

[54] **CHANGEABLE SIGN**

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[21] Appl. No.: **71,517**

[52] U.S. Cl. .... **40/125 R, 40/145 R**

[51] Int. Cl. .... **G09f 7/10**

[58] Field of Search ..... **40/125, 145, 125 H, 125 K**

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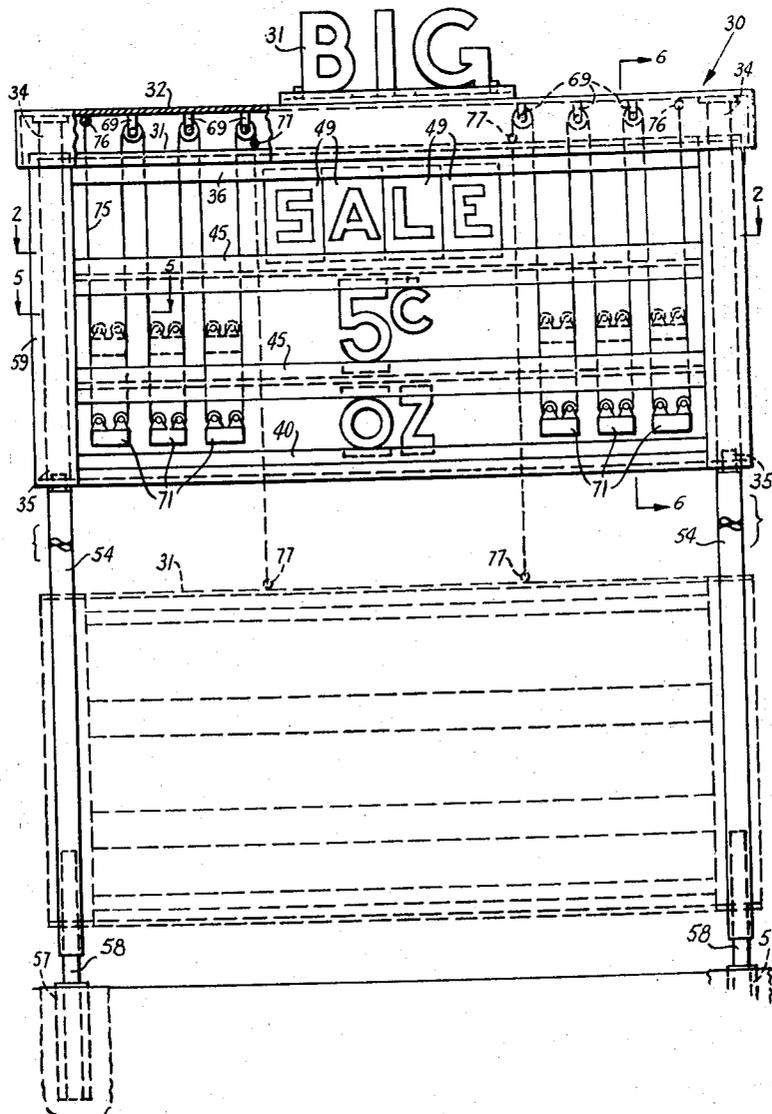
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[57] **ABSTRACT**

A changeable sign in which the letter panels form the background of the sign as well as carrying the indicia. The letters carry horizontal tongues on their upper and lower edges which fit into grooves locking the letters therein. The framework of the changeable sign is mounted for vertical movement so that it may be lowered to the ground for changing the letters. End caps lock the letters in their groove support to prevent pilferage. Moveable guide poles are used to guide the framework as it is moved vertically to prevent damage to the sign and injury to the operator. Counter weights are used to support the weight of the sign through a system of pulleys so that the sign can be easily moved up and down as required.

