ONE-PIECE SUPPORT

Assignee: Amerace Esna Corporation, Union, N.J.

Filed: Feb. 10, 1972

Appl. No.: 225,142

Related U.S. Application Data
Continuation of Ser. No. 9,188, Feb. 6, 1970, abandoned.

Primary Examiner—William H. Schultz
Attorney, Agent, or Firm—Prangley, Dithmar, Vogel, Sandler & Stotland

ABSTRACT

A one-piece support for a driveway marker or the like having an elongated post integrally carrying on one end thereof means for mounting a reflector thereon and integrally carrying on the other end thereof means for mounting the support in the ground.

2 Claims, 6 Drawing Figures
ONE-PIECE SUPPORT

This application is a continuation of the copending application of Sidney A. Heenan, Ser. No. 9,188, filed Feb. 6, 1970, for ONE-PIECE SUPPORT, now abandoned.

This invention relates to a support for a driveway marker or the like and more particularly, this invention relates to a one-piece support having at one end thereof mounting means for a reflector and at the other end thereof means for mounting the support in the ground.

It is a principal object of the present invention to provide a support for a driveway marker or the like of the type set forth, the support including a one-piece synthetic plastic resin post, the post having at one end thereof means for holding a spike adapted to be driven into the ground, the holding means including a cylindrical portion of the post having a bore therethrough adapted to provide substantial frictional contact between the holding means and the spike inserted therethrough, whereby to provide a support adapted fixedly to be mounted in the ground by driving the associated spike through the holding means until the end thereof is embedded into the ground.

The invention, both as to its organization and method of operation, together with further objects and advantages thereof, will best be understood by reference to the following specification taken in connection with the accompanying drawings in which:

FIG. 1 is a front elevational view of a support of the present invention particularly adapted to hold a driveway marker;

FIG. 2 is a side elevational view of the support of the present invention;

FIG. 3 is a sectional view of the support and the driveway marker shown in FIG. 1 taken along line 3--3 thereof;

FIG. 4 is an enlarged front elevational view of the lower portion of the support shown in FIG. 1 showing the support carrying the driveway marker mounted in the ground;

FIG. 5 is a sectional view of the support for the driveway marker of FIG. 1 taken along line 5--5 thereof; and

FIG. 6 is an enlarged, fragmentary view of the offset portion as viewed from the left of FIG. 4.

Referring now to the drawings, there is shown therein a support 100 for a driveway marker, the support 100 including a reflector mounting means 101 for mounting thereon a reflector 102, the reflector mounting means 101 being integral with an elongated post 103, the post 103 depending downwardly from the reflector mounting means 101. Integral with the elongated post 103 at the end thereof opposite to the reflector mounting means 101 is a spike holder 104, the spike holder 104 being adapted to receive therethrough an associated spike 105.

As best seen in FIGS. 1 and 3, the reflector mounting means 101 includes a rectangular frame 110, the frame 110 being provided with an ornamental design or filigree work 111. On the inner edge of the frame 110 is a rib 112, the rib 112 extending completely around the rectangular frame 110 and being generally transverse thereto to provide shoulders 113 formed on the inner edges of the ribs 112. Interior of the ribs 112, the frame 110 forms a rectangular aperture 114 and extending upwardly from the aperture 114 on the frame 110 along the longitudinal axis of the elongated post 103 is a rib 116, the rib 116 providing a center line about which the decorative or filigree work 111 symmetrically and attractively is arranged and also providing for added strength of the elongated post 103.

The reflector 102 may be of the type disclosed in my previously filed co-pending patent application Ser. No. 625,723, filed Mar. 24, 1967, for REFLECTOR STRUCTURE, which application is incorporated hereinto by reference. The reflector 102 includes a reflecting surface 120 V-shaped in cross section, the reflector 102 having a plurality of vertically and horizontally extending spaced-apart reinforcing ribs 121 to provide the required strength for the reflector 102. The reflector 102 includes two reflecting surfaces 120, each being identical one to the other in opposed relationship, the reflecting surfaces 120 being held in place by two studs 122 vertically spaced apart along the longitudinal axis of the elongated post 103, the studs 122 being carried by the frame 110 and extending through aligned apertures 123 in the reflecting surfaces 120. (The studs 122 are shown broken away in FIG. 3 for clarity but extend outwardly from frame 110 and are an integral part thereof).

