Aug. 9, 1949. C. F. SWANSON 2,478,727

DOOR ACTUATED SIGNAL FLAG FOR MAILBOXES

Original Filed March 27, 1946

FIG 1

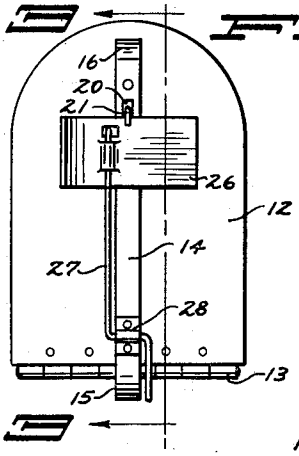


FIG 2

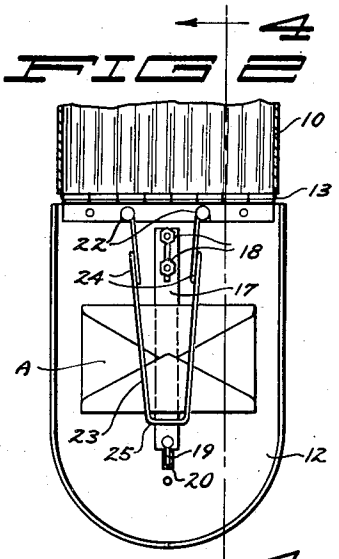


FIG 3

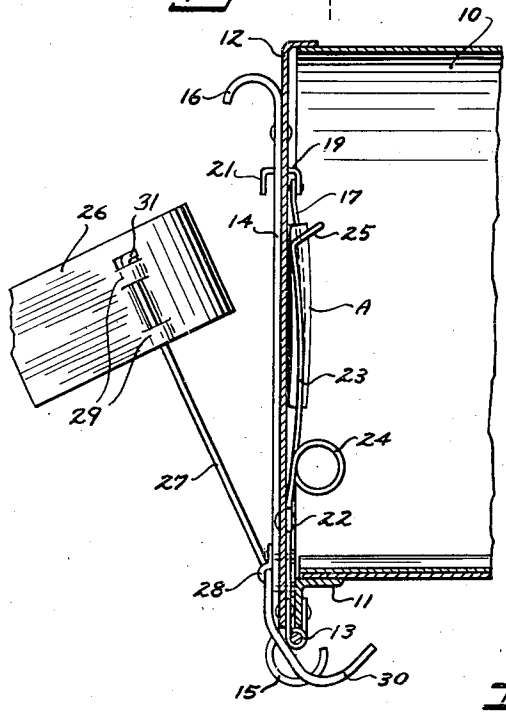
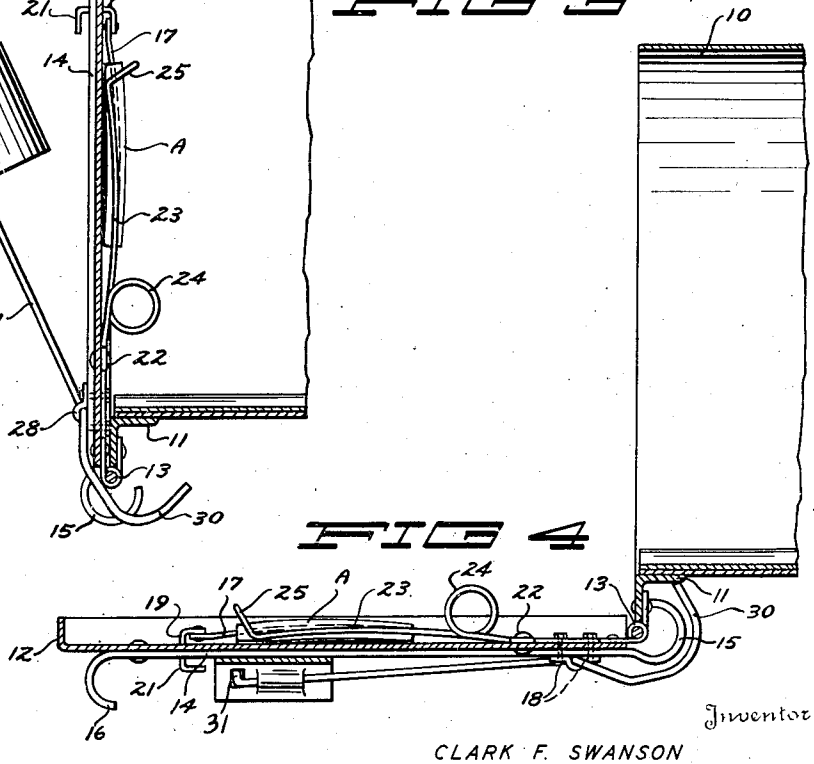