**8 Claims, 25 Drawing Figures**



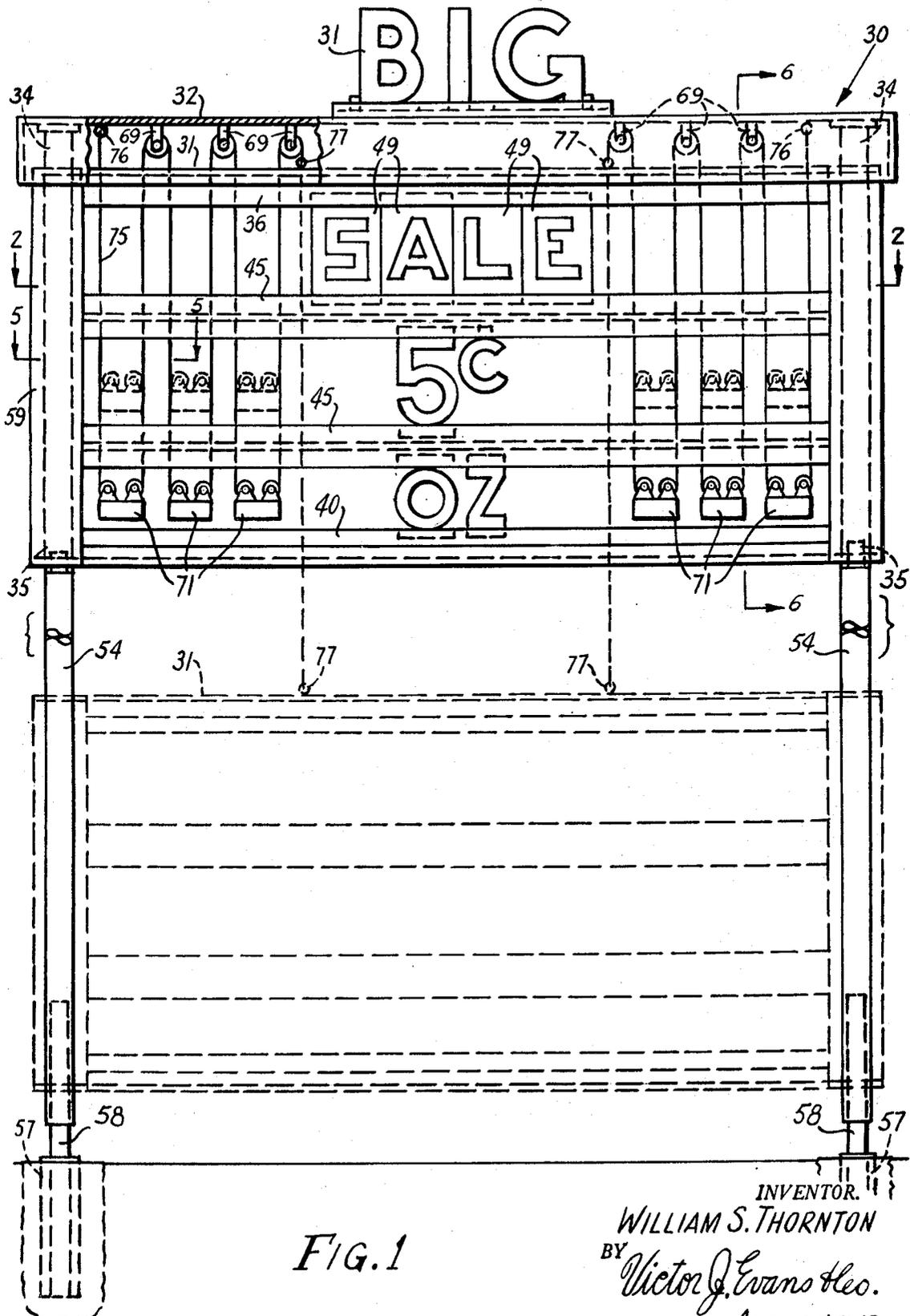


FIG. 1

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FIG. 2

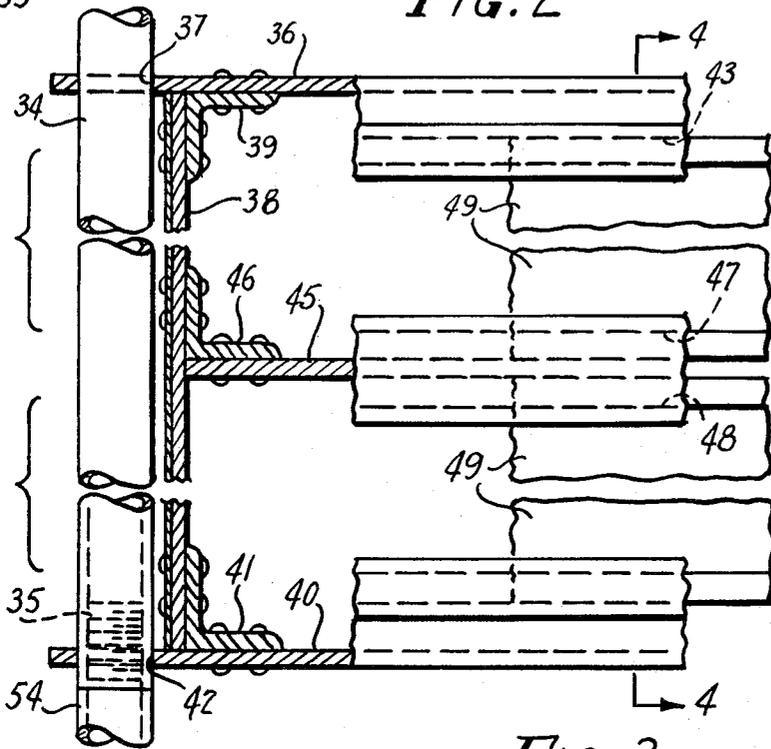


FIG. 3

