United States Patent

Ballingall et al.

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[54] **LAY-DOWN HIGHWAY DELINEATOR POST**

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[52] **U.S. Cl.** **94/1.5,** 52/116, 287/99

[51] **Int. Cl.**.....**E01c 23/16**

[58] **Field of Search** 94/1.5; 287/99; 52/116, 292, 52/296, 645; 248/159

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[57] **ABSTRACT**

A two sectioned post, one section being driven into the ground and the other section being above ground, the two sections being hingedly connected, the hinge being so constructed that the upper section may be pivoted in only one direction into substantially horizontal, or "lay-down" position.

3 Claims, 4 Drawing Figures

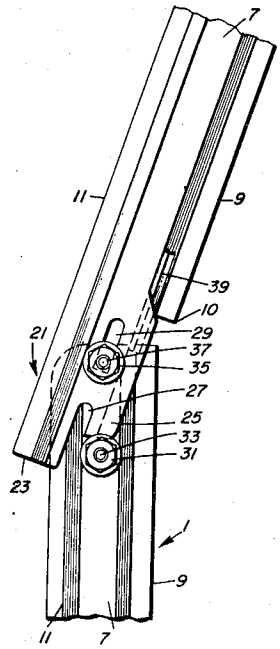


FIG. 1

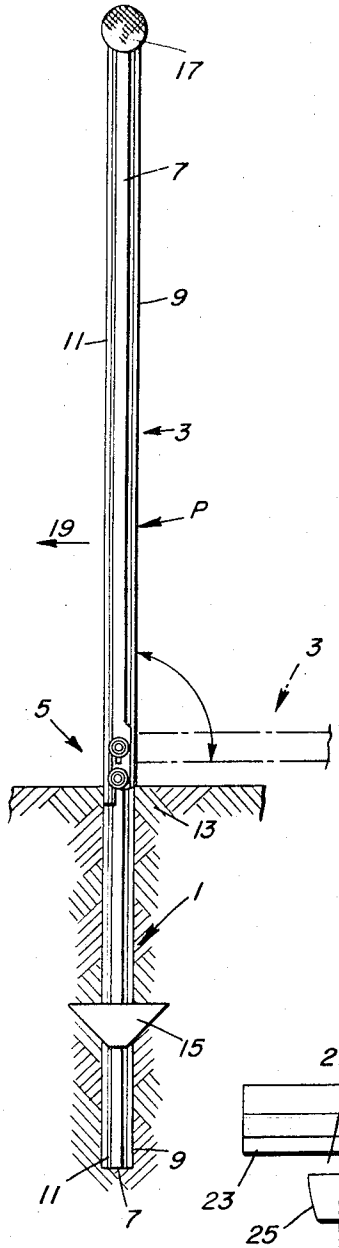


FIG. 2

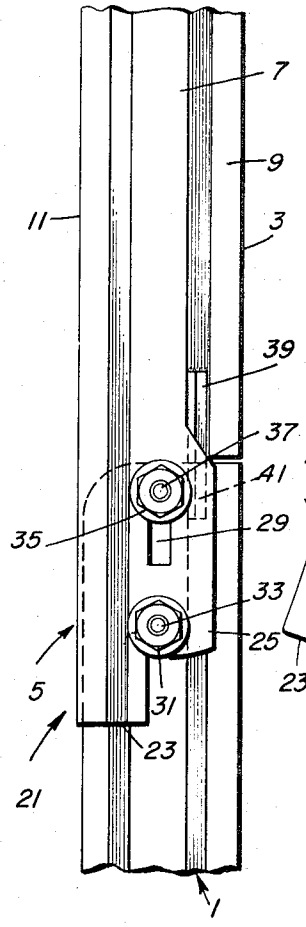


FIG. 3

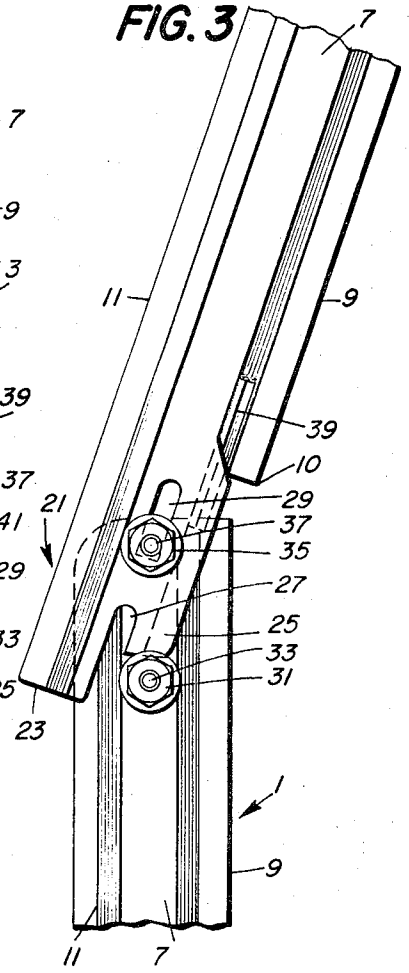
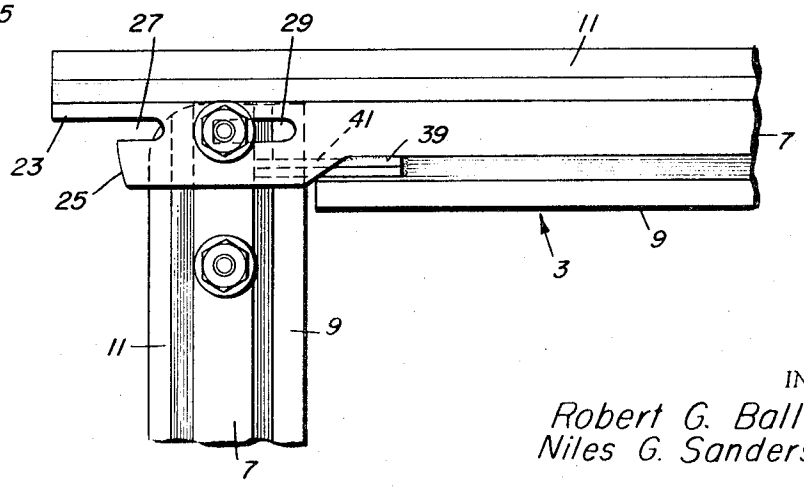


FIG. 4



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LAY-DOWN HIGHWAY DELINEATOR POST

This invention relates generally to highway right-of-way delineator posts, and in its more specific aspects it relates to such posts which are composed of two sections hingedly connected together; and the nature and objects of the invention will be readily recognized and understood by those skilled in the arts to which it relates in the light of the following explanation and detailed description of the accompanying drawings illustrating what we at present believe to be preferred embodiments or mechanical expressions of our invention from among various other forms, arrangements, combinations and constructions, of which the invention is capable within the spirit and scope thereof.

It is customary practice to indicate the right-of-way on highways by a plurality of spaced apart right-of-way delineator posts. Such posts are usually embedded in the ground and on the length thereof extending above the ground carry a reflector. Thus, the edge of the highway is marked for vehicles traveling thereover.

Considerable difficulty has been experienced with such posts, particularly during the winter months when snow removal equipment is clearing the highway and strikes the posts badly damaging them or in many cases making them useless. When this occurs it is necessary for the highway crews to replace the damaged or useless posts. It is our experience that a large percentage of these posts must be renewed each spring, and it will be appreciated that this is both a time consuming task as well as one involving considerable expense.

This damage to delineator posts may also occur during the summer months when they may be struck and damaged by the mowers which are used to keep the highway right-of-way clear.

It has been our prime objective, in the development of this innovation to provide a delineator post which will eliminate the possibility of being damaged or ruined by various types of highway equipment. We have devised a highway delineator post which is of the "lay-down" type and is manipulable with facility, in the fall by a highway crew to so position it that it is removed from the damaging path of highway equipment. The manipulation is relatively simple and a great number of posts may be operated upon to remove them from harm's way, without requiring a substantial number of man hours and without requiring any particular equipment to accomplish this purpose.

