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AUTOMATIC MAIL BOX FLAG

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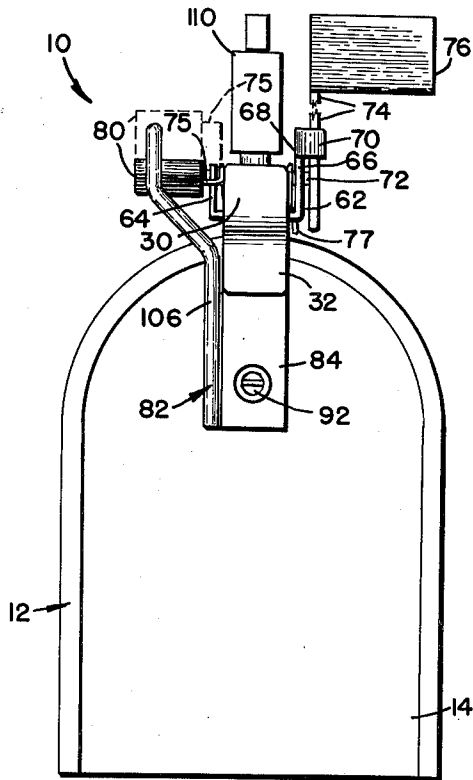


FIG. 1

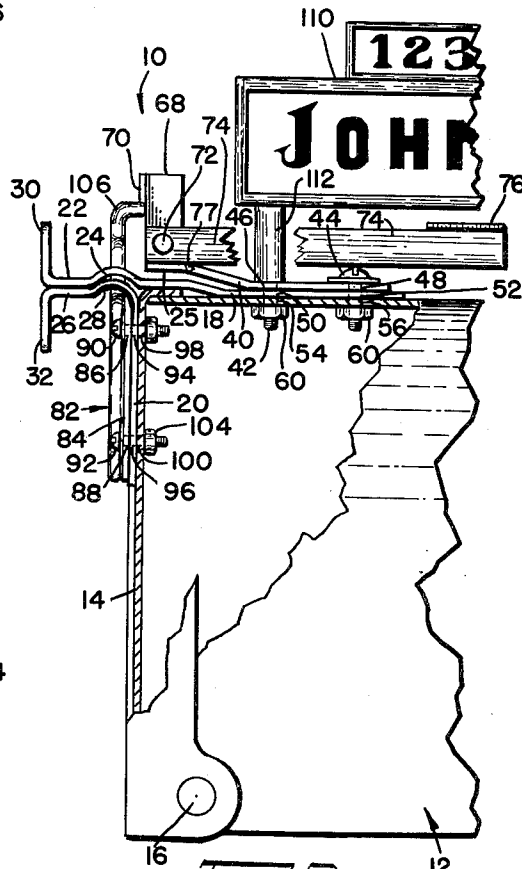
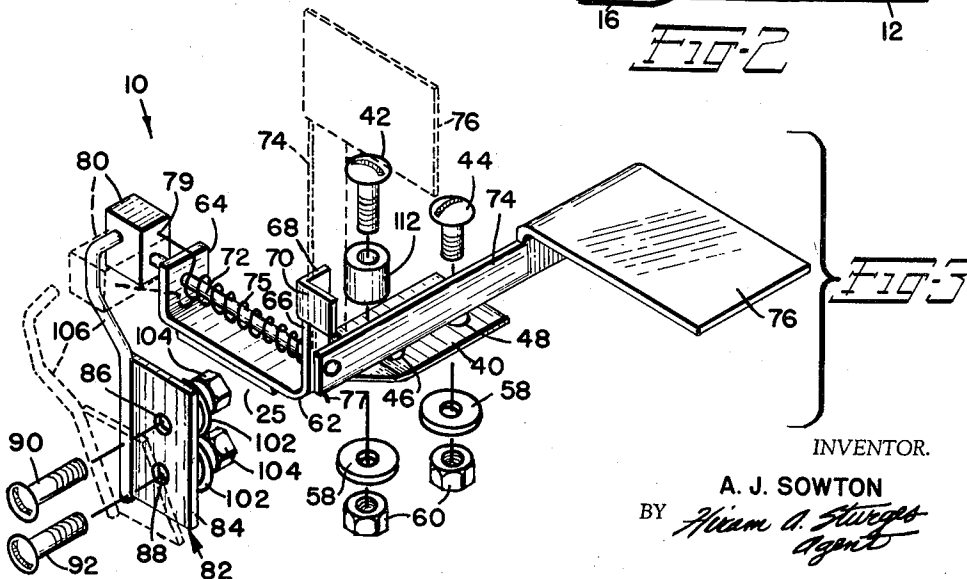


FIG. 2



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AUTOMATIC MAIL BOX FLAG

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1 Claim. (Cl. 232—35)

This invention relates to mail boxes and more particularly to the provision of an automatic flag-raising mechanism which operates in cooperation with the opening of the door of the box.

An object of this invention is to provide a delivered mail signal device which can be more readily attached to mail boxes.

