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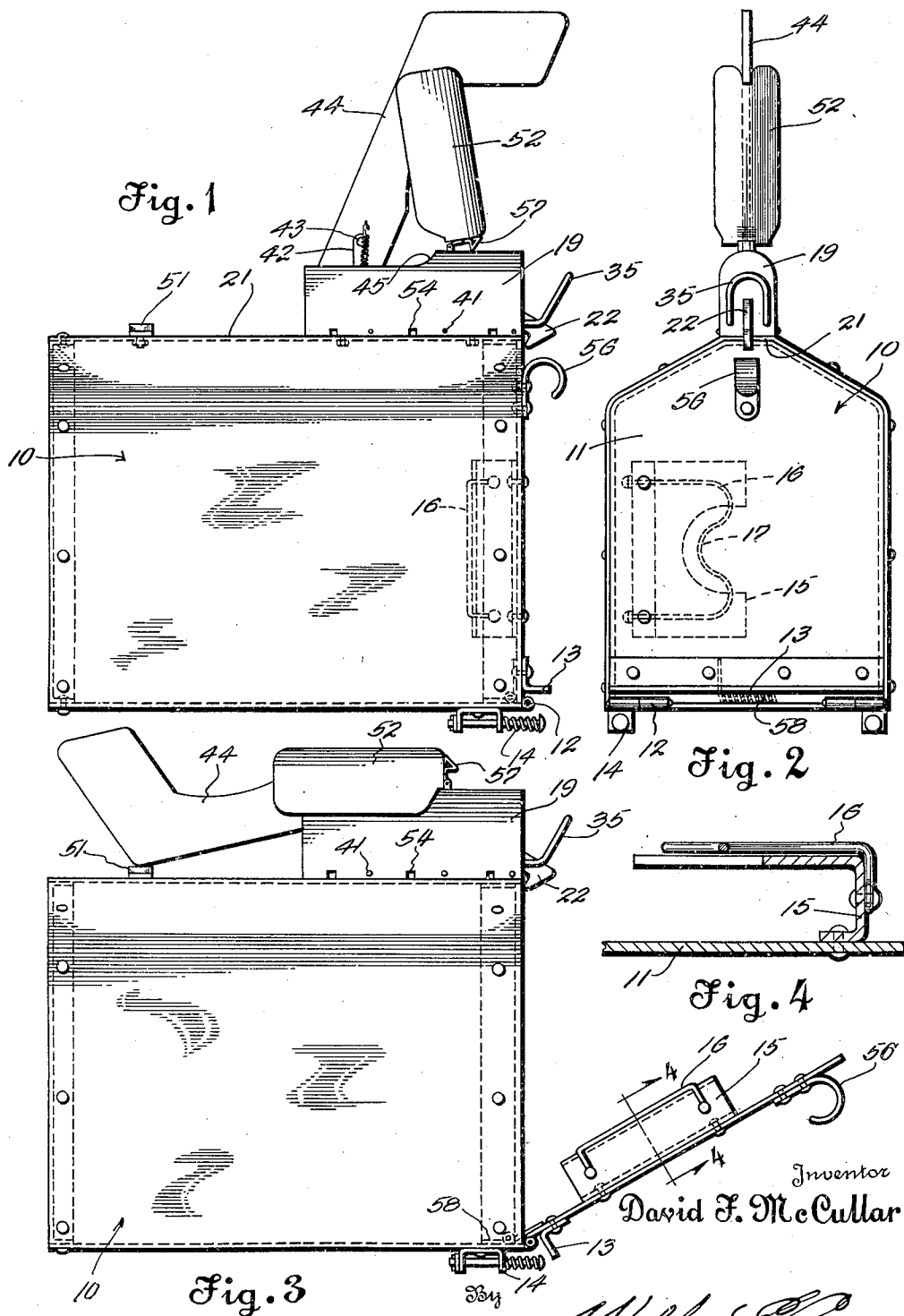
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RURAL MAILBOX

