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3,340,779

HIGHWAY SAFETY GUIDE

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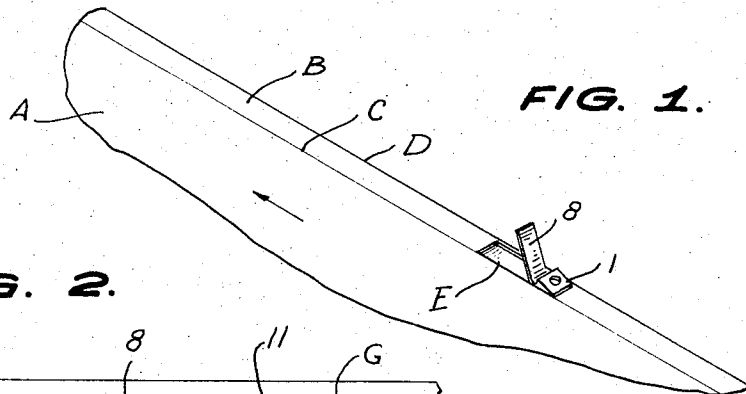


FIG. 1.

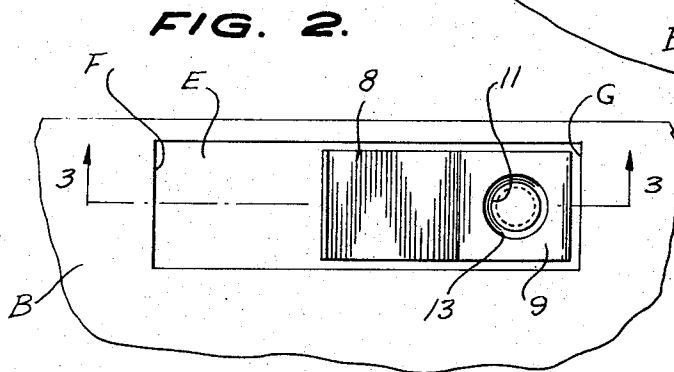


FIG. 2.

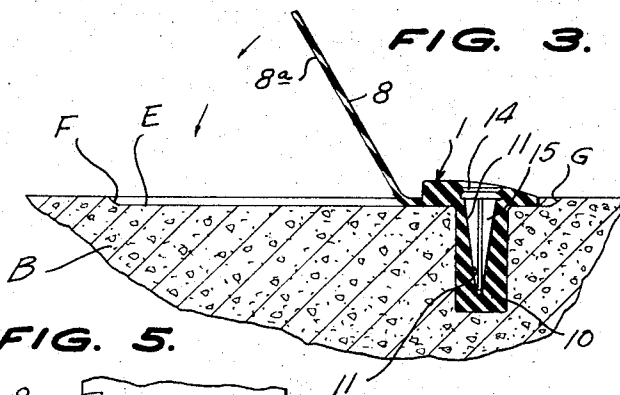


FIG. 3.

FIG. 5.

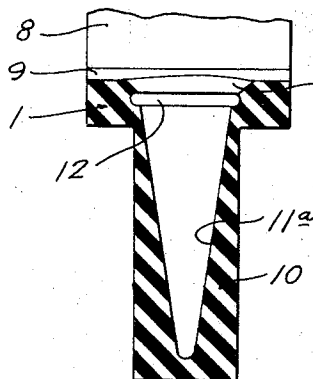


FIG. 4.

FIG. 6.

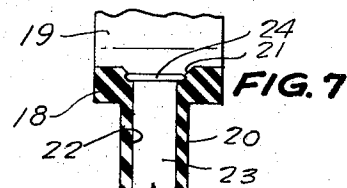
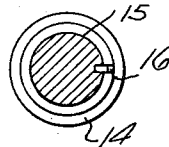
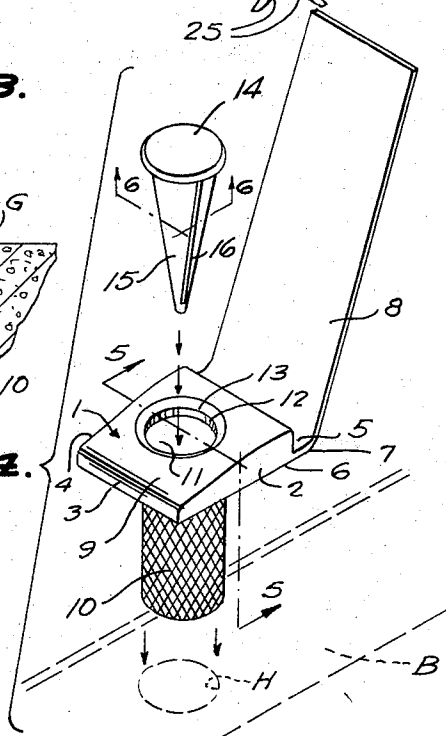


FIG. 7.



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HIGHWAY SAFETY GUIDE

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ABSTRACT OF THE DISCLOSURE

The present invention is concerned with a highway safety guide to be inserted in a series thereof along a roadway in a line at the edge or an intermediate portion of the roadway and having a resilient flap extending above said roadway to provide a guide line to motorists passing therealong.