Delivered mail signalling devices of prior art have been attachable to mail boxes only by special drilling of holes. I have found that the public is reluctant to buy a product involving special drilling of holes, sometimes because a drill or bit is not available, and sometimes because of the alignment problems in placing the drill holes in exactly the right place so that the parts fit and rain leakage does not occur.

It is therefore an object of this invention to provide a delivered mail signal, the mounting plates of which have apertures which can be placed in at the factory to exactly fit and register with the openings already extending through the conventional mail box top and door for attachment of the conventional spring latch door members.

A further object is to provide a signal which is so constructed that it does not interfere with the space on the top of the mail box which is usually occupied by an upstanding name and address device or artistic ornament, whereby the delivered mail signal can be attached to the majority of existing mail boxes with a minimum of effort.

More specifically, it is an object to provide a delivered mail signal the flag portion of which can be mounted by suitable means at the latch spring bracket apertures on the longitudinal center line of the top of the box and yet the flag itself is spaced considerably to one side of the longitudinal center line of the top of the box so as not to interfere with name and address devices, and means for preventing said flag arm from pivoting past a preferred upstanding position at the end of its upward travel.

Other and further objects and advantages of the present invention will be apparent from the following detailed description, drawings and claim, the scope of the invention not being limited to the drawings themselves as the drawings are only for the purpose of illustrating a way in which the principles of this invention can be applied.

Other embodiments of the invention utilizing the same or equivalent principles may be used and structural changes may be made as desired by those skilled in the art without departing from the present invention and the purview of the appended claim.

In the drawings:

FIGURE 1 is a front view of a mail box with the automatic flag of this invention attached thereto.

FIGURE 2 is a side view of a forward portion of the box and flag mechanism, with parts broken away for clarity.

FIGURE 3 is a perspective exploded view of the flag mechanism showing the alternate position of certain parts in broken lines.

In the accompanying drawings and in the following specification, the same reference characters are used to designate the same parts and elements throughout, and in which the numeral 10 refers to the invention in its entirety and numeral 12 generally indicates a mail box to which it is attached.

The mail box is of the conventional construction, having a door 14 closing one end. The door 14 opens out-

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wardly and downwardly, being hingedly secured to the box by pins 16 positioned adjacent its lower end.

The door of the box is held in a normally closed position by usual spring latch means comprising straps 18 and 20 secured to the top of the box 12 and door 14 respectively.

The strap 18 secured to the top of the box has a forward end 22 which extends outwardly beyond the end of the box and a downwardly opening recess 24 is formed in the strap adjacent the top of the door 14. The strap 20 is secured to the door in a vertical position and has an extended upper end 26 bent at a right angle at a point adjacent the top of the door and extends outwardly substantially parallel to the outer end 22 of the strap 18.

The extended end 26 of the strap 20 is formed complementally to the recess 24 of the upper strap whereby a raised section 28 thereof engages in the recess 24 thereby maintaining the door 14 in a closed position.

The outer ends of the straps 18 and 20 are bent upwardly and downwardly respectively to provide handles 30 and 32 for facilitating the opening and closing of the door 14. The mail box flag of this invention comprises an elongated anchor plate 40 longitudinally positioned atop the box and over the strap 18. The anchor plate is secured to the box by bolts 42 and 44 which latter extend through spaced apertures 46 and 48 in the plate 40, apertures 50 and 52 in the strap 18 and apertures 54 and 56 in the box 12. The ends of the bolts 42 and 44 are provided with washers 58 and nuts 60.

The anchor plate 40 has an upwardly offset forward end 25 and a U-shaped bracket 62 is secured at the forward end of the plate 40 and disposed transversely thereof. The bracket 62 has upwardly extending legs 64 and 66. The leg 66 has an extended end 68 at the forward side of which is attached a stop member 70 projecting outwardly at a right angle therefrom.

Each of the legs 64 and 66 of the bracket 62 has an aperture therein for rotatably receiving a horizontally disposed shaft 72. The ends of shaft 72 extend beyond the outer surfaces of the respective legs 64 and 66 and an elongated flag standard or supporting member 74 has its lower end fixed to that end of the shaft 72 adjacent the leg 66.

A signal portion or flag 76 is positioned at the upper end of the standard 74. The flag is of substantial size and it will be seen that the flag is disposed at a right angle to the longitudinal axis of the box 12 for ease of viewing from the house.

An elongated block 80 is fixed to the opposite end of the shaft 72. The block 80 has an aperture extending thereto at a point adjacent its lower end which receives the end of the shaft 72. The block 80 is fixed to the shaft by welding or other suitable means. As best seen in FIGURE 3, the block 80 is positioned on the shaft in a manner whereby the longitudinal axis of the block is disposed at a right angle with respect to the longitudinal axis of the flag supporting member 74. When the block is in a vertical position the flag is in a horizontal rest position adjacent the top of the box.

