

Sept. 24, 1957

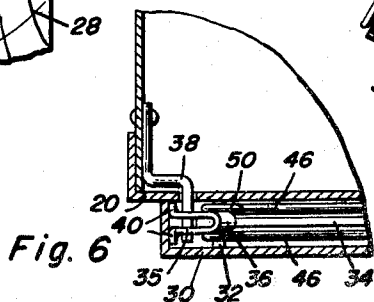
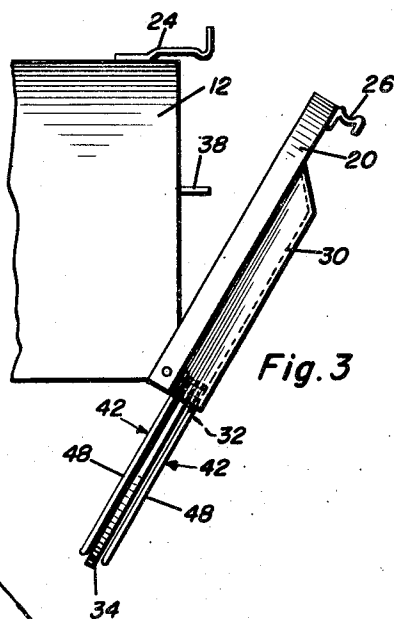
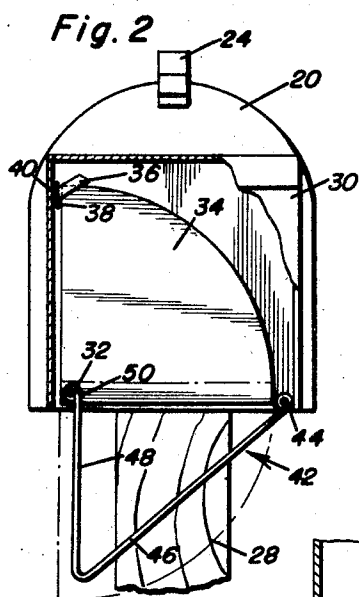
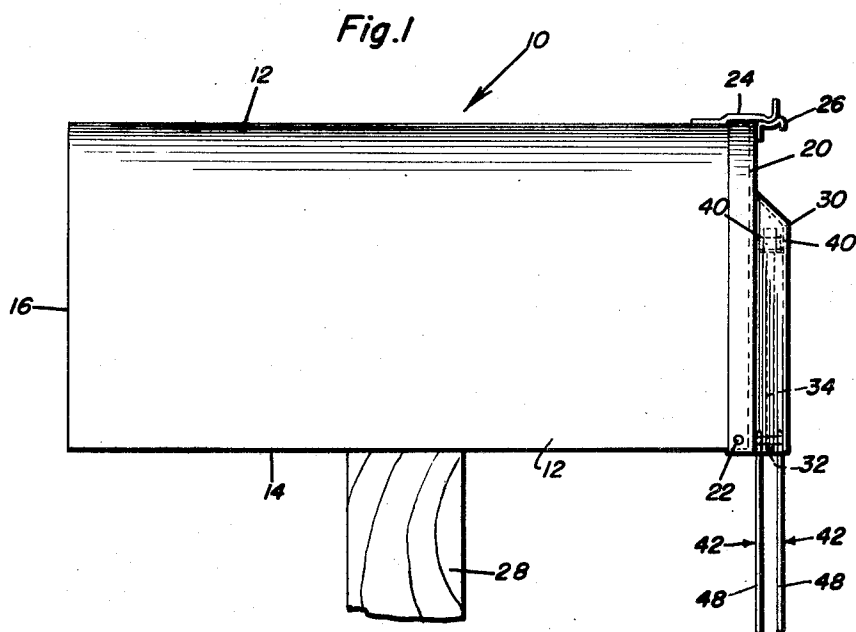
W. A. WARD