Each of the reflecting surfaces 120 is provided with a backing liner 124 to provide a hermetic seal for and to increase the strength of the reflector 120, as is well known in the art, the reflecting liner 124 being of the metal foil type. Each of the metal foil backing liners 124 has two vertically spaced apart apertures 125 therein for the passage therethrough of the respective studs 122, the apertures 125 being aligned with the respective ones of the apertures 123, the studs 122 being ultrasonically staked over after the reflectors 120 have been mounted thereon.

Referring now to the elongated post 103 integrally connecting the reflector mounting means 101 and the spike holder 104, the post 103 is cruciform in cross section and includes four ribs 130, 131, 132 and 133, each of the ribs being spaced at 90° to each other. The cruciform shape of the elongated post 103 provides for additional strength thereof, whereby the support 100 of the present invention for the driveway marker is strong and resistant to breakage thereof. At the bottom of the elongated post 103 is a beveled edge 134, the edge 134 extending diagonally from rib 132 to the spike holder 104, and the ends of ribs 131 and 133 are also beveled at the juncture with the diagonal edge 134, as seen in FIG. 6, to provide an arrow-shaped configuration, which configuration permits embedding of the post 103 into the ground, as hereinafter explained, with a minimum bending moment being produced in the post 103. There is also provided a horizontally positioned cross rib 135, the cross rib 135 being normal to the ribs 130 to 133, inclusive, and providing for additional strength of the elongated post 103 at the point thereof where impact due to driving of the associated spike 105 through the spike holder 104 may occur, the post 103 being embedded, in use, to the cross ribs 135. Further, the beveled diagonal edge 134 ensures that the support 100 may be driven into the ground so as to embed the bottom of the spike holder 104 therein up to the rib 135, as hereinafter explained.

With reference to the spike holder 104, there is provided an elongated cylindrical body 140 integral with the elongated post 103 at the bottom thereof. The elongated cylindrical body 140 has at the bottom end
thereof a beveled edge 141 and extending therethrough from the top of the elongated cylindrical body is a bore 142, the bore 142 being off-set a predetermined distance from the post 103, as particularly seen in FIG. 5. The bore 142 is of slightly larger diameter than the associated spike 105 and has spaced around the interior thereof four flats 143 to provide substantial frictional force between the spike holder 104 and the associated spike 105 when the spike 105 is driven therethrough. The spike 105 is an elongated cylindrical rod having a shank portion 148, an enlarged head portion 146 and a pointed bottom portion 147, the enlarged head portion 146 being cruciform in shape and slightly larger in diameter than the shank portion 148. There is also provided a washer 145 between the head portion 146 and the top of the spike holder 104 to prevent damage to the spike holder 104 when impacted by the enlarged head 146 of the spike 105 and to prevent the head 146 from driving through the holder 104.

The support 100 of the present invention is preferably made from a synthetic plastic resin such as a polycarbonate; however, there are other synthetic plastic resins well known in the art which possess the required impact strength and weather resistance adequately to perform as a support for a driveway marker. The support 100 of the present invention is preferably mounted adjacent to a driveway or other structure by hammering the spike 105 into the ground, as shown in FIG. 4, so that the beveled edge 141 of the spike holder 104 embeds into the ground and the spike holder 140 is buried in the ground up to the rib 135, thereby to provide the support 100 for the driveway marker with a very firm and stable base and to prevent rotation of the reflectors 120 away from an on-coming automobile. It is here noted that the support 100 of the present invention is in its in-use position when the spike 105 is fully driven into the ground and the beveled edge 136 is firmly embedded in the ground. The advantage of the above configuration is that the spike 105 can be made considerably smaller in diameter than normally would be required for a driveway marker and support thereof of the type presently in use. The spike 105 herein is relatively short and is completely driven into the ground, whereas other driveway markers are mounted on supports having spikes of much greater length with about only one third thereof driven into the ground. These prior art spikes must be of much greater diameter than the spike 105 herein to withstand the forces generated from the hammering thereof into the ground. Because of the construction herein, there is no driving means at the top of the support 100, whereby no part of the metal spike remains exposed above ground to cause injury if a child were to fall on the driveway marker of the present invention. If a child were to fall on the driveway marker disclosed herein, the post 103 would bend to prevent any serious injury, whereas a metal spike extending above ground could cause severe injury.