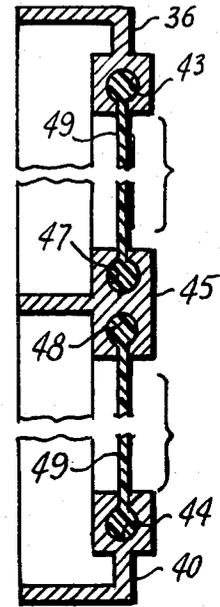


FIG. 4

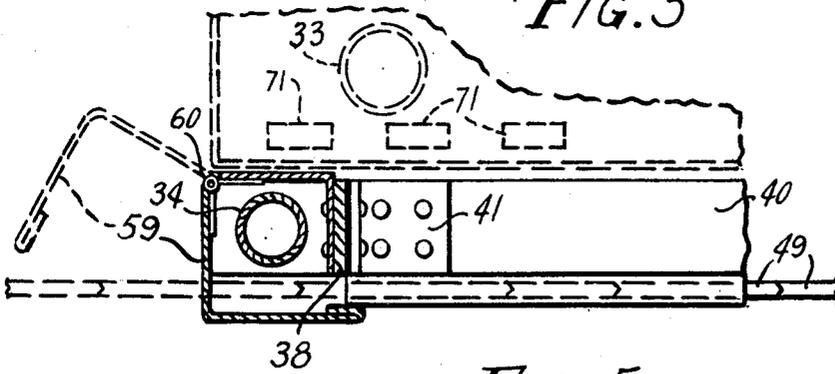


FIG. 5

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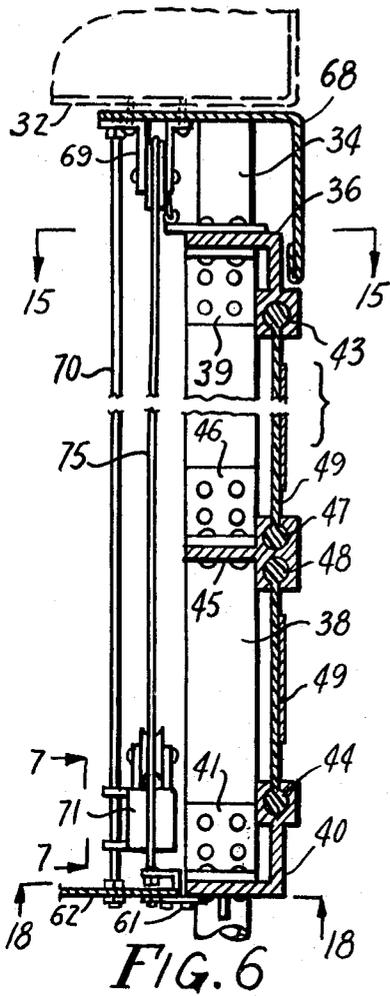


