Sept. 11, 1934. R. L. SMITH 1,973,020

MAIL BOX

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Fig. 1.

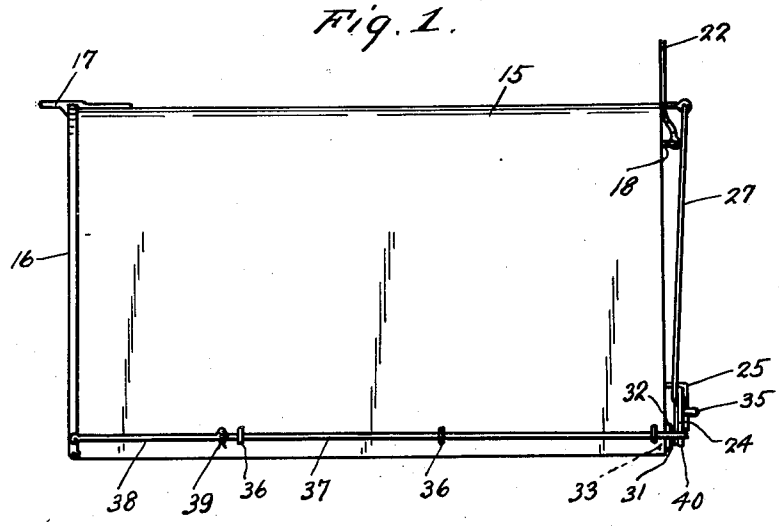
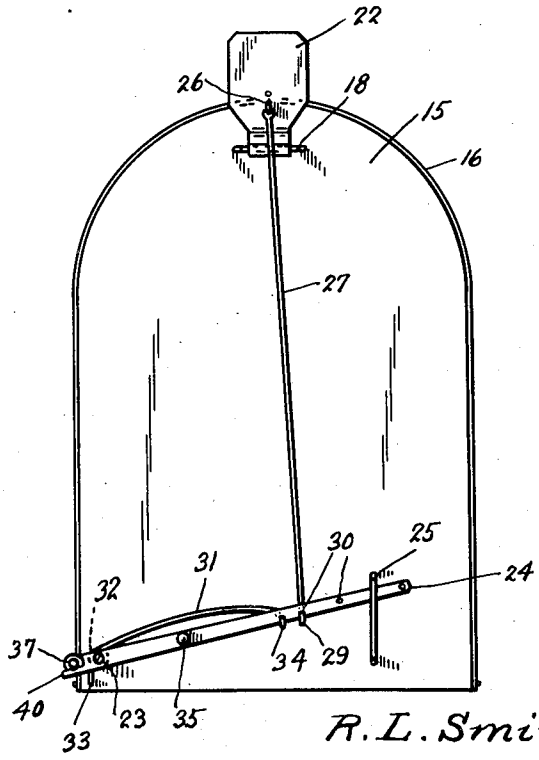


Fig. 2.



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Fig. 3.

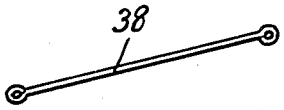


Fig. 4.

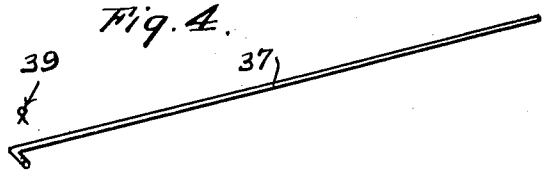


Fig. 8.

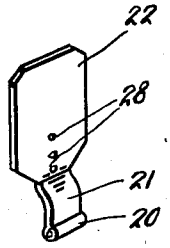


Fig. 5.

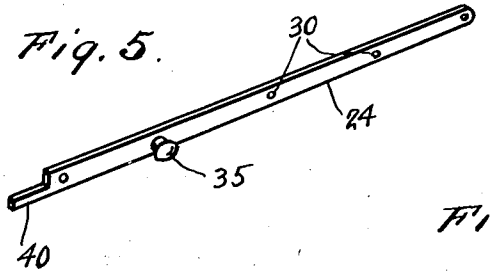


Fig. 9.

