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J. B. KEATS
CONICAL MARKER DEVICE
Filed Feb. 23, 1968

3,451,368

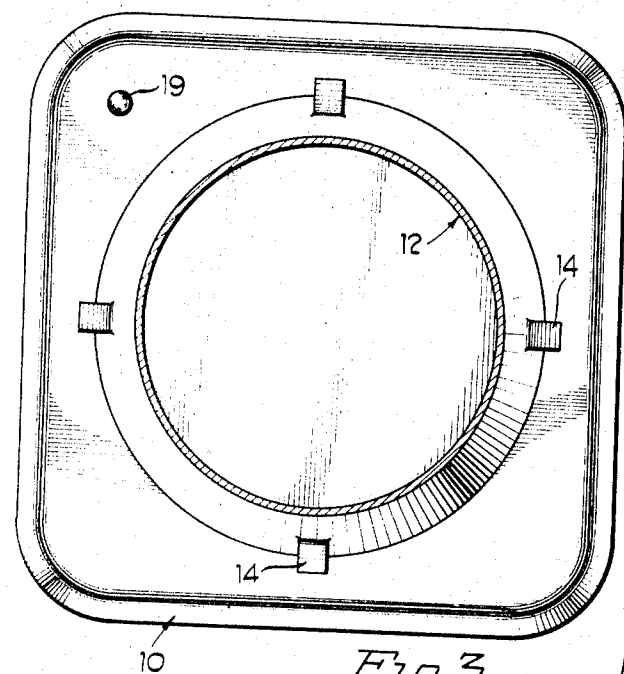


Fig 3

Fig 2

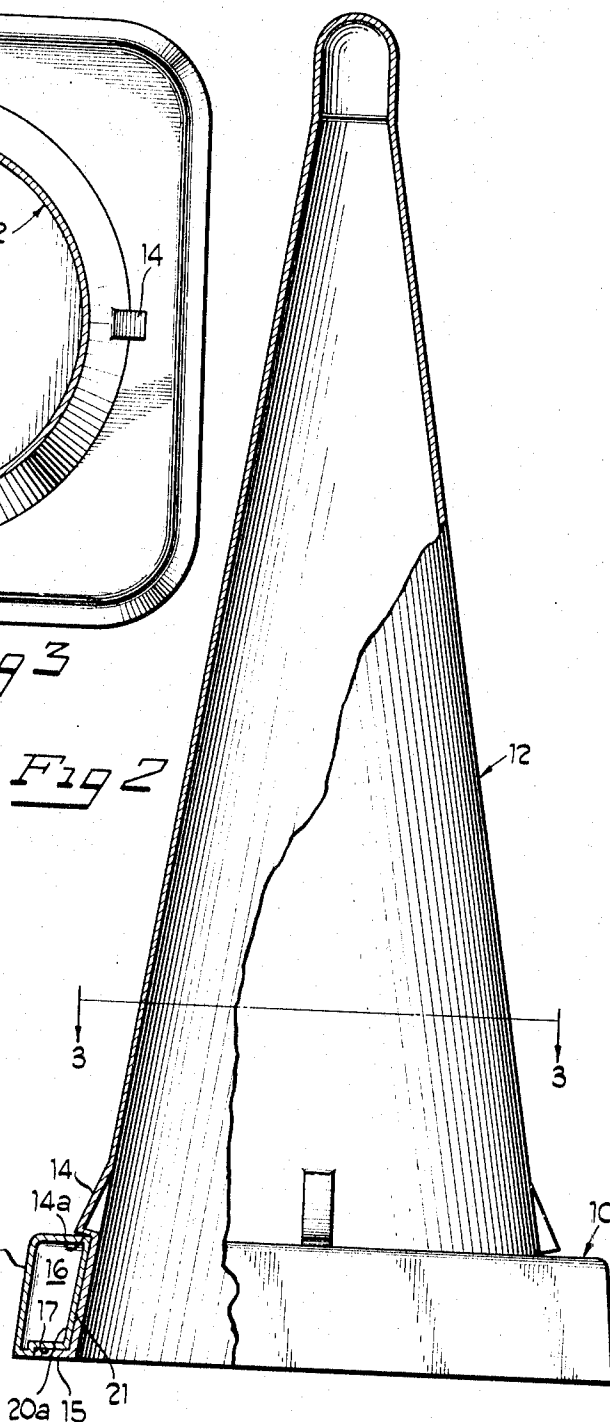
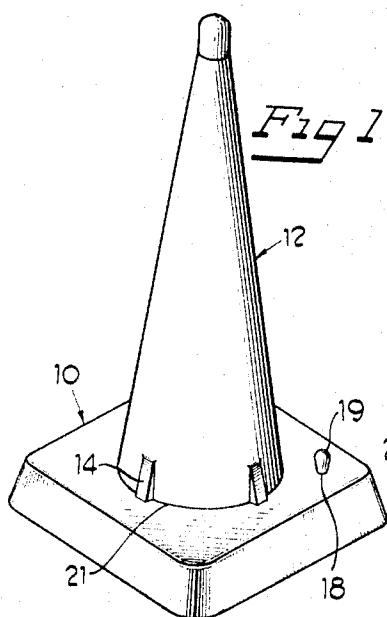


Fig 1



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CONICAL MARKER DEVICE

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2 Claims

ABSTRACT OF THE DISCLOSURE

A conically shaped marker device that is formed in two portions, a base portion which is capable of being loaded with ballast and an upper portion, said lower portion adapted to retain said upper portion in an upright vertical position.

BACKGROUND

Two-piece marker devices of the type disclosed herein are shown in United States Patent 3,099,244. The marker devices of the aforementioned United States patent comprises a base portion which is capable of being loaded with a ballast and an upper conical portion which is secured to the base portion.