FIG 4



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UNITED STATES PATENT OFFICE

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DOOR ACTUATED SIGNAL FLAG FOR MAILBOXES

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Original application March 27, 1946, Serial No. 657,382. Divided and this application January 23, 1948, Serial No. 4,010

5 Claims. (Cl. 232—35)

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This application is a division of my co-pending application for improvements in Mail box, Serial No. 657,382, filed March 27, 1946, Patent No. 2,437,053, patented March 2, 1948.

This invention relates to improvements in signal devices used on mail boxes and the primary object is to provide a pick up signal for rural mail boxes which rests in its protruding signaling position whenever mail is put into the cooperating mail clip and which signal automatically returns to a non-signalling position when the mail is removed from the clip and the mail box door is closed.

Another object of my invention is to provide an improved letter support for mail boxes which holds the letter securely inside the box on the inner side of the mail box door where it is easily accessible for removal by the mail carrier.

Still another object is to provide an outgoing mail signal which will be easily seen by the mail carrier and which will collapse against the mail box door when the door is opened and will remain in the closed position when the mail is removed from the box and the door is closed.

These and other more detailed and specific objects will be disclosed in the course of the following specification, reference being had to the accompanying drawings in which—

Fig. 1 is a frontal elevation of a mail box closed showing my improved signalling device resting against the door in its normal or non-signalling position.

Fig. 2 is a plan view of the front end of a mail box with the door opened showing a letter inserted in the mail holder.

Fig. 3 is an enlarged fragmentary detail section view along line 3—3 in Fig. 1 showing a letter inserted in the holder and the flag in its open or signalling position.

Fig. 4 is a view similar to Fig. 3 but taken along line 4—4 in Fig. 2 showing the box opened.

Referring to the drawing more particularly and by reference characters 10 denotes a mail box of the usual type used in rural areas. The size or shape of the box is unimportant in describing my invention and only the front of the box is shown in the drawings. 11 designates a cross member of angle iron which extends crosswise beneath the front of box 10 and is rigidly secured thereto. Door 12 for closing the box is hinged thereto by means of hinges 13 fastened to the door and to the cross member 11 by rivets or any other suitable fastening means. The door may thus swing forward and downward in the usual manner. Strap 14, which is secured vertically to the center and on

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the outside of door 12, depends in the form of a hook 15 which contacts cross member 11 when the door is opened (Fig. 4) and prevents further downward movement of the door. The opposite upper end of the strap is formed into a finger hook 16 for convenience in opening or closing the door. It can be clearly seen from this that the door may be lowered to a substantially horizontal position before hook 15 contacts the cross member. It is understood, however, that any means of limiting the downward movement of the door may be used in conjunction with my signalling device now to be described.

The signal and mail clip holder arrangement is mounted on door 12. A slightly bowed fixed spring 17 is adjustably secured to the inner side of door 12 in a vertical position by means of rivets or similar fasteners 18. Affixed to the free end of spring 17 is a hook 19 which turns outwardly and plays in slot 20 in the door and strap 14. Hook 19 terminates in a downwardly turned end to form a hook latch 21. Thus, as bow spring 17 is extended by pressure on the box, hook 19 will move upward or outward in slot 20 and as the pressure is released the spring will resume its bowed position and hook 19 will be drawn inward again. Secured at points 22 on the opposite sides of the fastened end of spring 17 are the ends of a looped wire spring clip 23 having torsion coils 24 which serve to hold the clip tight against door 12. The sides of the looped clip 23 clear spring 17 and the bight 25 where the clip bridges the spring is bent angularly inward so that it will not bear on spring 17.

