

[54] MOUNTING APPARATUS FOR MAIL BOXES
AND THE LIKE

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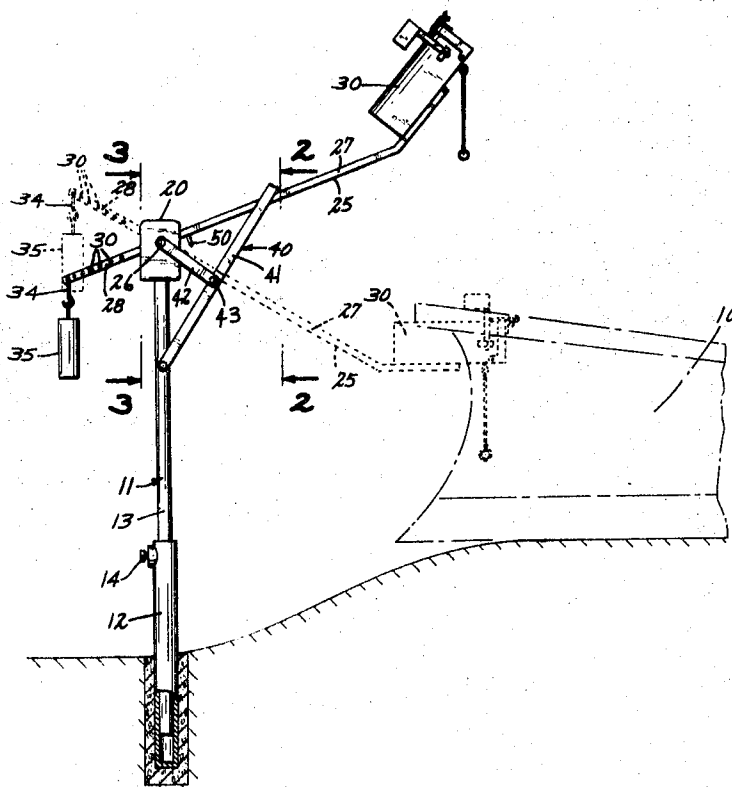
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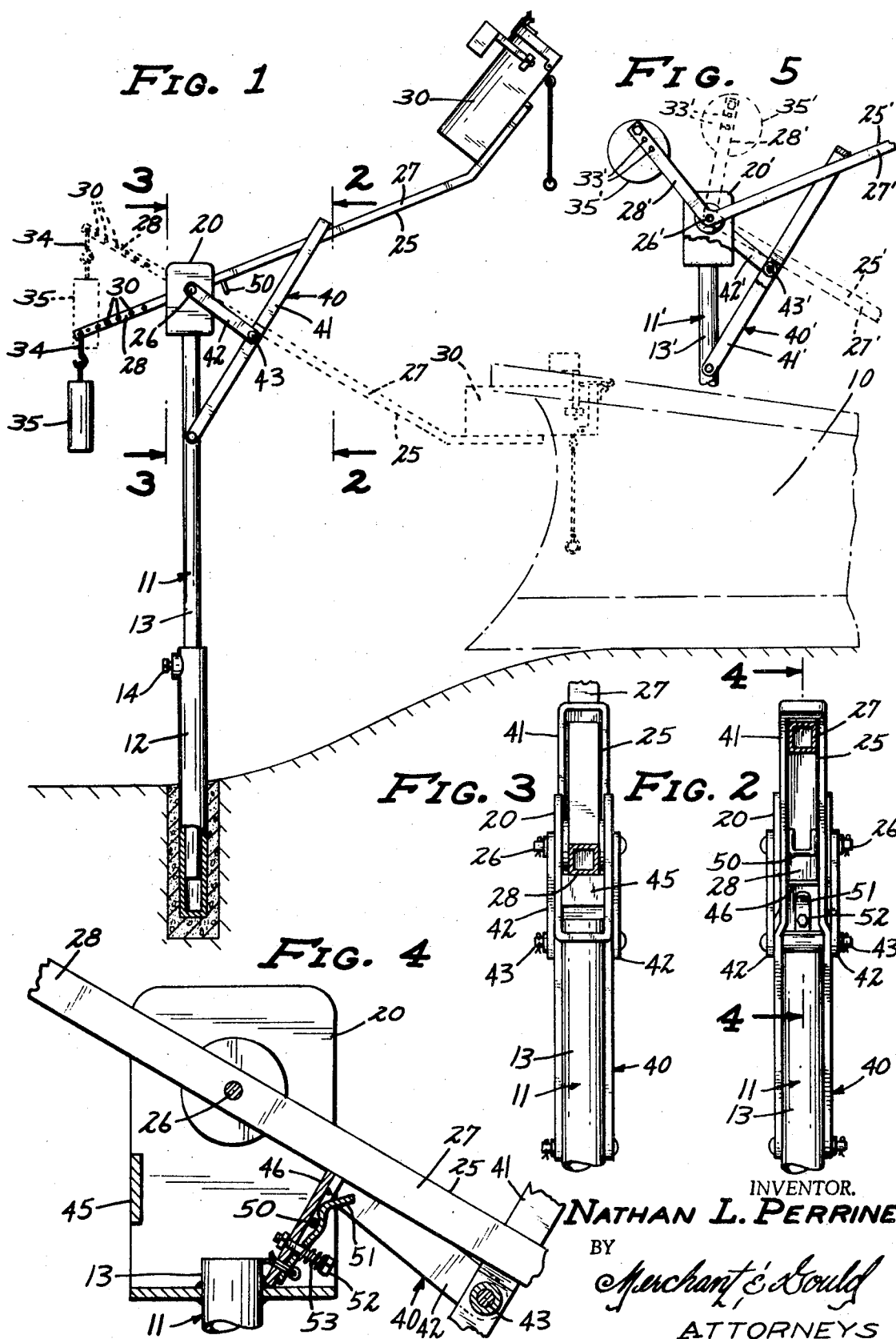
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[57] ABSTRACT

