July 30, 1963 R. S. KNAPP 3,099,244

ROAD MARKERS

Filed Feb. 16, 1962

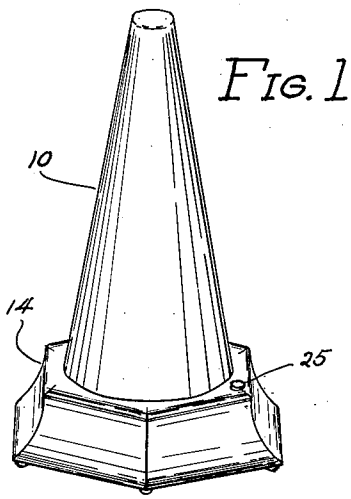


FIG. 1

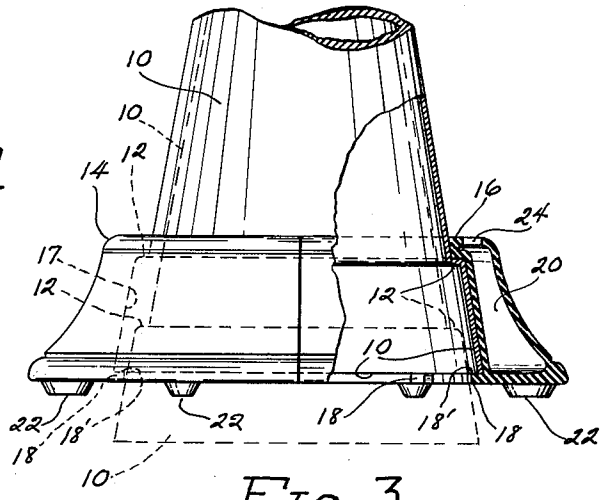
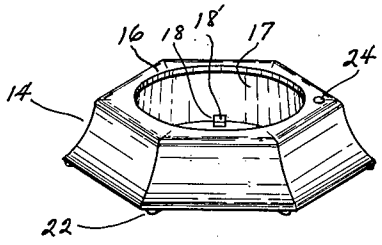


FIG. 3



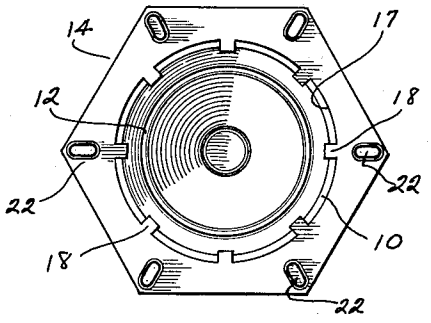


FIG. 4

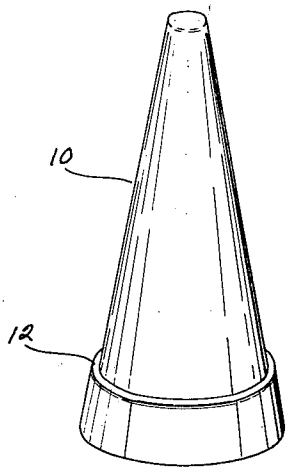


FIG. 2

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ROAD MARKERS

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This invention relates to improvements in road markers, and more particularly to a cone-like marker of the type placed on the ground around road obstructions to mark the same for motorists and others.

Heretofore, conical road markers of the type described have been made in one piece, with integral cone and base portions. It has been found that such one-piece markers are not entirely satisfactory, however, for several reasons. For one thing, when such markers are made of fluorescent plastic material, as is desirable, it is a needless expense to have the base portion formed of the same relatively expensive material, since the base is merely intended as a support for the upright cone portion. Moreover, with conventional, one-piece conical markers the integral base is too light in weight to prevent the marker from being blown over, or otherwise inadvertently displaced, and there is no simple, practical way of adding weight to such conventional markers. With these considerations in mind, the principal objects of the present invention are to provide a novel road marker wherein the cone and base portions are separately made, thus permitting the use of relatively inexpensive, non-fluorescent material for said base member, and wherein said base may be so designed that weight can be easily and inexpensively added thereto if it is desired to increase the stability of the marker.

