United States Patent [19]

Ross

[11] **3,847,335**

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[54] **FOLDABLE PORTABLE SIGN STANDARD**

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[52] **U.S. Cl.** ..... **248/166,** 40/125 H
[51] **Int. Cl.** **F16m 11/38**
[58] **Field of Search** ..... 248/165, 166, 170, 171, 248/122, 488, 460, 463; 40/125 H, 125 N

[56] **References Cited**

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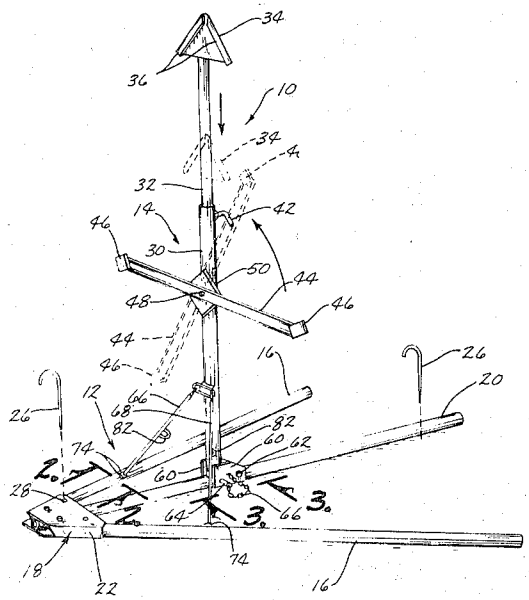
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Primary Examiner—Marion Parsons, Jr.
Attorney, Agent, or Firm—Zarley, McKee, Thomte & Voorhees

[57] **ABSTRACT**

A sign standard includes a trio of legs pivotally interconnected at one end and spaced no more than 90° apart. An upstanding post is pivotally connected to the center leg and includes a pivotal cross arm. The post is comprised of telescopic sections with the top section having a cap cooperating with the cross arm to hold a sign. A pair of pivotal braces are connected to the post and their outer ends are received in openings in the outer legs. One of the braces is longer than the other such that when the post is pivoted to its upstanding position the one brace is received in the leg opening first followed by the engagement of the other brace in its leg opening. In a collapsed condition the post is pivoted down and the outer legs are pivoted in such that all elements are parallel. A pin is provided on a chain connected to the post and when the post is in an upstanding position the pin extends through aligned apertures in the post and the center leg and when the standard is collapsed the chain extends around and under the legs and through the post. The braces each carry downwardly facing apertured ears which are positioned between apertured plates on the post and the pin extends through the plates and the ears when the standard is collapsed.