A standard adapted to be fixed in an upright position with an elongated arm pivotally attached to the upper end thereof with ends extending outwardly in two directions from the pivot point. One of said ends adapted to have a mail box and the like attached thereto and the other end having a counter-balancing weight attached thereto. The arm is guided for movements between a first position wherein the mail box is in a mail receiving position and a second position wherein the mail box is rotated substantial distance above the first position. The weight is oriented so that the mail box will remain in either of the two positions.

1 Claim, 5 Drawing Figures





MOUNTING APPARATUS FOR MAIL BOXES AND THE LIKE

BACKGROUND OF THE INVENTION

1. Field of the Invention

Rural mail boxes and the like must be positioned adjacent the road so that they are convenient for mailmen to place mail therein but they must be sufficiently removed from the road so that snowplows and other road maintenance equipment can pass. In general, the standard mail box, which is simply a post embedded in the ground with a box affixed to the upper end thereof, is very inconvenient because snow has a tendency to pile therearound as snowplows dump snow from the road thereon. If the snowplow operator attempts to get close enough to push the snow beyond the mail box he will in many instances strike the box or the post and severely damage the same.

2. Description of the Prior Art:

Several types of mounting apparatus are described in the prior art, all of which are limited to an upright standard fixed in the ground with an elongated pole-like arm pivotally attached to the upper end thereof so as to extend outwardly in opposite directions approximately equal distances. A mail box is affixed to one end and a weight is affixed to the other end, which weight is sufficient to normally pivot the mail box into an upward position. To insert or withdraw mail a chain is pulled to move the mail box downwardly into a generally horizontal position and held until the mail is inserted or withdrawn from the box. Further, many of these mounting apparatus allow pivotal movements about the horizontal axis of the standard so that the chain is not always readily available to the mailman or recipient of the mail. Because the box must be held in the horizontal position it is extremely difficult and requires both hands for the mailman to hold the box down and insert the mail.

SUMMARY OF THE INVENTION

The present invention pertains to mounting apparatus for mail boxes and the like including a standard having an elongated arm pivotally attached adjacent the upper end thereof with one end extending outwardly toward the road and adapted to receive a mail box thereon and the other end extending outwardly away from the road with a weight affixed thereto. Guide means are incorporated in the apparatus to limit pivotal movements of the arm to a generally vertical plane and means are incorporated to maintain the box either in a first horizontal position or a second upwardly pivoted position.

It is an object of the present invention to provide improved mounting apparatus for mail boxes and the like.

It is a further object of the present invention to provide mounting apparatus having upper and lower positive positions for the mail box so that mail can be inserted and retracted conveniently when it is in the lower position and maintenance equipment can pass thereby when it is in the upper position.

