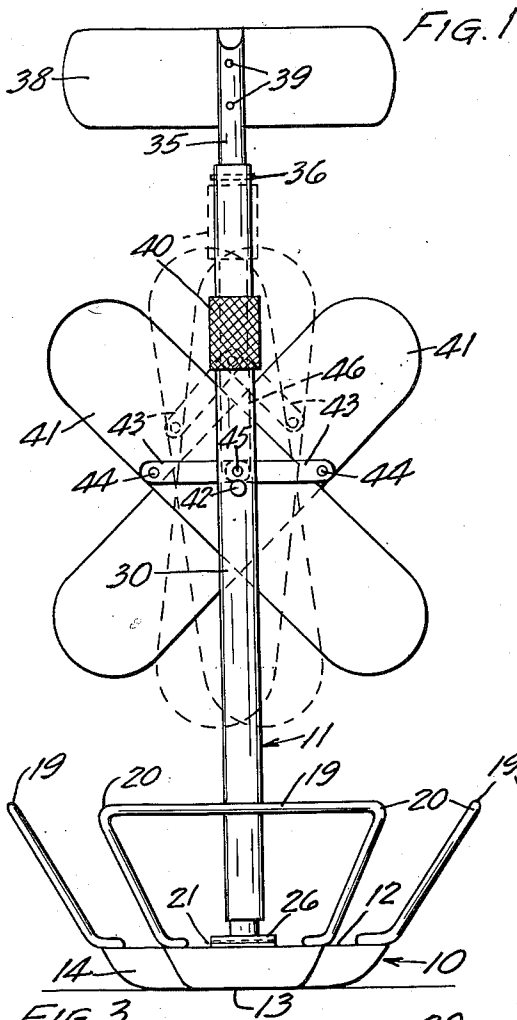
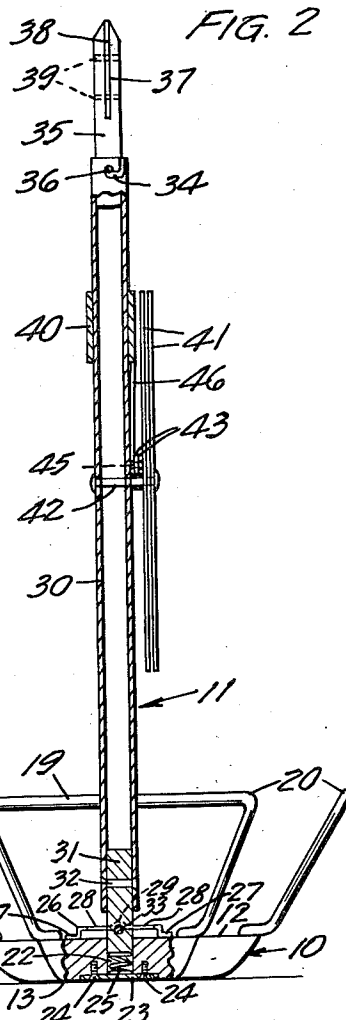
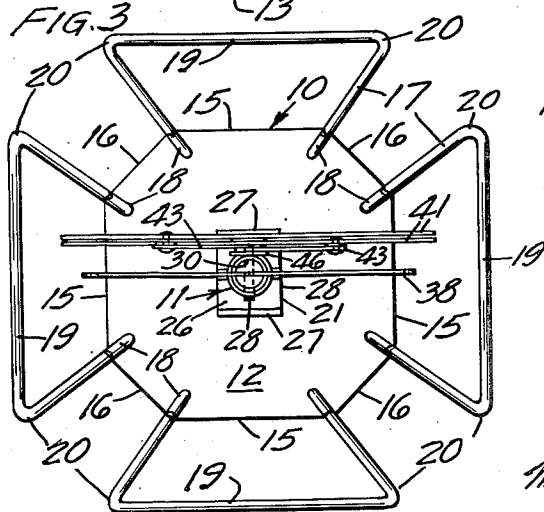
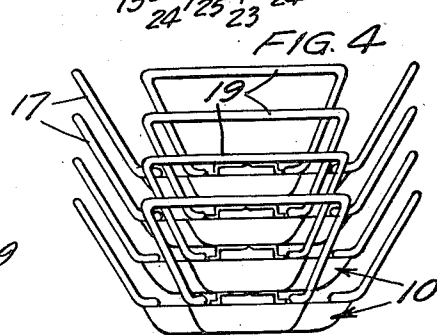


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PORTABLE STANDARD

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PORTABLE STANDARD

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3 Claims. (Cl. 116—63)

This invention relates to a portable standard and has for a general object the provision of a sturdy and effective device especially adapted for outdoor use, which can be quickly assembled and dismantled for transportation and storage.