10 Claims, 7 Drawing Figures



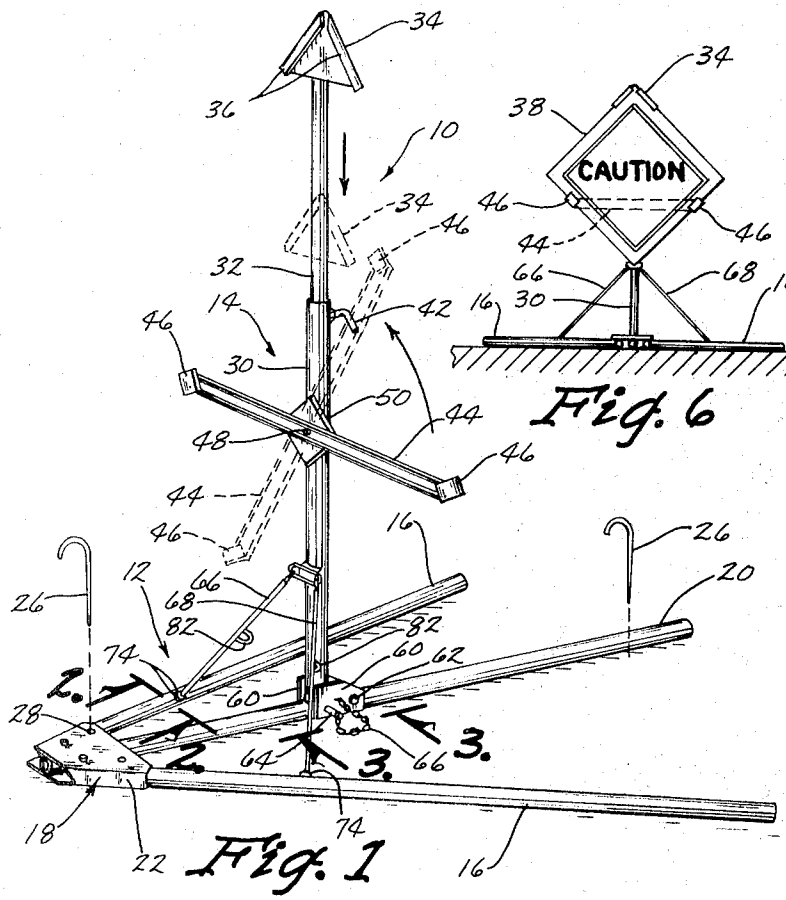


Fig. 1

Fig. 6

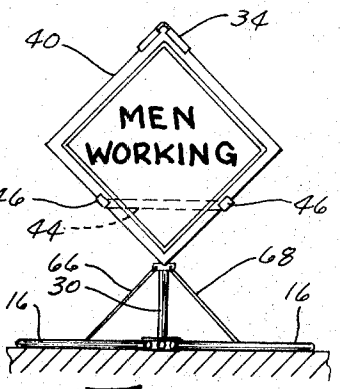


Fig. 7

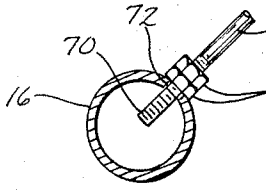


Fig. 2

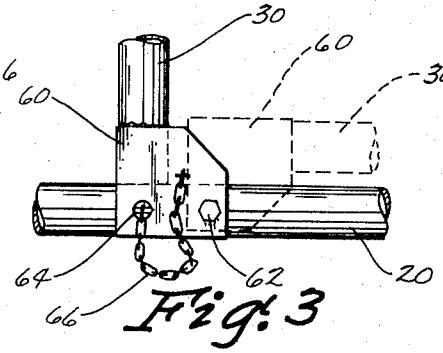


Fig. 3

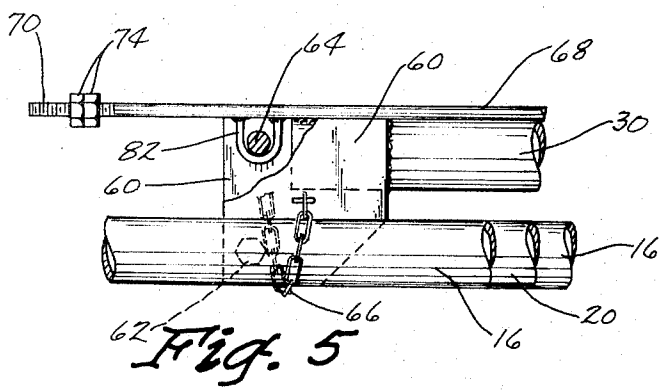


Fig. 5

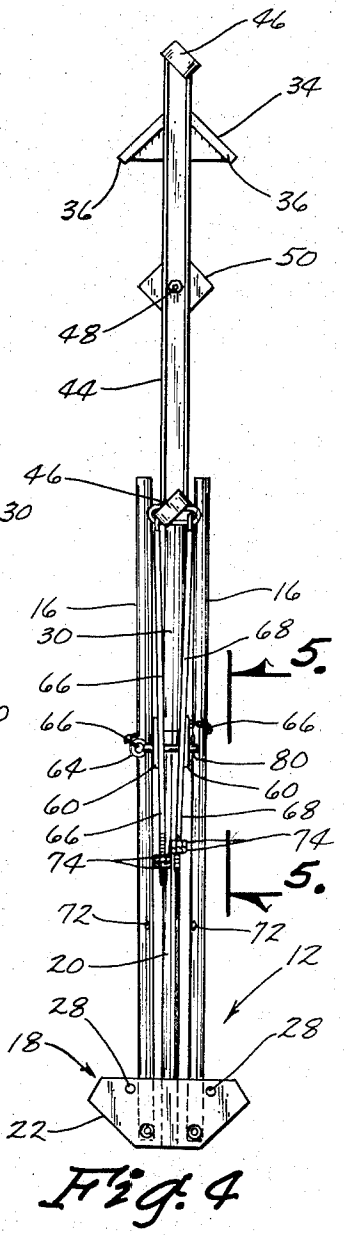


Fig. 4

FOLDABLE PORTABLE SIGN STANDARD

Work on city streets by utility firms, street repair crews and telephone workmen require the use of a warning sign to advise motorists of the work project. These warning signs need to be easily assembled for use and disassembled for storage. They should be light weight and have the ability to withstand reasonable winds. Also, the size of the signs used vary and thus the sign standard should adapt to these different sizes.

The sign standard of this invention is capable of being quickly assembled and disassembled and when disassembled occupies a small space and all component parts are conveniently interconnected and tied together by a locking chain. The sign standard will adapt to signs of different sizes and needs to be staked down only in the most severe weather conditions.

The base of the sign includes three tubular members pivoted at one end and limited by a hinge against outward pivotal movement. The upright post on the center member is permanently hinged to the center post and includes braces having outer ends received in openings in the outer post. The post is telescopic and includes a pivotal cross arm with a cooperating cap member at the top of the post. A pin is carried on the center base member by a chain which locks the post in an upright position and also when the chain is extended around the legs of the base and the post when in its lowered position serves to hold the components in a collapsed storage condition.

This invention consists in the construction, arrangements and combination of various parts of the device, whereby the objects contemplated are attained as hereinafter more fully set forth, specifically pointed out in the claims, and illustrated in the accompanying drawings in which:

FIG. **1** is a perspective of the sign standard of this invention;

FIG. **2** is a cross sectional view taken along line **2** — **2** in FIG. **1**;

FIG. **3** is a cross sectional veiw taken along line **3** — **3** in FIG. **1**;

FIG. **4** is a top plan view when the sign is in its stored condition;

FIG. **5** is a cross sectional view taken along line **5** — **5** in FIG. **4**; and

FIGS. **6** and **7** are front elevational views showing the sign standard being used with signs of different sizes.

The portable sign standard of this invention is referred to generally in FIG. **1** by the reference numeral **10** and includes a base structure **12** and a hinged post structure **14.**