These and other objects of this invention will become apparent to those skilled in the art upon consideration of the accompanying specification, claims and drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

Referring to the drawings, wherein like characters indicate like parts throughout the figures:

FIG. 1 is a view in side elevation of the mounting apparatus having a mail box affixed thereto and operatively affixed in the ground, the dotted lines indicating a first position and the full lines indicating a second position, portions thereof broken away and shown in section;

FIG. 2 is an enlarged sectional view as seen from the line 2—2 in FIG. 1;

FIG. 3 is an enlarged sectional view as seen from the line 3—3 in FIG. 1;

FIG. 4 is a view as seen from the line 4—4 in FIG. 2; and

FIG. 5 is a view similar to FIG. 1 illustrating another embodiment, portions thereof removed and portions broken away and shown in section.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring to FIG. 1, a road bed and ditch are illustrated in transverse section and a plow 10 is partially illustrated on the road bed to provide the viewer with approximate size relationships and a view of the operation of the present apparatus. The mounting apparatus includes a standard 11, which is formed of a first tubular member 12 and a second tubular member 13 telescopically engaged within the tubular member 12. A set screw 14, which in this embodiment is illustrated as a hex screw, is engaged in the tubular member 12 so as to press against the tubular member 13 to hold the two members in the desired extended relationship. The tubular member 12 is embedded firmly in the ground so that the standard 11 is oriented approximately vertically with the tubular member 13 extending upwardly from within the tubular member 12.

A generally U-shaped frame 20 is affixed to the upper end of the tubular member 13 by some convenient means, such as welding or the like. In the present embodiment the bight of the frame 20 is affixed to the tubular member 13 so as to be generally horizontal with the legs extending upwardly in parallel spaced-apart relationship therefrom. An elongated arm 25 is positioned between the legs of the frame 20 and a spindle 26 (which may be a bolt or the like) extends through both legs of the frame 20 and the arm 25 so as to pivotally mount the arm 25 for movement about the horizontal axis of the spindle 26. The spindle 26 is engaged through an opening in the mid-portion of the arm 25 so that a substantial portion 27 of the arm 25 extends outwardly from the frame 20 toward the road and a smaller portion 28 extends outwardly from the frame 20 in approximately the opposite direction. A mail box 30, which may be any commercially available mail box, is affixed in any convenient manner to the outer end of the portion 27.

In the embodiment illustrated in FIGS. 1-4, the arm 25 is a generally straight bar, except for a generally upward bend adjacent the outermost end of the portion 27. The mail box 30 is affixed to the bent portion and the frame 20 is oriented so that the portion 27 of the arm 25 must extend outwardly and downwardly therefrom toward the road to position the mail box 30 horizontally at the desired height adjacent the road (as illustrated in dotted lines in FIG. 1). With the mail box

30 and arm 25 in this first position the portion 28 of the arm 25 extends generally upwardly and outwardly from the frame 20 in the opposite direction. The mail box 30 and arm 25 are rotatable vertically upwardly into a second position wherein the portion 27 of the arm 25 extends outwardly and upwardly from the frame 20 so as to position the mail box 30 well above any road maintenance equipment, such as the snowplow 10, and the portion 28 extends downwardly and outwardly in approximately the opposite direction. The portion 28 has a plurality of holes 33 therethrough, one of which has a hook 34 engaged therethrough with a weight 35 attached. The weight 35 is sufficiently large to counterbalance the mail box 30 to maintain it in the upper or second position whenever it is moved into the second position. The additional holes 33 are provided to adjust the weight 35 to provide it with the most desirable torque arm.

Guide means generally designated 40 include a U-shaped bracket 41 engaged over the portion 27 of the arm 25 with the two ends thereof affixed to opposite sides of the tubular member 13 and a pair of struts 42 affixed between a mid-portion of the bracket 41 and the frame 20 to hold the bracket 41 rigidly in position. The bracket 41 serves to guide the rotary movements of the arm 25 and to limit the movements to a generally vertical plane. In the present embodiment, the bight of the bracket 41 serves as a stop for the arm 25 to limit the upward rotary movement thereof and a bolt 43, which is utilized to affix the struts 42 to the bracket 41, has a sleeve thereover positioned between the legs of the bracket 41 to serve as a stop for the arm 25 in the lower position. Referring to FIG. 4, a generally vertically oriented plate 45 is positioned between the legs of the frame 20 to engage the portion 28 of the arm 25 and serve to stop rotation of the arm 25 when it is in the second position. A second plate 46 positioned between the legs of the frame 20 and oriented at an angle to the vertical, engages the portion 27 of the arm 25 to stop rotation thereof in the first position. Either or both of the plate 45 and bight of the bracket 41 may be utilized to limit rotation of the arm 25 upwardly and either or both of the plate 46 and bolt 43 may be utilized to limit rotation of the arm 25 downwardly. While a specific guide means 40 is illustrated in this embodiment, it should be understood that many other types of guide means might be incorporated, including members forming an integral portion of the frame 20.