A more specific object of the invention is to provide a weighted type of standard wherein a portable base element is so constructed as to have self-righting properties with the standard secured thereto and a portion of the self-righting base structure will also provide handle means for carrying a plurality of the bases in nested relation.

Another object of the invention is to provide a device of the class described which can be collapsed and taken apart in such a manner that a large number of the complete standards can be compactly positioned when not in use, yet can be quickly mounted and prepared for use without the employment of tools.

A further object of this invention is to provide a portable signal standard in which the self-righting base structure is provided with a standard and collapsible signal arms, the entire device being capable of dismantling into compact space.

These and other objects and advantages of my invention will more fully appear from the following description, made in connection with the accompanying drawings wherein like reference characters refer to the same parts throughout the several views and in which:

Figure 1 is a rear elevation of my device showing the post in mounted relation with the base and the signal arms in full line in their extended relation and in dotted line in their retracted relation;

Figure 2 is a side elevation of my portable standard shown in Figure 1, a medial segment thereof being vertically sectioned to better show cooperation of the separate parts;

Figure 3 is a top plan view of my device in mounted condition; and

Figure 4 shows several of the weighted base portions in nested relation so that the handle and fulcrum members may be simultaneously employed for carrying the bases in one hand.

With continued reference to the drawing, my portable signal standard comprises generally a weighted base 10 and a post 11. The weighted base is generally flat in structure, being provided with an upward horizontal surface 12 and a lower horizontal surface 13, as shown in Figs. 1 and 2. The base is preferably constructed of metal such as cast iron, although the structure may be cast from hydraulic cement containing weighted aggregate or any other suitable substance having the requisite strength and weight. The base may be of any convenient configuration, but I prefer that it be symmetrical and of a polygonal shape. In the instant case, the configuration presents eight sides of symmetrical design although the sides are not necessarily equal in length throughout. In order to assist in the nesting features, I prefer that the sides be rounded at 14, as shown in Figs.

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1 and 2, so that a smoothly contoured surface is formed upwardly at the sides from the bottom 13.

In the form shown, four of the sides designated as 15 are alternately spaced with four sides designated as 16. Each of the sides 15 is in spaced parallel relation with an opposed side and a handle member 17 is mounted adjacent the periphery of the weighted base 10 in association with each of the sides 15. The handle member is preferably formed in a loop with the lower ends 18 being secured to the upper surface 12 of base 10. The upper terminus of each of the handle members 17 has a horizontal hand hold and fulcrum member 19, each of which lies in the same horizontal plane throughout the entire structure of the base, as shown in Fig. 1. The corners 20 of each handle 17 are spaced from a corner 20 of the adjacent hand hold 19 at a distance not greater than the length of the hand hold and fulcrum member 19 and preferably slightly less. The handles 17 may be formed of metal rod so as to provide the necessary strength for the purpose set forth. The handles are generally angulated upwardly and outwardly to conform with the curvature 14 at the periphery of the weighted base.

Medially of the upper surface 12 of the base 10 is provided socket means 21 for receiving and holding in upstanding relation the post 11. The socket means 21 is shown more clearly in Fig. 2 and comprises an opening 22 vertically formed in the base 10 so as to extend substantially through the base, as shown. A stop plate 23 may be positioned at bottom 13 so as to underlie the opening if it is drilled completely through the base. Stop plate 23 may be threadably secured to the underside of the base by such means as screws 24. Biasing means such as compression spring 25 is positioned in the opening 22, as shown in Fig. 2. A pin catch and release plate 26 is secured to the upper surface 12 of base 10 and is apertured in alignment with the opening 22 so as to receive the post 11. The catch plate 26 has downwardly off-set outer flanges 27 which are fastened to the surface 12, and the plate is provided with a pair of outwardly extending slots or openings 28. At right angles to the slots or openings 28 are a pair of upwardly recessed grooves 29, as shown in Fig. 2.

The post 11 is preferably formed of a tubular body portion 30 having a stub shaft 31 secured in the lower end thereof by such means as rivets 32. A rigid cross pin 33 is secured through the stub shaft 30 so that the outer ends will pass through the slots 28 and, upon being turned a quarter of a turn, will be biased upwardly into retained relation with catch plate 26 at the grooves 29, as shown in Figs. 1, 2 and 3. The outer end of the stub shaft 31 will, of course, be in compressive relationship with the spring 25 so that the entire post 11 will be biased upwardly when in mounted position, as shown in Fig. 2.