Filed April 3, 1946

2 Sheets-Sheet 1



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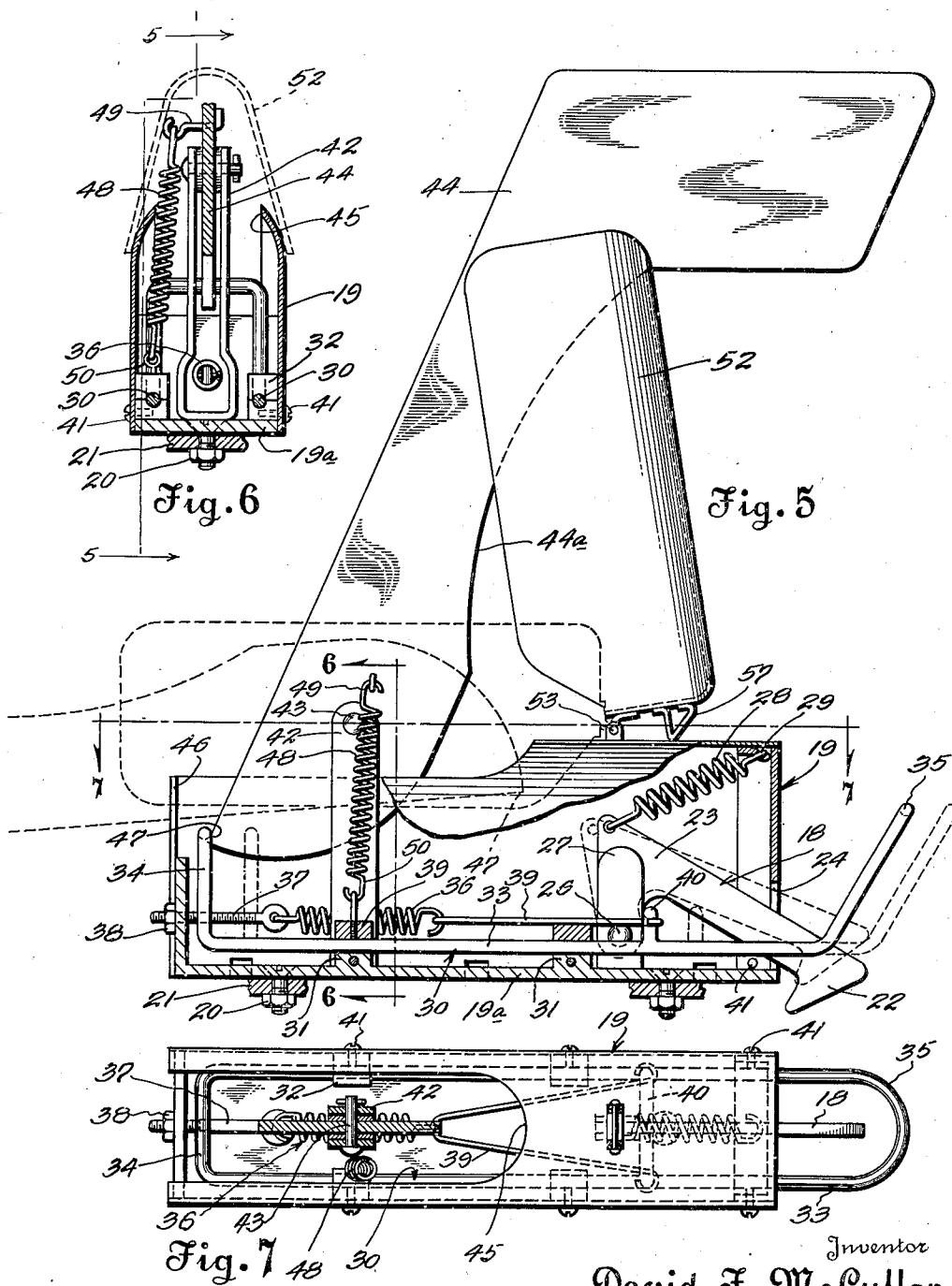
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RURAL MAILBOX

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1

This invention relates to a rural mail box which has as a main feature the saving of time of delivery and collection of mail by the mailman in rural districts. It is estimated that he would save from ten to twenty seconds in the service at each box or about one hour a day on each of his trips.

For instance, on a rural route with say, 360 mail boxes and a saving of ten seconds for each box, this would amount to a gain of one whole hour per day at a very low estimate.

Another advantage of my mail box tending to time-saving consists in the fact that no mixing up of pick-up mail with delivery mail is possible.