The base structure **12** includes outer legs **16** hinged by one piece nose housing **18** to a center leg **20.** The legs **16** are limited in their outward pivotal movement by side walls **22** of the nose housing **18.** J-shaped stake pins **26** are provided for holding the base flat against the ground in severe weather conditions. The rear stake pin **26** is adapted to engage the center leg while the forward stake is received in an opening **28** in the nose housing **18.**

The upstanding post structure **14** includes telescopic tubular members **30** and **32** with a pyramid-shaped cap element **34** at the top of the tubular member **32.** The cap element includes outwardly extending flanges **36** for engagement with the top corner edge of a square sign **38,** as seen in FIG. **6** or sign **40** in FIG. **7.** A hand

setscrew **42** is provided for selectively locking the telescopic sections at the desired elevation for the sign being supported. The length of the two sections are such that when in their contracted condition the bottom end of the top section **32** will hit the base structure before the cap **36** is capable of pinching the operator's fingers against the top end of the lower section **30.**

A pivotal cross arm **44** is provided on the lower section **30** and includes flange portions **46** at the outer ends thereof for engagement with the bottom side edges of the signs **38** and **40,** as seen in FIGS. **6** and **7.** The arm **44** is pivoted to the lower post section **30** by a pin **48** extending through a bearing plate **50** carried on the post **30.**

The lower end of the lower post section **30** includes a pair of pivot plates **60** which extend along the sides of the center base leg **20** and a pin **62** pivots the plates and post to the center leg **20.** A locking pin **64** is carried on a chain **66** connected to one side plate and a locking pin **64** is adapted to extend through the center leg **20** and the pivot plates when holes in each are in alignment when the post is in its upstanding position as seen in FIG. **1.** In this position the lower end of the post is bearing against the top surface of the center leg **20.**

When pivoting the post to its upright position a pair of brace elements **66** and **68** are received in the outer tubular leg **16.** The brace element **66** is longer than the corresponding brace element **68** on the opposite side and thus its outer end **70** is received in the opening **72** in the leg **16** first followed by the base element **68** being received in its opening in the opposite leg **16.** Adjustable nuts **74** are provided on the threaded ends of the brace elements to vary the position of the upright post.

