May 31, 1949. G. ALFISI 2,471,919

SIGNALING MAILBOX

Filed Feb. 17, 1948

Fig.1.

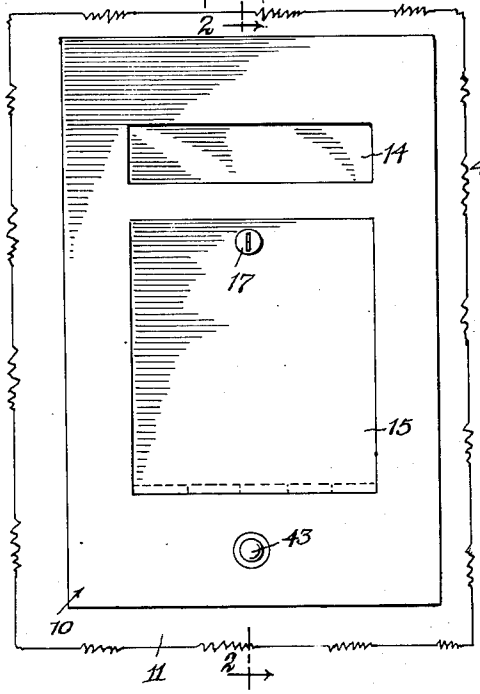


Fig.2.

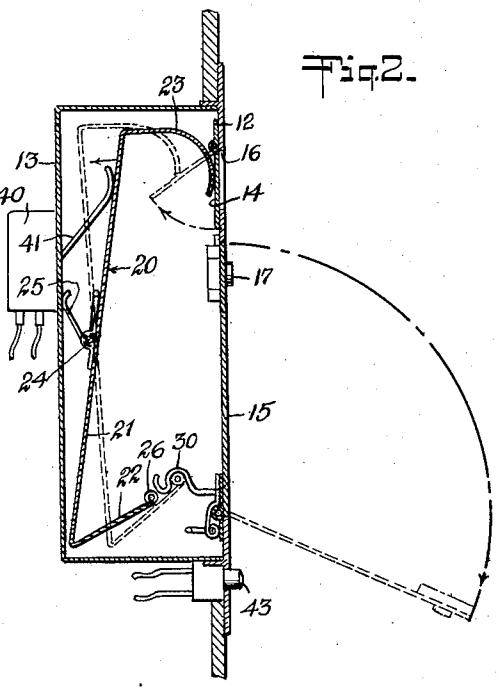


Fig.3.

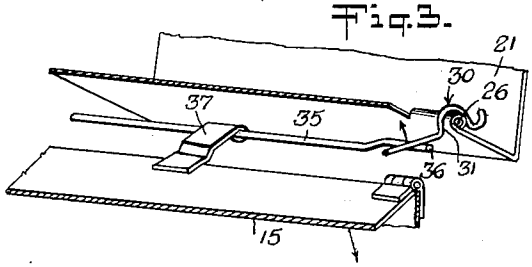


Fig.4.

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Patented May 31, 1949

2,471,919

UNITED STATES PATENT OFFICE

2,471,919

SIGNALING MAILBOX

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Application February 17, 1948, Serial No. 8,830

4 Claims. (Cl. 200—57)

1

The present invention relates to mail boxes and more specifically to a signalling mail box in which a circuit closing device is actuated when mail is deposited to energize a signal located inside the house.

A further objective was to provide a mail box equipped in such a manner that a signal would light in the house when mail was deposited and which would go out upon the removal of the mail from the box.

Another feature of my invention is the provision of a pivotal mail receptacle within the box that actuates the signalling circuit.

A further feature of my device is that it may be readily incorporated in existing mail boxes with a minimum of effort.

The present invention contemplates the provision of a mail box equipped with a movable mail-receiving receptacle on the inside. When the mail is deposited through the upper slit in the box, the receptacle will be moved causing a signalling circuit to be energized. At the same time the receptacle will be latched in a mail-receiving position so that the circuit will remain energized until the mail is removed from the box. At the time the mail is removed from the box, latch releasing means are actuated causing the receptacle to resume its normal position and at the same time cause the signalling circuit to be deenergized.

Further unique features and advantages of my invention will be apparent as I proceed with the description.

With reference to the drawings—

Fig. 1 shows a front elevation of my mail box;

Fig. 2 shows a sectional view on line 2—2 of Fig. 1;

Fig. 3 shows an enlarged perspective view of the latching means and latch releasing means; and

Fig. 4 shows a schematic view of the wiring diagram of the signalling device.

In Fig. 1 I show a mail box 10 which, if desired, may be mounted in a suitable frame 11. The box is rectangular in shape having front and rear walls 12 and 13 and upper and lower doors 14 and 15 located in the front wall. The upper door 14 acts as a closure for the slit 16 through which the mail is deposited, and it is hinged in such a manner that it moves inwardly and upwardly. The lower door 15 through which the mail is removed moves outwardly and downwardly when opened and is further equipped with a conventional lock 17. Mounted within the box for pivotal movement is a receptacle 20 that consists of a single piece of material having a rear wall 21 and a

2

trough-like lower portion 22 integral with the rear wall. The upper portion 23 of the receptacle is bent forward and downward in such a manner that when in its normal position the upper portion 23 contacts the rear of the upper door 14. The receptacle 20 is pivoted at approximately its mid point 24 to the sides of the box and is also equipped with a leaf spring 25 that maintains it in the position shown by the solid lines in Fig. 2. One end of the spring 25 bears on the box while its other end is secured to the receptacle.