2,807,410

RURAL MAIL BOX SIGNAL

Filed Aug. 21, 1953

2 Sheets-Sheet 1



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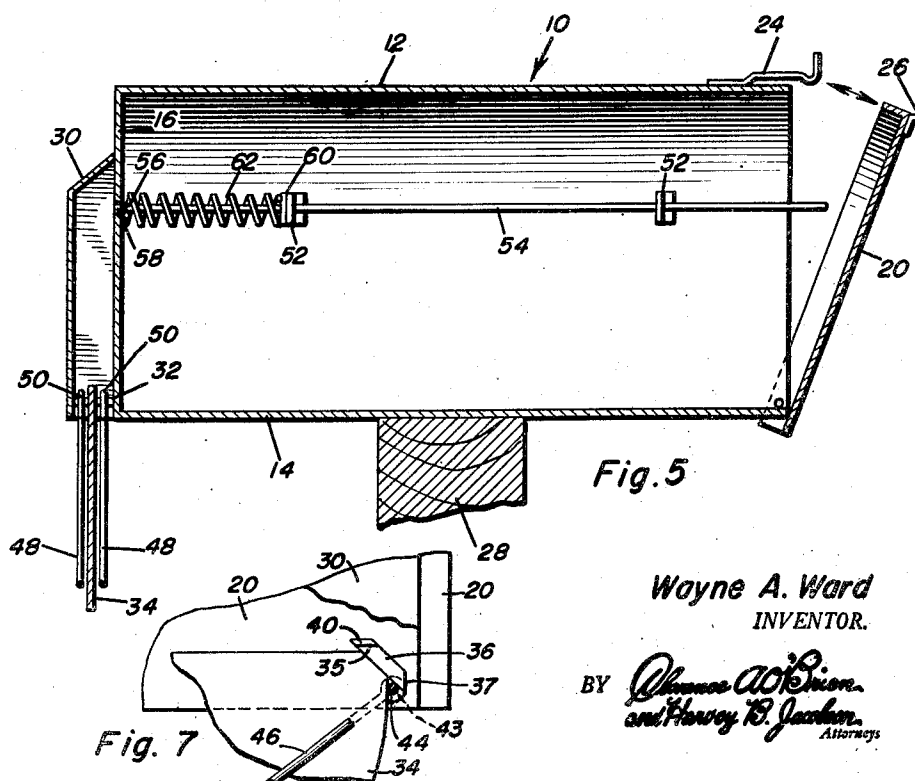
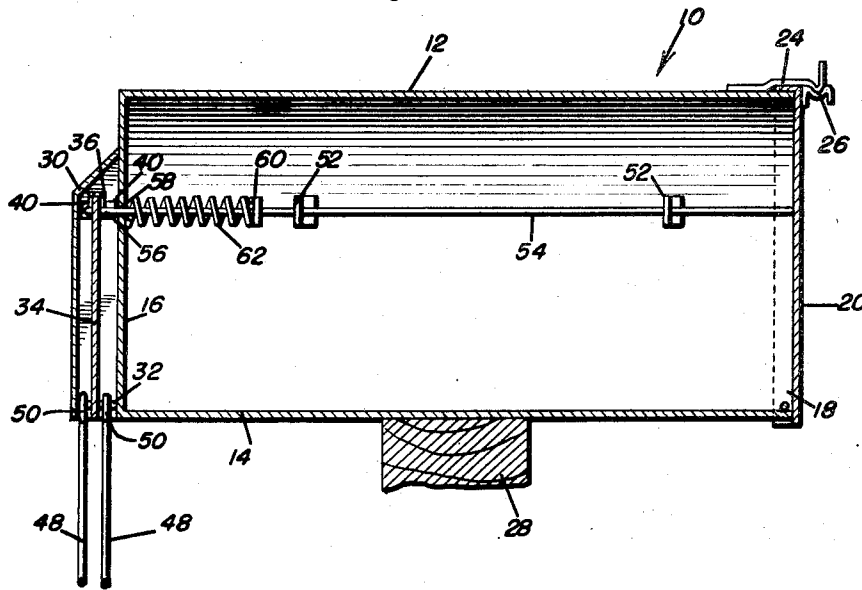
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2 Sheets-Sheet 2

Fig. 4



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2,807,410

RURAL MAIL BOX SIGNAL

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Application August 21, 1953, Serial No. 375,641

5 Claims. (Cl. 232—35)

The present invention relates to a rural mail delivery box signaling means that will be automatically actuated upon opening the door of the box.

The primary object of the invention is to provide a rural mail signaling means that will signal automatically upon opening of the box, that will not be affected by the action of wind when in its signaling position and which will be protected from the weather at all times when in its non-signaling position.

A very important object of this invention is to provide a rural mail box signaling device that will serve as an additional signal to the regulation signal now utilized to notify the mail carrier that there is a letter in the box for him to collect.

A very important object of the invention is to provide a mail delivery signaling means that may be mounted at the front or rear end of the box, which is extremely simple in its mounting and operation and requiring a minimum number of parts.

Yet another object of the invention is to provide a mail delivery signaling means for rural mail boxes having a novel actuating means operatively connected to the door of the box.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a side elevational view of a suitable mail delivery box with the invention attached;

Figure 2 is a front view of the mail delivery box with certain parts being shown broken away for priority of detail showing the mounting of the signaling means on the door of the box;

Figure 3 is a detail view in side elevation of the front end portion of the box showing the door in partially opened position, with the signaling means constituting the present invention in signaling position;

Figure 4 is a side elevational view in cross section of a rural delivery box with the signaling means mounted on the rear end of the box;

Figure 5 is a view similar to Figure 4 disclosing the operation of the signaling means upon opening of the door of the box;

Figure 6 is an enlarged fragmentary view with portions in plan and section detailing the catch and cooperating keeper or retainer pin of Figures 1-3; and

Figure 7 is a fragmentary front view with portions primarily in elevation and wherein the function of a catch as a stop shoulder is disclosed and wherein the signal is in its down or displaced position.