FIG. 6

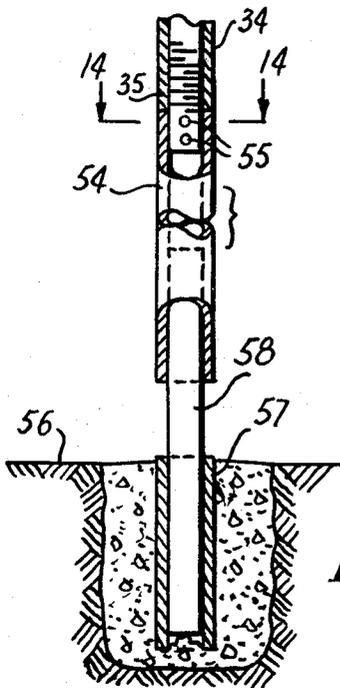


FIG. 13

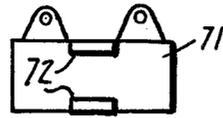


FIG. 7

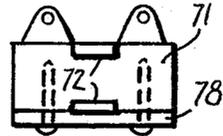


FIG. 9

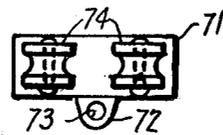


FIG. 8

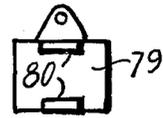


FIG. 10

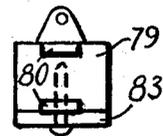


FIG. 12

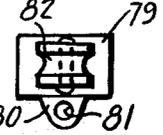


FIG. 11

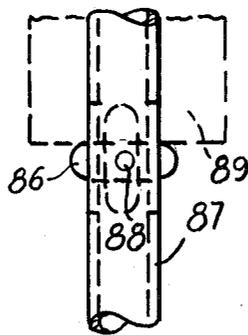


FIG. 23

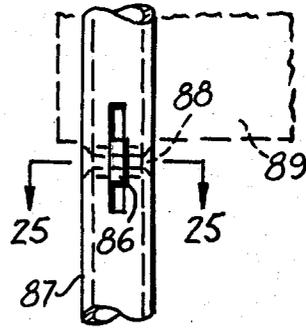


FIG. 24



FIG. 14



FIG. 25

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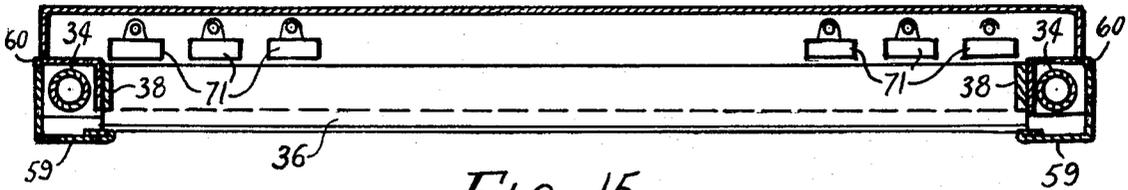