A coiled spring 75 is journaled about the shaft 72 between the legs 64 and 66 and has one end 77 anchored against the bracket 62 and its opposite end is extended and bent outwardly to be received in an aperture 79 in the upper end of the block 80, whereby the flag supporting member 74 and flag 76 is normally urged into an upright position.

A lock bar, generally indicated by the numeral 82, is provided for holding the flag 76 in horizontal position. The lock bar 82 is secured to the door and comprises a vertically disposed base plate 84 having spaced apertures 86 and 88. Bolts 90 and 92 secure the plate 84 to the

door 14 and they also extend through apertures 94 and 96 in the strap 20 and apertures 98 and 100 in the door 14. The bolts 92 and 94 are provided with washers 102 and nuts 104.

A finger 106 is secured to the plate 84 and its upper end extends upwardly and is suitably formed to engage the block 80 at times when the block is in an upright position and the flag is in horizontal position, as shown in FIGURES 2 and 3.

As thus described, it will be seen that the device may be readily assembled on mail boxes in manufacture or may be easily mounted on boxes now in use with minimum effort and tools and by the average homeowner.

The device is applicable to existing mail boxes in that the apertures in the plates 40 and 84 may be spaced to align with the apertures already in the box. Ordinarily the straps 18 and 20 are secured to the box by rivets. In attaching the flag mechanism to the box the rivets may be punched out, whereupon the plates 40 and 84 may be placed in their respective positions over the existing holes and secured by bolts 42, 44, 90 and 92.

It is also desirable to point out that a feature of the described construction is in that the mechanism does not interfere with the placement of name plates atop the box as shown at 110 in FIGURE 2. In this instance the bolt 42 is of sufficient length to extend from the frame of the name plate through a tubular spacer 112 which supports the name plate and the top of the box 12.

In operation, the flag 76 is normally in a horizontal position as shown in full lines in FIGURES 2 and 3, whereby the end of the extended finger 106 of the lock bar 82, secured to the door 14, is in engagement with the block 80, the spring latch of the normally closed door 14 holding the flag 76 in the horizontal position against the tension of the coiled spring 75.

However, upon opening the door 14, the finger 106 disengages the block 80 whereby the coiled spring 75 urges the flag into an upright signalling position, further forward movement of the flag and standard being prevented by the stop member 70, and the several parts would assume positions as indicated in broken lines in FIGURE 3. Closing the door does not affect the signalling position of the flag as the upper end of the block pivots downwardly out of the path of travel of the end of the finger 106. The block 80 acts as a keeper so that when it is engaged by the end of the finger 106, the flag 76 is retained or maintained in a horizontal position against the tension of the coil spring 75. Thus when the door 14 is opened and the end of the finger 106 is disengaged from the block 80, the coil spring 75 will urge the flag 76 into operative or signalling position.

Re-setting the device is accomplished by simply opening the door, manually moving the flag into horizontal position which brings the block into an upright position and upon closing the door the lock bar 82 will be engaged with the block to maintain the flag in horizontal position.

From the foregoing description, it is thought to be obvious that an automatic mail box flag constructed in

accordance with my invention is particularly well adapted for use, by reason of the convenience and facility with which it may be assembled and operated, and it will also be obvious that my invention is susceptible of some change and modification without departing from the principles and spirit thereof, and for this reason I do not wish to be understood as limiting myself to the precise arrangement and formation of the several parts herein shown in carrying out my invention in practice, except as claimed.

I claim:

In a signal for a mail box including a hollow body having an open front, a door hinged to said body for closing said open front and coacting spring latch straps mounted respectively on said door and said body for retaining said door in closed relation to the open front of said body, the improvement comprising an anchor plate positioned in overlapping relation to the latch strap mounted on said body, said plate having an upwardly offset, forwardly extended end portion, an elongated U-shaped bracket secured to said end portion transversely thereof, said bracket having a vertically disposed stop member integral therewith, a horizontally disposed rock shaft journaled in said bracket, a flag staff extended from one end of said shaft at right angles thereto, a flag secured to the free end of said flag staff, a keeper of elongated rectangular formation secured to the opposite end of said shaft so that the longitudinal axis of said keeper extends in a plane at right angles to a plane extended through the longitudinal axis of said flag staff, a coil spring mounted on said rock shaft with one end thereof secured to said bracket and the opposite end thereof secured to said keeper whereby said spring biases said flag staff into a vertical position in engagement with said stop member, a lock bar positioned in overlapping relation to the strap mounted on said door, an elongated finger secured at one end to said bar and extending angularly therefrom, the opposite end of said finger being offset and positioned for engagement with said keeper, whereby when the door is in closed position with the offset end of said finger in engagement with the keeper and the longitudinal axis thereof is in vertical relation to the longitudinal axis of said flag staff, said flag will be retained in a non-signalling position against the tension of said spring and when said door is opened so that said finger is disengaged from said keeper said flag staff will be urged into signalling position in engagement with said stop member, the flag on the upper end of said flag staff thereby indicating that said door has been opened.

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