The upper end of the post may be provided with bayonet-type slot means 34 which is adapted to receive a shaft 35 having bayonet-type pins 36 for cooperation therewith. The shaft 35 fits snugly into the upper end of tubular body 30 and projects upwardly to terminate in a slotted end 37. A cross arm 38 may be mounted within the slot 37 and secured with relation to the shaft 35 by such means as rivets 39. The cross arm 35 provides means for writing instructions or warnings.

A sleeve 40 is slidably mounted on the tubular body 30 of shaft 11, as shown in Figs. 1 and 2. A pair of pivotal arms 41 are mounted to a common pivot 42 so that they may be extended to the position shown in full line in Fig. 1. A pivotal link 43 is mounted to each arm 41 at the pivot pin 44 and the inner ends of the pivotal links 43 are pivotally secured together at the pin 45. An extension 46 of sleeve 40 is also secured with pin 45, as shown in Figs. 1 and 2.

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In the use and operation of my portable signal standard, the device may be set up as shown in Figs. 1 and 2 with the post 11 secured to the socket means and the sleeve 40 in downward position so as to cause the links 43 to extend to their outermost positions and thereby extend the signal arms 41 to the full line position of Fig. 1. The appropriate cross arm 38 is mounted at the top of the post to indicate the purpose of the signal device. If, through high winds or accidental collision, the signal standard should be tilted in any direction, the hand hold and fulcrum member 19 of the handles 17 will come into contact with a supporting surface and, since the center of gravity of the device is arranged so that it lies below the fulcrum point in normal horizontal relation, the device will be incapable of permanent tipping and will, therefore, right itself. In the event the direction of tilt is such as to rock the weighted base about a surface 14 which will place an edge 16 in contact with the ground, an adjacent pair of corners 20 will provide cooperative fulcrum points and will function in exactly the same manner to cause the standard to right itself when the tilting force is removed.

When it is desired to transport or store the devices, the post 11 is pushed downwardly against the force of compression spring 25 and pins 29 are aligned with openings 28 whereupon the entire post can be removed from each weighted base. The signal arms 41 are then collapsed to the dotted line position of Fig. 1 by merely sliding upwardly the sleeve 40 and the cross arm 38 may be removed, if desired. The posts 11 will, therefore, be capable of combining with a large number of similar posts to occupy a relatively small space during such storage or transportation.

Similarly, the bases 10, when separated from the post, may be nested, as shown in Fig. 4, with the handles 17 in registry and a plurality of the hand hold and fulcrum members 19 lying in close separation. By grasping several of the hand holds, a plurality of the weighted members can be lifted and carried simultaneously.

The portable signal standard is particularly adapted for highway use where a large number of signals must be rapidly set up and located at spaced intervals. It is particularly advantageous to have a truck of small capacity for such purpose, since the signal standards are

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often associated with detours and other roads which are almost impassable. The compact arrangement of a large number of signal standards makes it possible to transport these signals to the individual locations where they can be rapidly assembled and set up as they are located. Conversely, the signals may be dismantled and collapsed at the time they are picked up and can then be compactly nested and piled into a small truck with little effort.

It will, of course, be understood that various changes may be made in the form, details, arrangement and proportion of the parts without departing from the scope of my invention.

What I claim is:

1. A portable signal standard comprising, a generally flat weighted base, looped handle members secured peripherally of the base, each of said handle members lying in spaced relation with its neighboring handle member and terminating upwardly in a combined horizontal hand hold and fulcrum, socket means disposed medially in the upper surface of the flat base, and a post removably positioned in upstanding relation in the socket means, a pair of signal cross arms pivotally secured at a common pivot point medially of the ends of said post, a sleeve member mounted for longitudinal reciprocation on the post, and pivot linkages secured to each of said arms and said sleeve whereby sliding movement of said sleeve in one direction will cause said cross arms to diverge and movement in the other direction will cause them to converge.

2. The subject matter set forth in claim 1, wherein the flat weighted base has a polygonal outline and a looped handle member is secured at each polygonal edge.

3. The subject matter set forth in claim 1, wherein the base is curved upwardly and outwardly at its bottom and the looped handle members are angled outwardly to permit nesting of a plurality of base members when their respective posts are removed.

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