FIG. 15

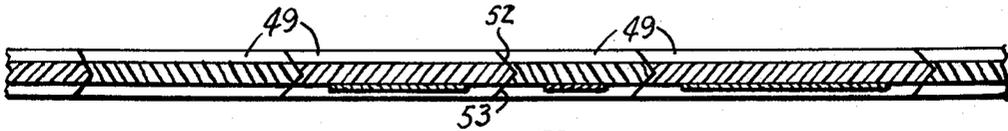


FIG. 16

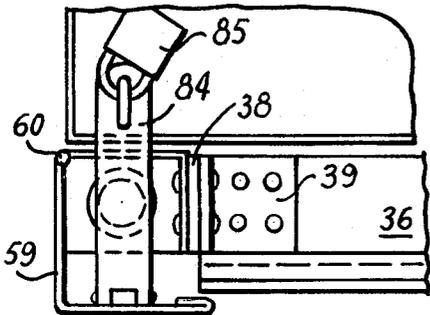


FIG. 22

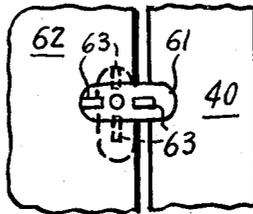


FIG. 19



FIG. 17

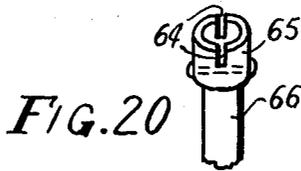


FIG. 20

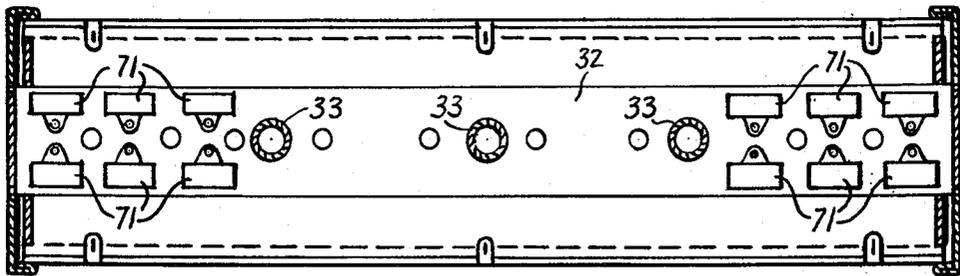


FIG. 18

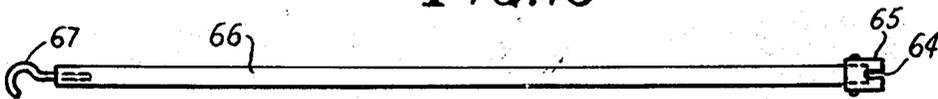


FIG. 21

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## CHANGEABLE SIGN

## BACKGROUND OF THE INVENTION

## 1. Field of the Invention

The present invention relates to high level signs of the type used in shopping centers having a changeable letter portion forming a part thereof.

## 2. Summary of the Invention

The present invention is an attachment for a high level sign having fixed indicia to provide a changeable letter sign which can be raised and lowered to change the letters. The letter panels and blank panels are each provided with tongues on their upper and lower edges which engage in grooves extending across the sign. The tongue grooves interlock so as to prevent the panels from being removed except at each end of the grooves. The letter panels form the background of the sign and have indicia on the front surface thereof. The sign is raised and lowered on removeable guide poles to prevent wind damage to the sign and injury to the operator. Counter weights operating through a system of pulleys balance the weight of the sign so that it is easily raised and lowered.

The primary object of the invention is to provide an overhead changeable letter sign which can be easily lowered to the ground for changing the letters and which has the letter panels locked therein.

Other objects and advantages will become apparent in the following specification when considered in the light of the attached drawings.

## BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a front elevation of the invention;

FIG. 2 is a horizontal sectional view taken on the line 2—2 of FIG. 1 looking in the direction of the arrows;

FIG. 3 is an enlarged fragmentary vertical sectional view of the framework of the sign shown partially broken away and in section for convenience of illustration;

FIG. 4 is a fragmentary vertical sectional view taken along the line 4—4 of FIG. 3 looking in the direction of the arrows;

FIG. 5 is an enlarged fragmentary horizontal sectional view taken along the line 5—5 of FIG. 1 looking in the direction of the arrows, with parts broken away for convenience of illustration;

FIG. 6 is an enlarged fragmentary vertical sectional view taken on the line 6—6 of FIG. 1 looking in the direction of the arrows, with parts broken away for convenience of illustration;

FIG. 7 is a front elevation of one of the double pulley counter weights;

FIG. 8 is a plan view of the counter weight illustrated in FIG. 7;

FIG. 9 is a view similar to FIG. 7 illustrating the counter weight with additional weight attached thereto;

FIG. 10 is a front elevation of a single pulley counter weight;

FIG. 11 is a top plan view of the counter weight of FIG. 10;

FIG. 12 is a view similar to FIG. 10 illustrating additional weight attached to the counter weight;

FIG. 13 is a detail view shown partially in section and partially broken away for convenience of illustration of the removeable guide pole;

FIG. 14 is a horizontal sectional view taken along the line 14—14 of FIG. 13 looking in the direction of the arrows;