Of those forms of the invention shown in the drawings, the numeral 10 indicates a mail delivery box in its entirety. As is customary, the box comprises an elongated housing 12 having a floor 14, a closed rear end 16, and an open front 18 closed by a swinging door 20. Conveniently, the door 20 is hinged on horizontal pins or pin 22 below the open front end 18 of the box so that

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upon downward swinging movement of the door the entire interior of the box is exposed.

Spring clip 24 mounted on the top of the housing 12 cooperates with spring clip 26 mounted on the door 20 to retain the door 20 in closed position.

The mail box, of course, is mounted on a suitable stand or post 28.

In the form of the invention shown in Figures 1-3, the outside of the door 20 is provided with a downwardly opening shield or cover 30 which is secured thereto in any suitable manner. The cover 30 is mounted on the outside of the door in such a manner that its open lower end is disposed adjacent the lower end of the door 20 and extends substantially parallel thereto.

Outwardly projecting from the door 20 adjacent one of the lower corners thereof is a rod or hinge pin 32. Swingably mounted on the rod 32 is a flat signal in the form of a sector-shaped plate or quadrant 34. When the mail box door is in a closed position as shown in Figures 1 and 2, the quadrant 34 will be placed in the position shown in these figures wherein one edge thereof is parallel to the lower edge of the door 20 while the other linear edge thereof is upwardly extending and parallel to the side edge of the door 20. At the junction of the vertically directed linear edge with the curved edge of the quadrant 34 a catch 36 is mounted, which catch may conveniently take the shape of an inverted channel to straddle the surfaces of the quadrant. With further reference to the catch 36 it will be seen that it is fixed to the cooperating corner portion of the plate 34 intermediate its ends and one end 35 projects beyond the marginal edge of the plate to provide the construction shown. The other end portion of said catch projects beyond the curvate edge of the signal plate, as at 37, and provides a check or stop shoulder which is engageable with the hereinafter described stop pin. Secured to the inner surface of the housing 12 and projecting forwardly through an aperture through the door 20 is a forwardly projecting pin 38. When the door 20 is in closed position, the pin 38 engages the laterally projecting catch 36 to retain the quadrant within the cover 30 on the door 20. The catch 36 is also provided with outstanding lateral ears 40 at one end which retain the quadrant 34 within the cover 30 equally spaced from the outside of the door 20 and the inside of the cover.

To form a wind guard for the flat quadrant plate 34, a pair of V-shaped wire members 42 are bent as at 43 to provide eyes, the latter encircling a horizontal pin 44 extending between the cover 30 and the door 20 within the open bottom of the cover 30. Parallel legs 46 extend downwardly and then bend in a vertical direction with the end portions 48 formed with additional eyes 50 which encircle the hinge rod or pin 32 on opposite sides of the quadrant 34. In addition to supporting the wire members 42, the horizontal pin 44 serves as a stop pin in cooperation with the end portion 37 of the catch 36 to prevent the quadrant 34 from swinging entirely without the limits of the cover 30.

To operate the signaling plate 34 the door 20 is simply opened and is swung and slid away from the pin 38 which releases the end portion 35 of catch 36 and allows the quadrant 34 by the action of gravity to swing about the pin 32 and be received between the legs 46 and 48 of the wind guard 42. The projecting end 37 of the catch 36 engages the stop pin 44 of the wind guard to prevent pendulum like swinging movement of the quadrant plate 34. By its retention between the legs of the wind guard 42, the quadrant 34 is not likely to become damaged by the action of wind and the like.

In the modification shown in Figures 4 and 5, the elements of the signaling means, with the exception of the operating means, are identical and are merely mounted

on the rear wall 16 of the mail box rather than the door 20 of the box. Therefore, instead of being mounted on the outside of the door 20, the downwardly opening cover 30 is mounted on the side of the rear wall 16. Likewise, the hinge pin 32 projects rearwardly from the rear wall 16 adjacent one of the lower corners thereof and the quadrant 34 is mounted on this pin. As in the first embodiment of the invention, the free ends of the vertical portions 48 of the legs 46 of the wind guard 42 are provided with eyes 50 which engage the pin 32 on opposite sides of the quadrant plate 34 so that this plate will swing between them.

However, this embodiment does distinguish over the embodiment shown in Figures 1-3 in the particular operating means utilized to actuate the signaling plate 34.