A further object of the invention is to provide a novel road marker as described, wherein the cone and base portions thereof are securely united when in use, but wherein said members may be readily separated to permit their more efficient storage or shipment.

Still further objects of the present invention are to provide an improved road marker which is rugged and durable, and which is otherwise especially well suited for its intended uses.

With the above and other objects in view, the present invention comprises the improved road marker, and all of its parts and combinations, as set forth in the following specification and claims.

In the accompanying drawing, wherein the same reference numerals designate the same parts in all of the views:

FIG. 1 is a perspective view of the improved road marker in its assembled condition;

FIG. 2 is an exploded perspective view, showing the separable cone and base members;

FIG. 3 is an enlarged fragmentary side elevational view, parts thereof being broken away and shown in section, and showing, in broken lines, the cone being assembled in the base member; and

FIG. 4 is a bottom plan view of the assembled marker.

Referring now more particularly to the drawing, the numeral **10** designates the cone-shaped upper portion of the improved road marker comprising the present invention. Said cone ordinarily stands about 18 inches in height, although the size of the same is not critical to the novel construction constituting the present invention, and is preferably of a bright fluorescent color to increase the visibility of the marker. In accordance with the present invention said cone **10** is molded of a flexible but durable plastic, or similar material such as rubber, and the lower portion thereof is enlarged to provide an annular shoulder **12** (FIGS. 2 and 3).

The separable base member **14** characterizing the present invention is tapered toward its upper surface, to increase its stability, and is hexagonal in form. In the

latter respect, however, said base could as well be of various other shapes or configurations, and the invention is not to be limited to a unit having a hexagonally-shaped base member. A plurality of small, depending feet **22** are preferably provided on the bottom of said base to facilitate the positioning of the same on uneven ground. In accordance with the invention the base **14** is molded of a plastic or other material which is considerably less expensive than the fluorescent material from which the cone **10** is formed, and said base is relatively rigid in comparison to said flexible cone. In addition to permitting the use of cheaper material, it has been found that by forming the base and cone members separately the molding process is simplified and rendered less expensive.

As best appears in FIG. 3, extending completely through the base **14** is a bore or opening **17** which is designed to conform in size and taper to the enlarged lower portion of the cone **10**. An annular, internal flange **16** projects into said base opening **17** adjacent the top thereof, and projecting radially into the lower end of said opening is shoulder-forming means such as a plurality of circumferentially-spaced lugs **18** having shoulders **18'** (FIG. 3). As is shown in FIG. 3, in the preferred form of the invention said base **14** has a hollow interior, or cavity **20**, and one or more openings **24** are formed in the base top surface to provide communication between said cavity and the exterior, there being a suitable removable plug **25** (FIG. 1) for said opening. The base may, however, be made of solid material.

As hereinabove mentioned, the base and cone portions of the present marker are molded or otherwise formed as separate units, to permit the use of relatively inexpensive material in said base, and to permit use of the relatively expensive fluorescent paint on the cone only when such paint is to be employed. When it is desired to use the marker for its intended purpose said cone and base members must of course be assembled into a unitary structure. To assemble said members, and as is illustrated in broken lines in FIG. 3, the cone **10** is inserted into and drawn upwardly through the base opening **17**. The upward movement of said cone is continued until the annular shoulder **12** thereon abuts against the underside of the base flange **16**, and the lower portion of said flexible cone is simultaneously snapped past and seated on the relatively rigid shoulders **18'**, which in the preferred embodiment are formed by the lugs **18**, thus preventing movement of said cone in either direction. The result is a quick and easy assembly procedure which results in a strong, reliable connection.

When the marker is not in use it may be readily disassembled merely by deflecting the lower portion of the flexible cone inwardly so that the same will be unseated from the shoulders **18'**, and said cone can then be withdrawn through the lower end of the base. For efficient storage or shipment a number of said disassembled cones **10** may be mounted on each other in telescoping relation, and the relatively small base members **14** arranged together in compact form, or said markers may be stored in telescoped assembled condition.