FIG. 15 is a horizontal sectional view taken along the line 15—15 of FIG. 6 looking in the direction of the arrows;

FIG. 16 is an enlarged fragmentary horizontal sectional view taken through the letter panels illustrating the interfitting relationship thereof;

FIG. 17 is an end elevation of one of the letter panels;

FIG. 18 is a horizontal sectional view of the complete sign structure taken on the line 18—18 of FIG. 6 looking in the direction of the arrows;

FIG. 19 is a bottom plan view of the retaining latch for supporting the sign frame;

FIG. 20 is a fragmentary enlarged perspective view of the latch operating rod;

FIG. 21 is an elevational view of the operator rod having a hook on one end and a latch operator slot on the opposite end; FIG. 22 is a fragmentary top plan view of a locking system used with the invention;

FIG. 23 is a fragmentary front elevation of a pivoted latch bar;

FIG. 24 is a side elevation of the structure illustrated in FIG. 23; and

FIG. 25 is a horizontal sectional view taken along the line 25—25 of FIG. 24 looking in the direction of the arrows.

## DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring now to the drawings in detail wherein like reference characters indicate like parts throughout the several figures the reference numeral 30 indicates generally a sign constructed in accordance with the invention.

The sign 30 includes a fixed sign 31 mounted on a horizontal base 32 which is fixedly secured to a plurality of posts 33 with the base 32 elevated substantial distance above the ground. A pair of spaced apart parallel guide pipes 34 are secured to the base 32 and depend therefrom terminating in an internally threaded lower end 35 which is spaced a substantial distance above the ground.

An upper angle bar 36 extends longitudinally of the sign 30 and has vertical bores 37 in its opposite ends which slidably engage over the pipe 34. A pair of upright frame members 38 are secured to the angle bar 36 by means of angle brackets 39. The frame bars 38 extend vertically parallel to the pipe 34 and closely adjacent thereto. A lower angle bar 40 coextensive with the angle bar 36 and spaced therebelow is rigidly secured to the lower ends of the frame bars 38 by angle brackets 41. The angle bar 40 has a vertical bore 42 adjacent its outer end through which the guide pipe 34 extends.

The angle bar 36 has a transversely extending keyhole groove 43 extending longitudinally on the underside thereof and the angle bar 40 has a keyhole groove 44 opening through the upper side thereof and extending longitudinally therealong.

A dual groove bar 45 extends parallel to the angle bars 36, 40 intermediate thereof and is secured to the frame bars 38 at its opposite ends by means of angle brackets 46. The dual groove bar 45 has a keyhole groove 47 opening through the upper face thereof and arranged in opposed relation to the keyhole groove 43. A keyhole groove 48 opens through the lower face of the dual groove bar 45 in opposed relation to the keyhole groove 44.

A generally rectangular letter panel 49 is provided with a tongue 50 along its upper edge and a tongue 51 along its lower edge. The tongues 50, 51 are adapted to slide in the keyhole grooves 43, 47 or 48, 44 respectively to mount the letter panels 49 in indicia displaying position. The letter panels 49 are each formed with a V shaped tongue 52 on one vertical edge and a V shaped groove 53 on the opposite vertical edge so that the letter panels 49 interfit along their abutting vertical edges as can be clearly seen in FIG. 16.

A removeable guide post 54 has a reduced diameter externally threaded extension 55 secured in its upper end. The extension 55 is adapted to be threaded into the threaded end 35 of the pipe 34 with the guide post 54 extending to a point adjacent to but spaced above the ground 56. A socket 57 is mounted in the ground 56 at a level to permit lawn mowers and the like to roll thereover without damage. A coupling pin 58 is slidably mounted in the post 54 at the lower end thereof and is adapted to engage in the socket 57 as can be seen in FIG. 13 to lock the guide post 54 against movement away from alignment with the socket 57. In securing the post 54 in position the pin 58 is raised and held in raised position while the extension 55 is threaded into the threaded lower end 35 of the pipe 34, then the pin 58 is dropped into the socket 57 to complete the connection. With the guide post 54 in position the changeable sign 30 can be lowered to the ground by permitting the bores 37, 42 of the angle bars 36, 40 to slide downwardly over the guide pipe 34 and the guide post 54.