While designing this unique type of lay-down highway delineator post which is endowed with simple operational features we have not lost sight of the expense involved in the manufacture thereof. This post may be constructed relatively inexpensively and is insertable into operational position in the ground with facility.

With the foregoing general objects, features and results in view, as well as certain others which will be apparent from the following explanation, the invention consists in certain novel features in design, construction, mounting and combination of elements, as will be more fully and particularly referred to and specified hereinafter.

Referring to the accompanying drawings:

FIG. 1 is a view in elevation of the highway right-of-way delineator post in operative position with a length thereof embedded in the ground.

FIG. 2 is an elevational view of the delineator post with parts thereof broken away, and illustrating in detail the hinged connection between the two sections of the post.

FIG. 3 is a view similar to FIG. 2 only illustrating the start of the pivoting operation of the upper above ground section of the post.

FIG. 4 is a view similar to FIGS. 2 and 3 illustrating the upper above ground section pivoted into substantially horizontal inoperative position.

In the accompanying drawings, and particularly FIG. 1 thereof, we have illustrated one of our novel highway delineator posts of the "lay-down" type, and have used the letter P to designate the post in its entirety. The post is composed of a lower section the major portion of which is embedded in the ground which we have designated generally by the numeral 1, and an upper above ground pivotal section which we have designated in its entirety by the numeral 3. The sections 1 and 3 are hingedly connected together by a hinge construction which we have designated, in its entirety, by the numeral 5, and which will be described in detail hereinafter. The sections 1 and 3 of the delineator post are preferably formed of metal and each comprises an elongated central U-shaped portion 7 having flanges 9 and 11 extending in opposite directions from the top edges of the arms which form the U-shaped portion 7. In effect the U-shape portion 7 of the post sections functions as a web from which the flanges 9 and 11 extend. The flange 9 on the upper section 3 is cut away towards the lower end thereof, providing a free area 10. The major length of the lower section 1 is embedded in the ground 13, in any suitable manner, and is provided with a conventional post maintaining triangular section 15 which is affixed to the web 7, in any suitable manner. A conventional reflector lens 17 is affixed, in any desirable manner, to the top, or at any other convenient location, on the upper section 3 of the post. It will be appreciated that the right-of-way delineator posts may be spacedly located along the highway so that when the upper pivotal section 3 is pivoted downwardly into inoperative position, as disclosed in phantom lines in FIG. 1 of the drawings, it will extend in substantially horizontal position directed away from the highway which is in the direction relative to the post which shown by the arrow 19 in FIG. 1.

We have devised a novel hinge construction between the two sections 1 and 3 which is so constructed that the pivotal upper section 3 may only be pivoted in one direction, that is away from the highway, as explained above, and also the hinged connection between the two sections is so arranged that the pivotal action of the upper section of the post may not be inadvertently or accidentally caused to occur.

The lower end of the upper pivotal section 3, which we have designated in its entirety by the number 21, is of generally bifurcated form providing a pair of legs 23 and 25, the leg 23 being longer than the leg 25, for a purpose to be hereinafter described, and the bifurcated construction results in a slot 27 which is open at its lower end, and is between the legs. Spaced above the slot 27 and in alignment therewith, is a further closed end slot 29, each of the slots 27 and 29 being stamped or cut into the web 7 of the upper section.

Adjacent to but downwardly spaced from the upper edge of the lower section 1 a stud, rod, screw or the like, and bolt 33 and 31, respectively, are provided, the stud or rod extending through the web 7. It will be understood that the screw and bolt 33 and 31 are located on the web 7 of the section 1 at a point thereon, which is above the ground in which the section 1 is embedded. The arrangement being such that the bolt 31 is fixed on the stud so that it is spaced from the web 7 a distance sufficient to receive the web 7 of the upper section between the bolt and the web section of the lower section when the bolt 33 is received in the slot 27, as will be clarified hereinafter. A further stud, rod, screw or the like and bolt 37 and 35 respectively, extend through the web 7 of the lower section, upwardly spaced from and in alignment with the lower stud and bolt 33 and 31.