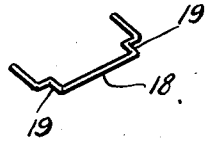


Fig. 6.



Fig. 10.



Fig. 11.

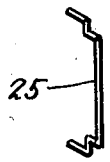
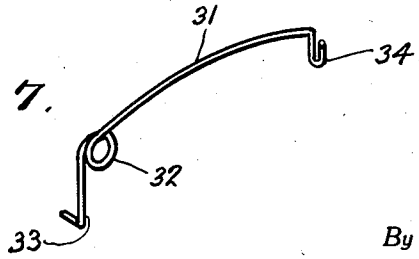


Fig. 12.



Fig. 7.



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Patented Sept. 11, 1934 1,973,020

UNITED STATES PATENT OFFICE

1,973,020

MAIL BOX

Richard L. Smith, Topeka, Kans.

Application January 23, 1934, Serial No. 707,954

3 Claims. (Cl. 232—35)

This invention relates to mail boxes, and more particularly to the type used in connection with rural delivery.

An object of the invention is to improve upon such types of mail boxes as are usually equipped with means whereby the presence or absence of mail in the box will be indicated.

As is well known such means usually consists in what is known as a "flag" and briefly the invention consists in improved means for mounting such flag and for locking the flag in an indicating position after mail has been placed within the box.

The invention together with its objects and advantages will be best understood from a study of the following description taken in connection with the accompanying drawings wherein:

Figure 1 is a side elevational view of the mail box illustrating the application of the invention, and with the flag in a raised or indicating position.

Figure 2 is an elevational view of the flag equipped end of the box.

Figure 3 is a perspective view of a connecting link.

Figure 4 is a perspective view of a reciprocating rod.

Figure 5 is a perspective view of a swingable arm.

Figure 6 is a perspective view of a link for connecting the swingable arm and flag.

Figure 7 is a perspective view of a spring.

Figure 8 is a perspective view of a flag.

Figure 9 is a perspective view of a hinge for the flag.

Figure 10 is a perspective view of a guide loop.

Figure 11 is a perspective view of a guide member and

Figure 12 is a perspective view of an eye member carried by the flag.

Referring to the drawings by reference numerals it will be seen that 15 indicates generally a mail box which may be of any preferred construction and equipped at one end with a downwardly swinging door 16 held normally closed by a spring catch or the like 17.

At the end thereof opposite to the door 16 there is suitably secured to the wall of the box 15 adjacent the top of the box a hinge member 18 formed of wire and bent into the general U-shape suggested in Figure 9 and shaped as at 19 to confine the loop or sleeve 20 of the hinge leaf 21 carried by flags 22 on the closed end of the hinge with limited longitudinal movement relative to said end of the hinge. It will thus be seen that the flag 22 thus engaged with the hinge 18 will be mounted for vertical swinging movement. In the present instance flag 22, as shown in Figure 8 is in the nature of a flat plate of metal or other suitable material and may be of any desired shape, and colored or not as found desirable.

On the same end wall of the box 15 adjacent the bottom of the box there is pivoted as at 23 a control arm 24, which arm, it will be noted, is pivoted adjacent one end to the wall of the box and adjacent one side of the box. The free end of the arm 24 operates in a vertical guide 25 which is substantially of the same general construction as the aforementioned hinge 18.

The flag 22 is operatively connected to the arm 24 adjacent the free end of the arm through the medium of an eye member 26 and a connecting link 27.

As shown in Figure 12 the eye member 26 has the shank thereof integral with a U-shaped structure 26a the legs of which are accommodated in suitable openings 28 provided in the flag 22 and are clinched at one side of the flag for holding the eye member 26 secured thereto.

As shown in Figure 6 the connecting link 27 is provided at one end with an eye that is engaged with the eye of the member 26 and at a relatively opposite end has a portion thereof laterally offset as at 29 to engage a selected one of several apertures 30 provided in the arm 24.