The principal object of the present invention is to provide a visual guide for indicating the right edge of a roadway to passing motorists to provide the driver with a clear definition between the firm road and its shoulder and thus assist the driver in keeping the vehicle on the road regardless of weather conditions during the day or night.

A further and important object of the invention is to provide markers which can be quickly and readily positioned in spaced apart series along the edges of new or old roadways providing a guide line to passing motorists, which markers can be run over by vehicles without affecting the operation of the vehicle, damaging the vehicle's tires, or even noticeably disturbing the passengers thereof.

Another and important object of the present invention is to provide an economically produceable long lasting road edge marker which will retain its indicating conditions under all weather conditions even when run over repeatedly by vehicles, snow plows, road graders and the like, requires a minimum of maintenance and can be produced entirely of a resilient material.

Further objects of the invention will be in part obvious and in part pointed out in the following detailed description of the accompanying drawings, in which,

FIG. 1 is a partial perspective view of a roadway with one of the present road markers mounted thereon.

FIG. 2 is an enlarged top view portion of a roadway with a road marker mounted thereon.

FIG. 3 is a cross sectional view taken on line 3—3 of FIG. 2.

FIG. 4 is an exploded perspective view of a portion of a roadway and marker before assembly.

FIG. 5 is a further enlarged longitudinal view taken on line 5—5 of FIG. 4.

FIG. 6 is a cross sectional view taken on line 6—6 of FIG. 4, and

FIG. 7 is a longitudinal sectional view of a modified form of road marker base and pin.

Referring now more particularly to the accompanying drawings wherein like and corresponding parts are designated by similar reference characters, numeral 1 generally indicates the present road marker base which has straight sides 2, 3, 4, and 5, and a flat bottom 6. A curved end portion 7 of a flat flap 8 is joined to side 5 of said base and has a face 8a extending contiguous with base bottom 6. Said base further has a top face 9 while a cylindrical portion 10 extends from and normal to the central portion of said base bottom 6.

A bore 11 extends longitudinally of said portion 10, through said base and opens in base top 9. Said bore is defined by a cone shaped wall 11a which has an annular recess 12 in said base and outwardly tapering mouth 13.

Said elements 1-10 inclusive are a one-piece unit pref-

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erably formed from a resilient material such as rubber, plastic or the like.

Pin head 14 is of a diameter for mating with recess 12 and thus has a snap fit therein. A cone shaped shank 15 extends normal to said pin head and is slightly larger in cross section than wall 11a for expanding cylindrical portion 10 when said pin shank is inserted in bore 11. Also a longitudinal recess 16 is provided in the periphery of shank 15 for allowing the same to be compressed. Said pin head and shank are also of a one-piece unitary construction preferably of a resilient material such as rubber, plastic or the like but may also be of a rigid material.

In FIG. 7 there is shown a modification of the present marker which is similar to that of FIG. 3 except that cylindrical portion 10 is modified and is designated as 20 in FIG. 7. Said cylindrical portion 20 has a straight bore 22 open all the way through said cylindrical portion and which bore has a tapered mouth 21 but is otherwise the same as the marker of FIG. 3.

A pin known in the trade as a fat nail 23 is inserted through bore 22 and has a head 24 for mating with recess 12 and split ends 25 which are expandable when driven into resisting material.

Either of the two aforementioned forms of road marker are mountable upon a roadway A in a marginal side portion B thereof which may be a shoulder defined by the line C and the edge D or it may be just the edge marginal portion of the roadway. Said roadway A may be of any conventional firm material such as concrete or macadam. To mount the road marker, a longitudinal recess E having slanting ends F and G is produced on the right edge of the road surface and then a hole H is produced into the material beneath said recess normal to the road's surface.

Thereafter cylindrical portion 10 is inserted in hole H until base bottom 6 rests upon the bottom of recess E with flap 8 extending above the roadway. Thereupon pin shank 15 is driven into the bore 11 until head 14 enters recess 12 and cylindrical portion 10 is expanded against the roadway material therearound. Said cylindrical portion 10 may have a tack coat thereon if desired and also may have a roughened peripheral surface as indicated in FIG. 4.

The installation of the road marker of FIG. 7 is similar to that previously described except that the fat nail 23 extends beyond cylindrical portion 20 into the surrounding material and the ends 25 are thus expanded as indicated in FIG. 7 for locking road marker in position.

As an example, only, of the present road marker, the base 1 and be 1½" square while the cylindrical portion 10 or 20 is 2" long and ¾" in diameter.

The flap 8 may be 5" long, 1½" wide and 1¼" thick.

Recess E is provided by cutting with conventional tools such as a diamond saw blade produced by the Bay State Abrasive Products Company of Westborough, Mass., in a drive unit such as produced by the Felker Manufacturing Co., or the Cardinal Corporation or by an abrasive wheel when the material B is concrete. Each recess E can be 9" long, 2" wide and ¼" deep while hole H can be drilled by a standard drill to produce a hole ¾" in diameter and 2" deep.