Another important feature of the novel road marker comprising the preferred embodiment of the present invention is that weight can be easily and inexpensively added to the base member **14** to increase the stability of the unit. To accomplish this end, the plug **25** is removed from the opening **24** in the top of said base, and sand, water, or any other inexpensive, relatively heavy material poured into the base cavity **20**, thus greatly increasing the weight of the marker and minimizing the possibility of the same being blown over or otherwise inadvertently displaced. The result is a novel method of adding weight to the marker which is simple, inexpensive, and effective.

Moreover, the sand or other fill can be easily poured from the base to lighten the marker when it is desired to disassemble or transport the same. Increased weight may also be obtained, of course, by making the base of solid plastic, rubber, or other material.

From the foregoing description it will be seen that the novel structure comprising the present invention has several advantages over conventional road markers. With the present device, wherein the cone and base portions are molded as separate units, a relatively inexpensive, non-fluorescent material can be used for the base member, thereby substantially reducing the manufacturing cost. Also, with the present invention if one part gets damaged in use it may be replaced without replacing the entire assembly. Further, the separable nature of the cone and base members permits the same to be compactly arranged for efficient storage or shipment. Moreover, and in contrast to conventional road markers, the present unit is so designed that sand or similar inexpensive material can be easily added thereto to increase its weight and stability.

It is to be understood, of course, that various changes and modifications may be made in the novel road marker hereinabove described, and all of such changes or modifications are contemplated as may come within the scope of the following claims.

What I claim is:

1. A road marker, comprising: a base member formed of a relatively rigid material, said base having an upwardly-tapered opening therethrough; an annular flange formed on said base member and projecting radially into the upper portion of said base member opening; shoulder-forming means on said base member projecting radially into the lower portion of said opening; and an upwardly-tapered conical member mounted in and projecting upwardly from said base member, said conical member being formed of a relatively flexible material, and said conical member having an enlarged lower portion forming an annular shoulder spaced from the lower edge thereof and which enlarged lower portion is of a size and taper to fit closely within said base member opening, the flexible nature of said conical member permitting the temporary deflection of said lower portion whereby the same may be forced upwardly past and seated on said base member shoulder-forming means while the annular shoulder on said conical member abuts the inwardly-projecting base member flange, thus removably securing said conical member within said base.

2. A road marker, comprising: a base member molded of a relatively rigid material, said base having an upwardly-tapered opening therethrough, having an annular interior cavity, and said base having an aperture therein providing communication between said cavity and the exterior; a plug in said base aperture, said plug being removable to permit the filling of said base member cavity with material; an annular flange formed on said base member and projecting radially into the upper portion of said base member tapered opening; shoulder-forming means on said base member projecting radially into the lower portion of said base member opening; and an upwardly-tapered conical member separably mounted in and projecting upwardly from said base member, said conical member being formed of a relatively flexible material, and said conical member having an enlarged lower portion forming an annular shoulder spaced from the lower edge thereof and which enlarged lower portion is of a size and taper to fit closely within said base member opening, the flexible nature of said conical member permitting the temporary deflection of said lower portion whereby the same may be forced upwardly past and seated on said base member shoulder-forming means while the annular shoulder on said conical member abuts the inwardly-projecting base member flange, thus removably securing said conical member within said base.

3. A road marker, comprising: a base member molded of a relatively rigid material, said base having an upwardly-tapered opening therethrough, having an annular interior cavity, and said base having an aperture therein providing communication between said cavity and the exterior; a plug in said base aperture, said plug being removable to permit the filling of said base member cavity with material; an annular flange formed on said base member and projecting radially into the upper portion of said base member tapered opening; a plurality of circumferentially-spaced lugs formed on said base member and projecting radially into the lower portion of said base member opening; and an upwardly-tapered conical member separably mounted in and projecting upwardly from said base member, said conical member being molded of a relatively flexible, fluorescent-colored material, and said conical member having an enlarged lower portion forming an annular shoulder spaced from the lower edge thereof and which enlarged lower portion is of a size and taper to fit closely within said base member tapered opening, the flexible nature of said conical member permitting the temporary deflection of said lower portion whereby the same may be forced upwardly past and seated on said base member lugs while the annular shoulder on said conical member abuts the inwardly-projecting base member flange, thus removably securing the enlarged lower portion of said conical member within said base.

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