The signalling device is made up of a rectangular signal flag 26 attached to a wire stem 27. This wire stem has a pintle portion near its middle which pivots freely in strap hinge 28 secured to strap 14, as is evident, this pivot allows the flag to move vertically away from the mail box door. Fashioned in the lower end of the stem is an actuator finger 30 turned rearwardly and upwardly alongside the hooked finger 15. The flag 26 pivots on stem 27 by means of punched out hinge ears 29. The upper end of stem 27 is turned angularly in toward the box as at 31. This serves the dual purpose of preventing the flag from sliding on the stem and of preventing the flag from making more than a quarter turn on the stem when placed in signalling position. The hinges 29 are located off center on flag 26 so that when the flag is released it will by force of gravity tend to assume the position in Fig. 3. The flag is further so located so that normally the hook latch 21 will engage its upper edge as in Fig. 1 and hold it flat

against door 12 in its inoperative position and the smaller or trailing portion of the flag is curved as shown so that the signal may be more easily returned to this position.

In operation then an outgoing letter A may be placed in the box by opening door 12 and slipping the letter between spring 17 and clip loop 23 as shown in Figs. 2 and 4 where it will be held by the spring tension of these parts. The letter tends to flatten the bowed spring 17 by the pressure against the letter of the clip loop 23 and as a result the bowed spring 17 is in effect elongated and hook 21 is moved clear of flag 26 as shown in Fig. 4. When the door is then closed the off center weight of the flag 26 will cause it to fall forward to the point where actuator finger 30 contacts hinge 13 and the flag is held at an angle to the box so it will be easily seen by a passing mail carrier (Fig. 3). When the carrier then opens the door 12 to remove the letter A the finger 30 strikes the cross member 11 as shown in Fig. 4 folding the signal flag back flat against the door. When the letter A is then withdrawn, the spring 17 will return to its bowed shape causing hook latch 21 to re-engage the flag. The flag is then held in place as the door is closed to its normal position shown in Fig. 1. Thus, the signal flag is actuated to its signalling position and returned without any attention by the farmer or carrier. Of course, if it is desired to mail a package or letter which is too large to fit under the clip loop, the signalling device may be manually manipulated very easily by merely exerting pressure on the bow spring to either release or relatch the flag.

It is understood that suitable modifications may be made in the structure as disclosed, provided such modifications come within the spirit and scope of the appended claims. Having now, therefore, fully illustrated and described my invention, what I claim to be new and desire to protect by Letters Patent is:

1. In a mail box having a door hinged to swing from an upright closed position to a generally horizontal open position, a signal flag, a support for the flag pivoted on the door, means normally holding the flag against the door, a letter holder adapted to receive a letter when the door is opened, means forming part of said letter holder and operative on insertion of a letter therein to release the flag, and the flag being so supported as to then swing outward from the door to a signalling position as the door is closed.

2. In a mail box having a door hinged to swing from an upright closed position to a generally horizontal open position, a signal flag, a support for the flag pivoted on the door, a hook normally holding the flag flat against the door, a letter holder adapted to receive a letter when the door is opened, means forming part of said letter holder and operative on insertion of a letter therein to actuate said hook and release the flag, and the flag being so supported as to then swing outward from the door to a signalling position as the door is closed.

3. An automatic signal apparatus for a mail box comprising a letter holder mounted on a door of the mail box, a signal flag, a support for the flag pivoted on the door, a hook secured to the letter holder, the said hook normally holding the flag in an inoperative position against the door but which releases the flag when a letter is placed in the letter holder, the flag moving to a signalling position by the force of gravity.

4. An automatic signal apparatus for a mail box with a hinged door comprising a letter holder, a signal flag, a support for the flag pivotally mounted on the door, a hook normally holding the flag against the door, means forming a part of said letter holder and operative on insertion of a letter therein to actuate said hook and release the flag, the flag being so supported to swing outwardly as the door is closed, and means which are a part of the letter holder which actuate re-engagement of the hook with the flag when the door is opened to a generally horizontal position and the letter is removed from the holder.

5. In a mail box having a door hinged to swing outward and downward to an open position, a signal flag, a support for the flag pivoted for vertical movement on the door, a hook normally holding the flag flat against the door, a letter holder consisting of a bowed spring and a wire clip spring mounted on the inner side of the door, the said hook affixed to the free end of the bowed spring and riding in a slot in the door, means whereby as a letter is inserted in the holder the flag is released by the hook so it swings to its signalling position, means to flatten the flag against the door when the door is moved to an open position, and means to re-engage the hook with the flag when the letter is removed from the holder.

CLARK F. SWANSON.

REFERENCES CITED

The following references are of record in the file of this patent:

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Number	Name	Date
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685,058	Phillips	Oct. 22, 1901