When the delineator post of our invention is in operative position with the two sections aligned, the rod 33 is received in the slot 27, and the rod 37 which extends through the slot 29 is at the upper end of said slot 29. Consideration of FIG. 2 of the drawings indicates that with the upper section 3 of the post mounted in this manner on the lower section it may not pivot or be swung into inoperative position due to the fact that the rod 33 will maintain the upper section in operative aligned position, since the rod is positioned in slot 27. When it is desired to pivot the upper section into lay-down inoperative position the upper section 3 is grasped and raised or manipulated upwardly until the rod 37 engages the bottom edge of the slot 29, when the upper section has been raised the length of the slot 29 the leg 25 of the bifurcation 21 will be above the horizontal plane of the rod 33, as particularly shown in FIG. 3 of the drawings. When this position has been reached the upper section is pivoted further downwardly (to the right as illustrated in FIG. 3) until the upper section is in substantially lay-down horizontal inoperative position as illustrated in FIG. 4 of the drawings. It should be recognized that the length of the slot 29 is substantially equal to the length of the shorter leg 25 so that when the upper section is raised the full amount of the length of the slot 29 the leg 25 will be above the horizontal plane of the rod 33, while the leg 23 which is longer than the leg 25, will not be above the horizontal plane of said rod 33. This insures that the upper section may only be pivoted in the direction of the leg 25 which is the direction away from the highway. If an attempt was made to pivot this upper section in the opposite direction, it will be recognized, that this could not be accomplished since the longer leg 23 would abut against the rod 33 to prevent pivotal movement in that direction.

A tongue or stop 39 is fixed, by welding or in any other suitable manner, to the arm of the web 7 from which the flange 9 extends. This stop or tongue 39 is a rigid element and is provided with an extension 41 which, when the upper section 3 is in inoperative position, abuts against the flange of the web 7 of the lower section to thereby prevent further downward pivoting movement of the upper section 3. Such a tongue or stop is of significance for a variety of reasons. It will be evident that the terrain on the side of the post away from the highway will probably not be flat and may drop off, and in this situation if no such tongue or stop was provided too great a pivoting action might occur if the terrain was the sole means for stopping this pivoting action of the upper section.

We claim:

1. A highway right-of-way delineator post of the "lay-down" type, including a lower section, the major portion of which is embedded in the ground, and an upper above-ground section, hinge means connecting said lower and upper sections together, whereby said upper section may be moved relative to said lower section, said hinge means comprising a bifurcated lower end on said upper section providing a pair of spaced-apart legs and a free area therebetween, one of said legs being shorter than the other, a rod fixed to and extending through a portion of the lower section which is above ground, said rod being received in said free area between said legs when the upper section is in position aligned with said lower section, and a further rod fixed to end extending from the upper portion of said lower section above said first named rod, and said upper section being pivotally mounted on said further rod, said upper section having an elongated slot therein and said further rod extending therethrough, the shorter leg being substantially equal to the length of the slot, whereby upon axial movement of said upper section the shorter leg is cleared from said first named rod for pivoting movement of said upper section relative to the lower section.

2. A highway right-of-way delineator post in accordance with claim 1, wherein said post is positioned adjacent a highway right-of-way with the longer of said legs facing said highway right-of-way for pivoting action of the upper section solely in a direction away from the highway right-of-way.

3. A highway right-of-way delineator post in accordance with claim 1 wherein upon movement of said upper section away from said lower section the further rod is positioned at and in abutment with the lowermost end of said elongated slot, and the lower surface of said shorter leg of the bifurcation is in a projected vertical plane above the first named rod and said other leg of said pair of legs being in a projected horizontal plane with respect to said first named rod.

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