When serving the ordinary mail box on rural routes, the carrier has all mail to be delivered in his hand, when he drives up to the box. When picking up the mail to be dispatched in every case the carrier must first pick up the dispatching mail before delivering mail to the box. Thus, there is loss of time changing mail from one hand to the other until the mail can be picked up.

With my invention, mail is first delivered and is out of the way. Mail to be picked up is held firmly in a receptacle on the door together with stamps, money or message for the carrier, and this operation is distinct and separate from delivery. The two transactions do not mix; therefore, less change for error. Thus, time is saved and confusion is eliminated, for the box automatically assists in attending to the business at hand. Each service is independent of the other.

One embodiment of my invention is illustrated in the drawings, wherein similar numerals indicate the same details in the different views.

Figure 1 is a view in side elevation of the rural mail box closed and flag up;

Figure 2 is a front elevation of Figure 1;

Figure 3 is a view similar to Figure 1 with the box open and the flag down;

Figure 4 is a fragmentary section along line 4—4 of Figure 3 showing in detail the receptacle for outgoing mail;

Figure 5 is a view in larger scale and vertical section along line 5—5 of Figure 6 showing the mechanism for operating the door latch and the flag;

Figure 6 is a sectional view taken along line 6—6 of Figure 5;

Figure 7 is a top plan view in section along line 7—7 of Figure 5.

The mail box 10 is rectangular, made preferably of sheet metal, and open only in front, which is closed by a door 11 which is hinged as at 12 at the bottom of the box. Adjacent the hinge the

2

door 11 is provided with an angle iron 13 across it to form a stop for outward swinging of the door. To lessen the thrust of the dropping door, one or more spring buffers 14 is provided under the bottom of the box in juxtaposition for said stop 13.

The bottom of the box is also provided with suitable means, not shown, for securing it on an ordinary standard or other support as required.

The door opening is of any desirable size, but a height of about 8½ inches is considered proper. The door has a tight fit between the sides, top and bottom of the box to make it watertight.

On the inner surface of the door 11 is provided a pocket or receptacle 15 intended for holding "out-going" mail and on top thereof a spring clip 16 which is bent crescent shaped as at 17 to aid the mailman in collecting the outgoing mail. A similar cutout may be provided in the receptacle 15.

A latch member 18 to hold the door 11 closed is provided on top of the mail box in a separate housing 19 containing the mechanism or working parts of my mail box. This housing which is a separate member, consists of a head and a base 19a secured as by bolts 20 or the like on the flat narrow top 21 of the mail box 10. The latch member 18 has a hooked nose 22 at the end of a long straight arm 23 which sticks out through a narrow slit 24 cut in the front wall of the receptacle 19 so as to give a good hold on the top edge of the door 11. The latch member 18 is fulcrumed as at 26 in a standard 27 which is secured on the bottom 19a of the housing 19, as best seen in Figure 5. By means of a tension spring 28, held at 29 in the housing 19 the hooked nose 22 is constantly pushed down in engaging position with the door 11. The nose 22 is lifted off the door edge to be released, when the actuating bar 40 travels forward to contact with the bottom edge of arm 23.

Along the bottom of the housing 19 is mounted to slide longitudinally an actuating member or carriage 30, which for that purpose is slidable in guides or bearings 31 with caps 32 holding down said member. This carriage 30 consists of two parallel shanks 33 preferably of round wire with the rear ends joined together by a rectangular arm 34 bent upwards from said shanks, while their front ends are joined to form a loop or "carriage-pull" 35 which protrudes forwardly beyond the front wall of the housing to provide a good finger-hold for operating the carriage 30.

The carriage is held back in its rearward position by a tension spring 36, the rear end of which

is attached to a tension rod or regulating screw 37 secured at 38 in the rear wall of the housing 19 by the adjustment nut 38. The forward end of spring 36 is hooked on to a clevis 39, the arms of which form a V attached to the actuating bar 40 projecting upwardly from the shanks of the carriage 30. The spring 36 will thus exert a pull on the carriage 30, to draw it to the rear until stopped by the transverse connecting bar 40 abutting the standards 27. It will be evident that a compression spring with suitable attachments may be used instead of the spring 36.

The housing is preferably made in two parts, namely, a hood 19 and a base 19a in order to facilitate assembling therein of the working parts. The carriage caps 32 may, for simplicity sake, be formed as lugs on the hood 19, so that when the hood 19 is placed on the base 19a, the caps match with the bears 31, so that the hood with the caps are all held down by screws 41, six being here shown.