In the embodiment illustrated in FIGS. 1-4, means are incorporated for positively maintaining the mail box 30 and arm 25 in the first position, which means include a projection or U-shaped member 50 affixed to the underside of the portion 27 of arm 25. A spring clip 51 is affixed to the outer surface of the plate 46 by means of a cotter pin and bolt 52, as illustrated in FIG. 4. The bolt 52 has a compression spring 53 engaged thereover to add additional spring bias to the spring clip 51 so as to bias the clip 51 tightly against the plate 46. The projection 50 is mounted on the portion 27 so that it is received in the spring clip 51 when the arm 25 is rotated downwardly into the first position. When the projection 50 is received in the spring clip 51 the mail box 30 and arm 25 are maintained positively in the first position until the arm 25 is manually rotated upwardly.

Referring to FIG. 5, a second embodiment is illustrated wherein similar parts are designated with similar numbers and a prime is added thereto to indicate a dif-

ferent embodiment. In FIG. 5 an arm 25' is pivotally mounted in a frame 20' at the upper end of a standard 11' and guided in its movements by guide means 40'. The arm 25' has a portion 27' extending outwardly toward the road bed with a mail box at the outer end thereof (not shown) and a portion 28' extending generally in the opposite direction from the frame 20'. In this embodiment the portion 28' of the arm 25' is bent at an angle to the portion 27' so that it lies to the right of the longitudinal axis of the standard 11' when the arm 25' is in the first or lower position (illustrated in dotted lines). When the arm 25' is in the second or upper position (illustrated in solid lines in FIG. 5) the portion 28' lies to the left of the longitudinal axis of the standard 11'. A weight 35' is pivotally attached to the portion 28' through one of a plurality of holes 33'. In this embodiment the weight 35' is eccentrically attached so that it rotates as the arm 25' rotates and positively holds the arm 25' in either of the first or second positions. It should be understood that the portions 28 or 28' and the weights 35 or 35' (in the two embodiments) can be adjusted, as to angle and position, into a variety of embodiments which will operate to positively maintain the arm 25 or 25' in each of the two positions as the arm 25 or 25' is rotated into that position. Thus, while projection 50 and spring clip 51 may be utilized to positively maintain the arm 25 in the first position, the portion 28 of the arm and the weight 35 can be adjusted to provide the same function, if desired.

Thus, improved mounting apparatus for mail boxes and the like is disclosed wherein the mail box can be conveniently attached to the apparatus for movement between a first position placing the mail box at a readily accessible height and a second position placing the mail box well above maintenance equipment and the like so it will not be damaged thereby. Further, the mail box and apparatus are guided in their movements so that they will always be readily available to the owner or mailman and the apparatus positively maintains the mail box in either the first or second position so that in the first position mail can be easily inserted and retracted and in the second position there is little danger of the apparatus accidentally dropping the mail box into maintenance equipment or the like. Further, the present apparatus is simple to manufacture and install and is completely adjustable for a great variety of positions.

While I have shown and described a specific embodiment of this invention, further modifications and improvements will occur to those skilled in the art. I desire it to be understood, therefore, that this invention is not limited to the particular form shown and I intend in the appended claims to cover all modifications which do not depart from the spirit and scope of this invention.

What is claimed is:

1. Mounting apparatus for mail boxes and the like comprising:

- a. a standard adapted to be fixedly mounted in a generally vertical position;
- b. an elongated arm pivotally attached at a mid portion thereof between its opposite ends adjacent the upper end of said standard for pivotal swinging movements in a vertical plane between first and second positions, one end of said arm being adapted to receive a mail box and the like in fixed engagement therewith;

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c. guide means fixedly attached to one of said standard and said arm for limiting the swinging movement of said arm to said vertical plane, between said first and second positions, relative to said standard;

d. weight means affixed to the other end of said arm;

e. said one end of the arm being bent to position a mail box attached thereto in a generally horizontal position with said one end below the horizontal plane of the axis of said pivotal swinging movement of the arm when the arm is in said first position, the mail box and said one end of the arm being positioned above said horizontal plane when the arm is

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in said second position; and

f. the other end of said arm being oriented relative to said standard for automatic movement of said weight means in opposite directions, responsive to swinging movements of said arm between said first and second positions, between a maximum torque position counterbalancing the one end of said arm in the second position to maintain said arm in the second position, and a minimum torque position counterbalanced by the one end of said arm and a mail box attached thereto with said arm in the first position to maintain said arm in the first position.

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