The arm 24 is normally urged to swing upwardly to hold the flag 22 in a raised position through the medium of a spring 31 clearly disclosed in Figure 7. Spring 31 has a loop portion 32 that is suitably disposed about the pivot 23 of the arm. One end 33 of the spring is suitably formed to engage an aperture in the end wall of the box 15 while between the loop 32 thereof and the end 34 the spring is longitudinally bowed as shown in Figure 7. At 34 the end of the spring is suitably formed to engage the lower edge of and to straddle the arm 24 in a manner clearly shown in Figure 2. It will thus be seen that under tension of spring 31 arm 24 will be normally urged to rotate in an anti-clockwise direction (viewing the device as shown in Figure 2).

To facilitate the swinging of the arm 24 downwardly against the tension of spring 21 the said arm is provided with a suitable knob or handle 35.

On one side of the box 15 there is slidably

mounted, through the medium of guide loops 36 what may be termed a latch rod 37. A connecting link 38 is pivoted at one end on an edge of the door 16 and has its other end engaged with a lateral projection on the rod 37, which projection is suitably apertured to accommodate a cotter pin 39.

When the door 16 is in closed position the free end of the rod 37 is projected into the path of a projection 40 provided on the arm 24 at the pivoted end of said arm. In forming the projection 40 the pivoted end of the arm is notched as will be clear from a study of Figure 5.

When the parts are in the position shown in Figures 1 and 2 the flag 22 will indicate the presence of mail in the box 15. When the owner of the box removes the mail it will be apparent that the downward swinging of the door 16 to an open position will cause a sliding movement of the rod 37 to the left in Figure 1 thus drawing the free end of the rod out of engagement with the projection 40 of the arm 24. After the mail has been removed and before closing the door 16 the operator with his hand on the knob 35, may swing the arm 24 downwardly against the action of spring 31, and this downward movement will, through the medium of the link connection 27 with the flag 22 cause the flag also to swing downwardly to a non-signalling position. The downward swinging movement of the arm 24 will raise the end projection 40 of the arm above the plane of the rod 37. The operator will then close the door 16 resulting in a projection of the rod 37 for engaging the free end of the rod with the under side of the arm projection 40 thus locking arm 24 against reverse or upward swinging movement and thereby secure the arm 24 in its downward position and the flag 22 in its aforementioned non-signalling position.

From the above it will be obvious that when the mailman opens the door 16 for depositing mail therein the free end of the rod 37 will be moved out of the aforementioned engagement with the end 40 of arm 24 and the arm 24 will, under action of spring 31, swing upwardly to the position shown in Figure 2 for raising the flag 22. Such of course will result in the projection 40 of the arm moving to a position below the plane of the rod 37 so that when the mailman after depositing the mail in box 15 shuts the door 16 the rod 37 will be projected to engage the upper edge of the projection 40 in a manner clearly suggested in Figure 2 and thus assist the spring 31 in securing the arm 24 and the flag 22 in a raised or, with respect to the flag 22, in a signalling position.

Having thus described my invention, what I claim as new is:

1. A mail box comprising a receptacle provided at one end with a vertically swinging hinged door, a signal flag hingedly mounted on the receptacle for vertical swinging movement, an operating arm pivotally mounted on the receptacle, an operating connection between said arm and the flag for transmitting movement of the arm to the flag, latch means slidably mounted on the receptacle and engageable with the arm for locking the same against swinging movement in a direction to raise the flag, and an operating connection between said door and the latch member for moving the latter out of engagement with the arm upon swinging movement of the door to an open position.

2. In a deposit and collecting receptacle, the combination with a mail box and a door therefor, of a signal member hingedly mounted on the mail box, an operating arm for the signal member pivotally mounted on the mail box, an operating connection between said arm and the signal member for transmitting movement of the arm to the signal member, spring means engaged with the arm for normally urging the same to swing in one direction and latch means for locking the arm against movement and in opposition to said spring operable by the door to move into and out of engagement with said arm.

3. A mail box having a signal flag swingably mounted thereon, an operating arm for the flag pivotally mounted on the mail box, an operating connection between said arm and the flag, a guide member for the free end of the arm mounted on the box and with which the end of the arm is engageable for limiting swinging movement thereof in either direction, spring means engaged with the arm for normally urging the same to swing in one direction, and door controlled latch means for securing the arm in either raised or lowered position, optionally.

RICHARD L. SMITH.