Vertical end covers 59 are secured on a hinge 60 at each end of the sign 30 extending around the guide pipes 34. The covers 59 may be swung back to the dotted line position as illustrated in FIG. 5 to permit the letter panels 49 to be slid out of the sign 30 when changing the message thereon.

A rotary latch 61 is mounted on a horizontal plate 62 forming part of the fixed sign 31. The latch 61 is adapted to rotate to a position underlying the angle bar 40 to support the sign 30 in its raised position. A pair of upstanding ears 63 are formed on the latch bar 61 for engagement by a pair of slots 64 formed in a section of pipe 65 secured to an operating pole 66. The operating pole 66 has a hook 67 secured to its opposite ends. An upper horizontal cover 68 is secured to the base 32 and is stationary thereon. A plurality of pulleys 69 are secured in spaced apart relation to the base 32. A plurality of vertical guide rods 70 extend from the base 32 to the plate 62 and are secured thereto. A counter weight 71 has a pair of ears 72 rigidly secured thereto and having vertical bores 73 formed therein. The counter weight 71 are mounted with the rods 70 extending through the bores 73 so that the counter weights 71 can move vertically thereon. A pair of pulleys 74 are journaled on the counter weights 71 in spaced apart relation and a cable 75 is trained over a plurality of the counter weights 71 and the pulley 69. One end of the cable 75 is secured at 76 to the base 32 and the opposite end is secured to the upper angle bar 36 at 77. From FIG. 1 it can be seen as the sign 30 is lowered the counter weights 71 are raised and conversely as the sign 30 is raised the counter weights 71 are lowered. Extra weight 78 can be detachably secured to the counter weight 71 as required.

For lighter signs a single pulley counter weight 79 may be substituted for the counter weight 71. The counter weight 79 has ears 80 with vertical bores 81 extending therethrough for engagement over the rods 70. A single pulley 82 is journaled to the counter weight 79 for attachment to the cables 75. An additional weight 83 may be detachably secured to the counter weight 79 when required by the weight of the sign.

In FIG. 22 a hasp 84 is shown attached to the side covers 59 and secured by a lock 85 to maintain the side covers 59 in position preventing the letter panels 49 from being removed from the sign 30.

The operating rod 66 is used to hook the bottom of the sign

30 to pull the sign 30 down against the weight of the counter weights 71 when it is desired to change the letter panels 49 thereon. In FIG. 23 through 25 a rotary latch pin 86 is illustrated pivoted to a pipe 87 on a pivot rivet extending therethrough the latch bar 86 supports a member 89 resting thereon.

Having thus described the preferred embodiment of the invention it should be understood that numerous structural modifications and adaptations may be resorted to without departing from the spirit of the invention.

What is claimed is:

1. A changeable sign mounted for vertical reciprocation beneath an overhead sign comprising a pair of upright spaced apart parallel guide pipes depending from and secured to said overhead sign, a sign frame slidably mounted for vertical reciprocation on said guide pipes, removable guide posts secured to the lower ends of said guide pipes and extending downwardly therefrom to the ground, said sign frame being slidable on said guide posts, said sign frame having at least one pair of spaced apart keyhole slots extending longitudinally thereacross and a plurality of letter panels with each of said letter panels having an integral tongue formed on its upper and lower edges for sliding engagement in said slots.

2. A device as claimed in claim 1 wherein each of said letter panels have interfitting vertical edges.

3. A device as claimed in claim 2 wherein said interfitting edges of said letter panels are V shaped.

4. A device as claimed in claim 1 wherein counter weight means are provided on said overhead sign for counter weighting said sign frame.

5. A device as claimed in claim 4 wherein a vertical guide on said overhead sign guides each of said counter weights.

6. A device as claimed in claim 1 wherein a socket is provided in the ground underlying said sign and means are provided on each of said guide posts for engaging in said socket.

7. A device as claimed in claim 1 wherein means are provided on said sign frame for locking said letter panels in said slots against endwise movement therefrom.

8. A device as claimed in claim 1 wherein means are provided on said overhead sign for releasably latching said sign frame in elevated position with respect thereto.

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