There are means for releasably securing the upper conical portion to the base portion comprised of an annular shoulder and a plurality of projections on the interior surface of the base portion and an annular shoulder on the exterior surface of the upper conical portion near the base thereof. The two pieces are secured together by inserting the upper conical portion into the base portion whereby the respective annular shoulders of the two portions engage one another and the lower edge of the upper conical portion nests within the plurality of projections on the base member.

Though this structure provides a means of attaching the two pieces, it is very difficult to disassemble the marker by deflecting the bottom of the cone as suggested by the patent.

SUMMARY OF THE INVENTION

The instant invention is directed to a two-piece conically shaped marker having a base portion and an upright conical portion that is adapted to fit within the base portion. The upper conical portion has shoulder protrusions which snap and fit over the upper surface of the base portion for ease of assembling and disassembling the marker. Upon fitting the conical portion of the marker up through the annular opening in the base portion, the shoulders on the conical portion are snapped over the base to snugly hold the two-piece marker together. In order to disassemble the present marker, it is only necessary to deflect the conical portion inwardly in the area of the shoulders and push the conical portion out of engagement with the base. This is a more simple and much more expedient means of disassembling the two-piece marker than that shown and described in the aforementioned patent.

The invention will be more clearly understood in conjunction with the drawings in which:

FIGURE 1 is a perspective view of the complete assembly of the marker;

FIGURE 2 is a partially broken away sectional side elevation of the marker shown in FIGURE 1; and

FIGURE 3 is a cross-sectional view taken on lines 3-3 of FIGURE 2.

Referring now more particularly to the drawings, FIGURE 1 shows the completed marker which is comprised of a base member 10 and a conical upper member 12. The conical upper member 12 is constructed of a

flexible material such as a rubbery thermoplastic material and has a plurality of outwardly projecting lugs 14 defining shoulders 14a thereon on the lower outer periphery thereof. An annular outwardly extending flange 15 is provided on the lower end or base portion on the conical member 12.

The base portion 10 is separate from the conical portion 12 and has a hollow interior 16 which may be filled with a ballast such as sand, water, aggregate material or the like through an opening 18 that is closed by plug 19. The base portion as shown has a square exterior wall 20 and an annular inner wall 20a defining an aperture 21. The bottom surface of the base member 10 has a recess 17 formed therein for receiving the annular flange 15 of upper member 12 after the marker portions are assembled. To assemble the present marker, the upper conical member 12 is inserted into the aperture 21 of the base member 10 from below. The upper conical member 12 is releasably secured to the base member 10 by forcing the lugs 14 past the top wall of the base member 10 so that the shoulders 14a snap out into a snug engagement with the top wall of the base member 10. The flange 15 of member 12 rests securely within recess 17 of the base member 10 at that point where shoulders 14a are in snug engagement with the top wall of the base member 10.

To disassemble the marker, it is only necessary to deflect the flexible upper member 12 inwardly along that area containing lugs 14 and force member 12 downwardly through base member 10.

The conical upper member 12 of the marker may be constructed of any suitable flexible thermoplastic or rubbery material such as an olefinic material, for example, polyethylene, polypropylene, polybutadiene, butadiene copolymers and copolymers of ethylene and vinyl acetate, and the like. The base member may be constructed of thermoplastic or rubbery materials, however, can also be constructed of more rigid thermoplastic such as impact polystyrene, acrylonitrile-butadiene-styrene terpolymers or graft polymers, polyacetal resins or the like. Additives may be combined with the thermoplastic materials to impart ozone or ultraviolet light resistance as well as color.

The two members, i.e., the base member 10 and the conical member 12 are normally formed as separate units by injecting molding, blow molding or fabricating from plastic sheet materials. The kind and amount of ballast that is utilized to fill the cavity 16 via hole 18 in the base portion 10 is relatively unimportant and such materials as sand and water are preferred due to their availability and economy.

The two-piece marker is easily constructed due to its configuration and may be assembled with ease. Thus, it can be constructed economically from inexpensive flexible materials. Also, a plurality of markers can be nested by stacking one upon the other for ease of storage.

The invention has been described with respect to a square base and a conical upper surface, however, a round base may be equally operable. The conical member is described with a closed top, however, may also contain an open top to accommodate auxiliary devices such as flags, lights, signs, etc.

It will be understood by those skilled in the art that this invention is not restricted to the specific embodiments set forth hereinabove, but may be varied in accordance with changes that may be made within the ambit of the invention by those skilled in the art.

As stated above, the prime use for the device of this invention will be as a traffic marking device, however, the markers of this invention may also be used to define permitted and prohibited areas in a skating rink, pond, etc.

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The scope of this invention is defined solely by the appended claims which should be construed as broadly as is consistent with the prior art.

What is claimed is:

1. A two-piece marker device comprising a base member having an upper wall and an annular inner wall defining an aperture therethrough and means defining an annular recess in the bottom thereof, and an upper member constructed of a flexible plastic or rubbery material having lugs thereon adjacent the base thereof, but spaced from the base at a distance substantially equal to the height of the annular inner wall of said base member, said upper member having an outwardly extending flange at the base thereof whereby the base member and the upper member may be releasably secured together by inserting the upper member into the annular inner wall of the base member and forcing the lugs of the upper member through the base member so that the lugs snap out into a fitting engagement along the top of the base member and so that the outwardly extending flange at the base of the upper member rests securely within the recess of the base member and further whereby the two-

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piece marker may be disassembled by deflecting the flexible upper member inwardly along those areas containing the lugs and pushing the upper member out of the base member.

2. The marker device of claim 1 wherein said base member and conical member are formed from a material selected from the group consisting of thermoplastic and rubbery materials.

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U.S. Cl. X.R.

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