When the sign standard is to be knocked down and stored it is merely necessary to pull the pin **66** locked in place by a cotter key **80,** as seen in FIG. **4,** thus allowing the post to pivot away from the nose housing **18** and flat against the center leg **20.** At the same time the brace elements **66** and **68** fold flat against the center post and the outrigger base leg **16** pivots inwardly flat against the center leg **20,** as seen in FIG. **4.** The aligned openings in the pivot plate **60,** as seen in FIG. **5,** are now above the center leg **20** and ears **82** on the brace element **68** are now in alignment with the holes in the pivot plates such that the chain **66** carrying the locking pin **64** extends out over the one leg **16** and down under the three legs back up over the opposite leg **16** whereby the pin **64** extends through the pivot plates **60** and the apertured ears **82** positioned between the two pivot plates thereby locking all component parts into a compact storable package. The telescopic sections **30** and **32** are contracted by operation of the hand setscrew **42** and, of course, the cross arm **44** is pivoted to its position parallel with the upstanding post. Assembly of the sign is accomplished by following the procedure in reverse.

I claim:

1. A sign standard comprising, a base including a trio of legs spaced less than ninety degrees apart in an open position and adapted to engage a support surface along their entire length, said legs being pivotally interconnected at one end and adapted to be pivoted together to a closed position wherein said legs extend in parallel engaging relationship to each other,

an upstanding post pivotally supported on said center leg and said post being adapted to pivot to a lowered position parallel to said trio of legs, and

a pair of support braces extend from said post to detachable engagement with each of said outer legs when said post is in its upstanding position and said braces pivot to a position parallel with said post when said post is in a lowered position.

2. The structure of claim **1** wherein said pivoted connection between said legs includs stop means for limiting the outward pivotal movement of said outer legs relative to said center leg.

3. The structure of claim **1** wherein the outer ends of said braces are received in openings formed in said legs and one of said braces is larger than the other brace whereby when said post is pivoted for positioning said braces outer ends in said openings said one brace will enter said opening first followed by said second shorter brace entering its opening.

4. The structure of claim **1** wherein said upstanding post includes a cross arm pivotal between horizontal and vertical positions and said post is further defined as being telescopically extendable to adjust to signs of different sizes.

5. The structure of claim **1** wherein a pin is provided on a flexible element connected to said post and when said post is in an upright position openings in said post and center leg are aligned to receive said pin and lock said post in an upstanding position.

6. The structure of claim **5** wherein when said post is in a lowered position and said legs are in a closed position and said flexible element is adapted to extend under and around said legs and into said opening in said post, said opening in said post being positioned above said legs as a result of said post being pivoted to its lowered position.

7. The structure of claim **6** wherein said braces are further defined as having apertured ears positioned to be aligned with said opening in said post when said post is in said lowered position and said pin extends through said apertured ears to lock said braces, post and legs against relative movement.

8. The structure of claim **4** wherein said post is further defined as including a cap at its upper end and said post includes an upper section telescopically received in a lower section, and said sections have relative lengths such that said upper section engages the bottom of said lower section before said cap engages the upper end of said lower section when said sections are in their retracted position.

9. The structure of claim **7** wherein said post having said opening is further defined by said post having apertured plates on opposite sides thereof and said apertures being positioned horizontally away from said post and in alignment with the opening in said center leg when said post is in said raised position to receive said pin and when said post is in said lowered position said apertured ears on said braces are positioned between said apertured plates and said pin extends through said plates and ears.

10. The structure of claim **1** wherein said trio of legs and said post are formed from tubular material.

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