Thus, tabs 52 are struck inwardly from one side of the housing 12 in longitudinally aligned relation to one another and an elongated rod 54 is slidably seated in suitable openings in these tabs and has one end 56 projecting through an opening 58 in the rear wall 16 to engage the catch 36 to retain the quadrant 34 against pivoting movement about the pin 32.

The other end of the rod 54 abuts the door 20 when this door is in closed position so that the rear end 56 of the rod will always project through the opening 58 when the door is in such closed position. A washer 60 is mounted on a portion of the rod 54 within the housing adjacent the rear wall 16 and a coil spring 62 reacts against this washer and the inner surface of the rear wall 16 to continually urge the rod into abutment at its other end with the door 20 when closed.

Thus, when the door is open as shown in Figure 5, the spring 62 urges the rod forwardly and retracts the rear end 56 thereof through the opening 58 in the rear wall 16 permitting the signaling plate 24 to be dropped beneath the bottom 14 of the box 10 where it will be easily visible to one wishing to ascertain whether or not mail has been delivered to the box.

To prevent undue forward movement of the rod 54, the rear tab 52 serves as a stop for the washer 60 as will also be noted in Figure 5.

From the foregoing, the construction and operation of the device will be readily understood and further explanation is believed to be unnecessary. However, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the appended claims.

What is claimed as new is as follows:

1. A rural mail box comprising a housing open at one end and provided at said open end with a hingedly mounted downwardly and outwardly swingable closing door to form a movable end wall, and provided at the opposite end with an immovable end wall, a sheath-like cover fixedly mounted exteriorly on one of the end walls of said box and open only at its bottom and adapted to protectively house and contain a gravity lowerable auxiliary signal, a hinge pin fixedly mounted in the lower portion of said cover, a gravity lowerable and projectible and retractible flat sector-shaped plate, said plate constituting a signal and having one corner portion thereof hingedly mounted on said hinge pin, said plate, when not in use, being housed within the confines of said cover, said one of said end walls of the mail box having an aperture therein, a catch fixed on an upper corner portion of said plate, and means supported on the mail box and having a portion projecting through said aperture constituting a keeper for said catch and adapted to release itself from said aperture and said catch when said door is intentionally opened and swings outwardly and downwardly.

2. The structure defined in claim 1 and the combination therewith of depending guard means, said guard

means comprising a pair of spaced parallel fixedly mounted legs, said legs being shaped and cooperable with said plate so as to permit the plate to fall therebetween and to be protected when in its signalling position, that is, against wind damage.

3. The structure defined in claim 2 and wherein said keeper means is in the form of an elongated rod which is slidably mounted within the confines of the box and which is spring biased and has one end releasably cooperable with the door and the other end projecting through the aperture in the aforementioned one end wall and into the space within said cover and engageable and cooperable with said catch.

4. A rural mail box embodying a housing closed except at the usual front end and provided at said front end with a hingedly mounted downwardly and outwardly swinging door, the rear end wall of said housing having an aperture therein, a sheath-like cover affixed in spaced parallelism to the exterior of said rear end wall and providing a signal accommodation space and being open only at its bottom, said bottom being in a plane approximately common with the plane of the bottom of said housing, a spring biased rod slidably mounted on the interior of said housing with one end releasably cooperable with the door and the other end projecting through the aperture in the rear end wall and into the space in said cover, a flat signalling plate which is gravity lowerable and which is hingedly mounted in said space and normally confined in said space and provided on one upper corner portion with a catch, that portion of the rod adjacent to said catch constituting a keeper and said catch being releasably engageable with said keeper, an end portion of said catch projecting beyond a cooperating edge portion of the plate and providing a stop shoulder, and a relatively stationary stop member affixed in the lower portion of said cover in the path of movement of said stop shoulder whereby when the latter comes into engagement with said stop member the outward and downward swinging position of the plate is checked.

5. A rural mail box comprising, in combination, a housing closed except at its front end, a closing door for said front end hingedly mounted on the box and openable downwardly and outwardly, said door having an aperture therein, a hollow cover affixed to the exterior surface of said door and covering said aperture and cooperating with the door and providing a signal housing space, said cover being closed except at its bottom, a pin fixed to one wall of said housing and projecting through said aperture and into the space and constituting a keeper, a sector-shaped plate normally housed in said space with a lower corner portion hingedly mounted in the lower portion of said cover, said plate being adapted to swing outwardly and downwardly through the opening at the bottom of said cover when the door is opened, the upper corner portion of said plate being provided with a catch having end portions projecting beyond the adjacent edge portions, respectively, of said plate and one projecting end portion of said catch constituting a retainer, the latter being releasably engageable with said keeper pin, the other projecting end portion of said catch providing a stop shoulder and being adapted to engage and come to rest against a stop member fixedly mounted in the lower portion of said cover.

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