A series of said recesses E are produced along the edge D of the roadway, each for receiving one of the present roadmarkers and said recesses are spaced part 50 feet between each recess so that a motorist driving in the direction of the arrow in FIG. 1 at 30 to 40 miles per hour will be provided with a visible guide at the right edge of the highway. At least flap 8 should be of a white material so that it will be visible under all kinds of driving conditions either at night or day providing the driver with a clear definition between the edge of the highway and its shoulder.

Should a vehicle ride over one of the present road

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markers the flap 8 will bend downwardly into recess E so that the motorists will not feel the passing of the vehicle over the road marker. As the vehicle passes from the road marker, flap 8 due to the resiliency of its curved end 7 will return to its normal position as shown in FIGS. 1-4 inclusive thus returning to its indicating position.

Normal amounts of precipitation will substantially clean the visible surface of the road marker so that it may be clearly seen at all times and the base and flap can be painted if necessary along with any white lines it is desired to paint on the roadway along the series of road markers.

In the case of new roadways recess E and hole H can be formed in the roadway material by a mold preset in the road's surface during its construction without requiring cutting tools.

Conventional roads are of course, produced in a number of different ways such as concrete with a macadam shoulder which is indicated at FIG. 1 at B or then roadway A may be a macadam road with a concrete shoulder which would be B or may be concrete alone so that the road marker is positioned adjacent the edge D thereof or it may be macadam alone and again the road marker would be positioned adjacent the termination thereof at D. In any event the road marker is placed to provide a guide to the right edge of the roadway A and the flap 8 extends on an obtuse angle to the roadway as well as bottom 6 of base 1 so that said flap extends forwardly from the motorist whereupon he can see the entire surface of each flap as he approaches and passes each one thereof.

The roadmarker of FIG. 7 is particularly suited for use with a macadam road which may have a dirt base thereunder into which the pin 23 will penetrate and have its end 25 expanded.

While rubber has been referred to for the road marker, other rubber-like materials or those containing other ingredients, cords or resilient wires may be used. As an example, only, of a plastic for use in producing the road markers, polyethylene may be used for this purpose.

The present invention is capable of considerable modification and such modifications as come within the scope of the appended claims are deemed to be a part thereof.

I claim:

1. A road marker comprising a base having a bottom with an elongated extension extending normal of said bottom and a bore extending through said base into said elongated extension, a flap resiliently attached to said base, said base, extension and flap being of one piece of resilient material and a pin detachably positioned in said bore.

2. A road marker comprising a base having a flat bottom with a cylindrical extension and a bore extending through said base into said cylindrical extension, a flap having one end resiliently joined to said base and extending on an obtuse angle to said base bottom, said base, cylindrical extension and flap being of one piece of resilient material and a pin being detachably positioned in said bore.

3. A road marker as claimed in claim 2 wherein said flap has a curved end portion joined to said base and the remainder of said flap is flat.

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4. A road marker as claimed in claim 2 wherein said flap has a curved end portion integral with said base with a face thereof contiguous with said base bottom and the remainder of said flap is flat and rectangular in configuration.

5. A road marker as claimed in claim 2 wherein said bore is defined by a side wall having an annular recess within said base, said pin having a head for mating with said side wall recess and a shank slightly larger than said bore for expanding said cylindrical extension when therein.

6. A road marker as claimed in claim 2 wherein said bore is defined by a cone shaped side wall with an annular recess provided in said wall at the wide end of said bore, said pin being of a resilient material, having a head for mating with said recess and a cone shaped shank slightly larger than said bore for mating therewith and expanding said cylindrical extension when therein.

7. A road marker as claimed in claim 2 wherein said bore extends through said cylindrical extension and said pin has an expandable end portion.

8. A road marker comprising a base of resilient material having a top, bottom and straight sides, a cylindrical portion extending from and normal to said base bottom, a bore extending through said base from its top to its bottom and into said cylindrical portion and a flap extending from one of said base sides beyond said base top for providing a visual guide above a roadway and a pin insertable in said bore and capable of expanding said cylindrical portion when therein.

9. A roadway side guide comprising a roadway having a side edge, a series of spaced apart recesses in said roadway adjacent said side edge each having a hole opening therein, a plurality of road markers each having a base seated in one of said recesses and a cylindrical extension seated in the hole opening in said recess, a flap resiliently joined to said base and extending above said roadway, said base and cylindrical extension having a bore and a pin seated in said bore expanding said cylindrical extension against the sides of said hole.

10. A roadway side guide as claimed in claim 9 wherein said base, cylindrical extension and flap are of a one piece resilient material.

11. A roadway side guide as claimed in claim 9 wherein said bore is cone shaped and said pin is of a resilient material, is cone shaped but slightly larger than said bore for mating therewith and expanding said cylindrical extension.

12. A roadway side guide as claimed in claim 9 wherein said bore is straight and said pin has an expanded end beyond said cylindrical extension.

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