In a contemplated example, the support 100 may be about 24 inches from the top rib 116 to the beveled edge 141 of the spike holder 104 and the spike 105 is less than 15 inches in length and about 0.1875 inches in diameter. The ribs 130 to 133, inclusive, are about 0.125 inches in width and depth and extend longitudinally approximately 19 inches from the aperture 114 formed by the rectangular frame 110 to the biased edge 134 which joins the spike holder 104 at the bottom of the support 100. The holder 104 is about 0.375 inches in diameter and the beveled edge 141 thereof is about 0.265 inches in diameter at the smallest part thereof. The bore 142 is about 0.234 inches in diameter and with the flats 143 therein the effective diameter is about 0.186 inches, or slightly less than the diameter of the spike 105.

The post 103 is elongated and therefore has considerable flexibility or give to it in order to withstand the impact resulting from chance contact between the post 103 and an automobile. The cruciform shape of the post 103 provides for additional strength to withstand the aforementioned impacts, which strength and flexibility are great advantages over prior art devices which tend to break on impact of the type described.

As may be seen therefore, there has been provided a support for a driveway marker or the like including a one-piece synthetic plastic resin post cruciform in cross section, the post having at one end thereof means for mounting a reflector thereon, which means include rectangularly shaped ribs having shoulders adapted to receive the post reflectors mounted on either side thereof by studs, the post having at the other end thereof means for holding a spike adapted to be driven into the ground, the holding means including a cylindrical portion of the post having a bore therethrough, the post having at the bottom edge thereof a beveled diagonally upwardly extending edge, the bore being adapted to provide substantial frictional contact between the holding means and the spike inserted therethrough, the spike having an enlarged head and carrying a washer therebelow to prevent the spike from passing through the holder or damaging the same, in order to provide a support adapted fixedly to be mounted in the ground by driving the associated spike through the holding means until the end thereof is embedded into the ground.

In view of the foregoing, it is apparent that there has been provided a one-piece support for a driveway marker. While there has been described what is at present considered to be the preferred embodiment of the invention, it will be understood that various modifications may be made therein and it is intended to cover in the appended claims all such modifications as fall within the spirit and scope of the invention.

What is claimed is:

1. A roadside marker comprising a one-piece support, said support being integrally formed of plastic and including a post and reflector mounting means on one end of said post and spike holding means on the other end of said post, said holding means having a bore extending therethrough and a plurality of flats distributed about the interior surface of said bore and integral therewith, and a spike passing through said bore for driving into the ground and having an exterior surface, said flats being constructed and arranged to provide the bore with an effective diameter slightly less than the diameter of said spike to cause said holding means frictionally to engage said spike and to maintain frictional engagement as said spike is driven through said bore and into the ground.

2. A roadside marker comprising a one-piece support, said support being integrally formed of plastic and including a post and reflector mounting means on one end of said post and spike holding means on the other end of said post, said holding means being offset from said post, said holding means having a bore extending therethrough, said bore defining an interior surface,
and a spike passing through said bore for driving into the ground and having an exterior surface, at least one projection on one of said surfaces and integral therewith for frictionally engaging the other of said surfaces and for maintaining said frictional engagement as said spike is driven through said bore and into the ground, said other end of said post being biased diagonally to facilitate imbedding the lower portion of said support in the ground without production of a substantial bending moment in said post.

* * * * *