Projecting inwardly from the front wall 12 of the box is a latch 30 which consists of a short piece of resilient wire bent intermediate its ends to form a U-shaped portion 31. The latching device 30 is mounted adjacent one of the side walls of the mail box and is adapted to coact with a projection 26 on the lower portion of the receptacle when the receptacle is moved to a mail-receiving position as indicated by the dotted lines in Fig. 2. The projection 26 may be formed by rolling a portion of the lower edge of the receptacle as shown in Fig. 3. Also shown in Fig. 3 is a latch releasing device which consists of a rod 35 equipped with an offset 36. The rod 35 is secured to the lower door 15 through a strap 37 and movement of the lower door to an open position causes the offset 36 to contact the latch 30, thereby releasing the projection 26 on the receptacle which will allow the receptacle to be pulled back into its original position through the spring 25.

My mail box is also equipped with a circuit-closing device that operates the signalling circuit. This device consists of a micro-switch 40 that may be mounted on the rear wall 13 of the box as shown in Fig. 2 and which is equipped with a flexible contact arm 41. The contact arm rests against the back wall 21 of the receptacle and when the receptacle is in its normal position as shown by the solid lines in Fig. 2, the switch contacts are open. However, as the upper door 14 is opened for the purpose of depositing mail, the door will push the upper portion 23 of the receptacle 20 causing it to pivot and to press against the contact arm 41 which in turn causes the contacts in the switch 40 to close. The switch is connected in series arrangement with a source of electricity and a signalling light or buzzer 42 which may be mounted inside the house in any selected spot. So long as the receptacle remains in this position, the signalling light 42 will remain lit indicating that mail has been deposited in the mail box. A further signalling unit is provided in that a button 43 positioned in the lower portion of the mail box is connected in series ar-

rangement with a source of electricity and a bell **44**. Through this arrangement the mailman may also press the button to ring the bell indicating that mail has been deposited, however, this circuit does not remain energized once the pressure has been removed from the button.

In operation, before any mail is deposited in the box the position of the pivotal receptacle **20** is indicated by the solid lines in Fig. 2. When the mailman deposits mail by raising the upper door **14**, the pressure of the upper door against the upper portion **23** of the receptacle **20** causes the receptacle to pivot which results in the contacts of the micro-switch **40** being closed and at the same time results in the projection **26** being engaged by the latch **30** to hold the receptacle in this mail-receiving position. This causes the signalling light **42** to light and this circuit will remain energized as long as the mail remains in the box. When the mail is removed through the lower door **15**, as the lower door pivots downwardly, the offset **36** will contact the latch **30** raising it a sufficient distance to allow it to release the projection **26**. As soon as the projection has been released the spring **25** will pull the receptacle back into its normal position. As the receptacle **20** pivots back to its normal position the switch contacts will be open causing the light **42** to go out and the box will be ready for another operation. In Fig. 4 I show a schematic wiring diagram of the circuit of the signalling device which consists of a micro-switch **40** connected through leads **45** and **46** to a light **42** and a source of electricity **47**. Also, the button **43** is connected through leads **48** and **49** to a source of electricity **47** and a bell **44**.

While the invention has been described in detail with respect to a present preferred form which it may assume, it is not to be limited to such details and form since many changes and modifications may be made in the invention without departing from the spirit and scope of the invention in its broadest aspects. Hence, it is desired to cover any and all forms and modifications of the invention which may come within the language or scope of any one or more of the appended claims.

I claim:

1. In a mail box an inwardly opening upper hinged door, an outwardly opening lower hinged door, a receptacle to receive mail mounted for movement within the box, yieldable means which return the receptacle into its non-receiving position, a latch within the box, latch releasing means on the lower door, and circuit closing means on

the box in operative relation to said receptacle, the provision and arrangement being such that opening movement of the upper door causes movement of the receptacle into engagement with the latch to be held in a mail-receiving position thereby actuating said circuit closing means, and opening movement of the lower door causes the latch releasing means to disengage the receptacle for movement into its non-receiving position by said yieldable means thereby enabling said circuit closing means to open.

2. In a mail box set forth in claim 1 wherein said receptacle is equipped with a trough-like lower portion to receive the mail.

3. In a mail box an inwardly opening upper hinged door, an outwardly opening lower hinged door, a pivotally mounted receptacle within the box, yieldable means which return the receptacle into its non-receiving position, and circuit closing means on the box in operative relation to said receptacle, a latch within the box, latch releasing means on the lower door, the provision and arrangement being such that opening movement of the upper door causes pivotal movement of the receptacle into engagement with the latch to be held in a mail-receiving position thereby actuating said circuit closing means and opening movement of the lower door causes the latch releasing means to disengage the receptacle for movement into its non-receiving position by said yieldable means thereby enabling said circuit closing means to open.

4. In a mail box set forth in claim 3 wherein said yieldable means comprises a leaf spring having one end bearing on the mail box and its other end connected to the receptacle.

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