used. Ordinarily the rounded end **18** is left closed to prevent mastic from rising through the opening when no nail **17** or screw is employed.

In the bottom **11** is formed an annular recess **19** which tapers toward the top **20** and having the side **21** approximately 12° from the vertical.

The side **22** has a widened portion **23** which fills with mastic and seals the reflector element. In the recess **19** is placed a band of paper or foil **24** coated on its outer side with light reflecting material **25** which is placed next to the side **21**.

Filling the space **19** is an annular ring **26** which is beveled on its outer side **27** to conform to the side **21**.

In Figs. 5–11, inclusive, are shown various uses to which this device can be applied. These uses require only a slight modification in form of the ring **26** and the shape of the grooves in the under side **11** of the base **10**.

In Figs. 5–11 the base **10**–A is provided with the annular recess **19** on opposite sides of which are formed the annular grooves **28** and **29**. The annular ring **30** which occupies the recess **19** may be without a flange, as shown in Fig. 6 or with an inner flange **31** as shown in Fig. 8, or an outer flange **32**, as shown in Fig. 7, or with both inner and outer flanges **31** and **32**, as shown in Figs. 9–11. The flanges **31** and **32** fill the grooves **28** and **29**.

There are also provided paper rings covered with a light reflecting substance and these rings are the inner ring **33**, the middle ring **34** and the outer ring **35**. The middle ring **34** fits into the top of the recess **19** while the rings **33** and **35** have the same radial dimensions as the flanges **31** and **32**.

The operation of the device is as follows: Assuming that it has been placed on a roadway or guard rail or other object in the path of the light given off by an automobile headlight, it will be seen that the rays **28**–R are bent by the surface **15** and reflected by the surface **25** and again bent by the surface **15** to make a band of light which appears to a person in the car as an illuminated band equalling in length the diameter of the paper band **24**.

The member **10** is made of any suitable transparent material, such as glass, or plastic which is transparent.

In actual use, it is found that turning the marker on the central nail will not impair its usefulness since it is equally effective in all directions which increases its value as a marker since it is bound to reflect the rays owing to its curved reflecting surface.

By making the cross section of the ring **26** tapering, it acts as a wedge which forces the light emitting material **25** into intimate contact with the surface **21**, thus preventing moisture and dirt lodging in between these members and impairing the usefulness of the marker.

The arrangements shown in Figs. 5–11 are used when the device is to be mounted in an upright plane instead of in a horizontal plane. It can be seen that various combinations of reflections can be obtained by combining the reflecting rings in any of the ways shown in Figs. 5–11, or in other combinations not shown, giving the device a wide range of use.

I claim:

1. A traffic marker comprising a body member of transparent material formed to the overall shape of a truncated cone having top and bottom faces perpendicular to the axis of the cone, said body member having depressions formed upwardly therein from said bottom surface for the purpose of receiving material for securing said bottom face of said body to a supporting structure, said body

member being formed with an axial depression extending from the top surface of said body member towards said bottom surface of said body member for the purpose of receiving a headed nail to be driven axially through said body member into a supporting structure, said axial depression being formed to receive the head of said nail entirely within said axial depression below the top surface of said body, said axial depression being formed with an abutment for the under side of the head of said nail to limit the progress of said nail through said body member and said body member being formed with an axial extension of said axial depression for the purpose of starting said nail axially through said body member to align the head of said nail with said abutment provided therefor.

2. A traffic marker comprising a body member of transparent material formed to the overall shape of a truncated cone having top and bottom faces perpendicular to the axis of the cone said body member having depressions formed upwardly therein from said bottom surface for the purpose of receiving material for securing said bottom face of said body to a supporting structure, said body member being formed with a deep annular groove extending upwardly into said body member from the bottom surface thereof and coaxially therewith, said groove having a stepped cylindrical surface concentric with said body member, the lower stepped part of said cylindrical surface being of lesser diameter than the upper stepped part, the outer surface of said groove being conical and converging upwardly to approximately the diameter of the

flat top surface of said body member, said groove having a substantially flat upper surface and part of said conical outer surface and said flat upper surface being covering with an outwardly reflecting material.

3. The traffic marker of claim 2 including a plug member for said groove of substantially the same size and shape of said groove, said plug member being sufficiently smaller than said groove to press tightly against said reflecting material and the inner cylindrical surface of said plug being substantially the diameter of said upper part of said stepped surface of said groove in said body member, the space between the lower stepped surface of said groove in said body member and said inner cylindrical surface of said plug being adapted to receive material for cementing said plug in said groove.

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