A bifurcated standard 42 is secured near the rearmost bearing 31 on the bottom 19a for pivotally supporting as at 43 the signal flag 44, which extends some distance upwardly above the hood 19a through an opening 45 therein, and which is of sufficient length to permit the full swing of the flag from upright position to folded position as indicated in Figure 5 by full and dotted lines respectively. A continuation of said opening is shown at 46 in the rear wall, Figure 5.

With the flag 44 in upright position the forward swing of the same is limited by its tail end at 47 abutting the arm 34 of the carriage 30. The flag is then retained in the upright position by another tension spring 48 held between a hook 49 on the flag 44 and an eye 50 secured on the cap 32. The hook 49 is so positioned in front of pivot 43 so as to obtain a leverage tending to throw the flag forward while raised but stopped by the arm 34, said spring also exerting a rearward leverage to hold the flag down when folded and limited by the stop ridge 51 furnished on the top of the mail box.

In order to close the opening 45 in the hood 19 a lid or weather shield 52 is hinged as at 53 on top of the hood, and adapted to swing by the action of gravity in the length direction of the mail box. It becomes swung into nearly upright position, Figure 5, by raising the flag 44 and stopped by heel 57 abutting the hood 19 on the forward side of the hinge 53. In its closed position, indicated by dotted lines in Figure 5, the shield is adapted to cover the opening 45 sufficiently to prevent rain, dust or snow from collecting in the housing 19. As a further precaution and to lead off any water or dampness that may be found in the housing 19, the same is provided with several vents or outlets 54 for draining off water.

In order to aid in opening the door 11 in case it sticks in the mail box a finger hook 56 is provided on the outside thereof.

All the main parts of the mail box are made of sheet metal or possibly some suitable plastic, but the base or bottom 19a should preferably be made of cast metal and fairly thick and heavy. Cast iron is considered most suitable. The springs are made of rustless steel.

When mail is to be dispatched after it is placed within the box the owner of the box raises the flag 44 from its lowered position in Figure 3 to its upright position in Figures 1 and 5. As a consequence the shield or weather guard 52 is automatically turned up from its closed to its open

position by the action of the flag shank 44a contacting with the rear edge of the shield 52, as shown by the same figures. The raised positions of the flag 44 and the shield 52 are limited by the carriage arm 34 and the heel 57. If the flag is already raised and the mail box door closed, a pull on the carriage pull 35, will move the arm 34 forward and cause the flag 44 and the shield 52 to fall down again, and the nose 22 of the latch member will be lifted by the cross bar 40, thereby releasing the door 11, which is now free to swing open until stopped by the buffer 14 aided by the spring 58.

Any mail to be sent is thereupon deposited in the receptacle 15 and under the spring 16. A coiled spring 58 positioned at the corner of the door 11 and the bottom of the mail box 10 tends to swing the door open.

When serving this rural mail box the mailman carries the mail in one hand ready for delivery when he drives up to the box. With his other hand he then manipulates the box to open it as just described and with the same hand removes the mail from the receptacle 15 on the open door. Thereupon he deposits in the box the mail he holds in the first hand and closes the door with the aid of the finger hook 56. This done, he now raises the flag to signal the owner of the mail box.

It is to be understood that the invention as here disclosed is not limited to the details here described and shown, but that the same may be varied without departing from the spirit of the invention as defined by the subjoined claims.

I claim:

1. A mail box for rural districts, comprising a container open at one end, a door hinged to the container and closing said opening, mechanical means on top of said container including a latch member tending to hold said door in closed position, a pivoted signal element on the container, a manually operated releasing device for said latch member, and means operating to shift the signal element from signaling to non-signaling position upon actuation of the latch releasing device.

2. A mail box for rural districts, comprising a container open at one end, a door hinged to the container and adapted to close said opening, mechanical means on top of said container including a housing and a latch member partially enclosed in the housing and tending to hold said door in closed position, a manually operated releasing device for said latch member, and a signal member mounted for oscillation in a vertical, longitudinal plane of said housing on a pivot in an opening of said housing, said releasing device having an abutment portion for limiting such forward oscillation and a stop on said box for limiting rearward oscillation of the signal member.

3. A mail box for rural districts, comprising a container open at one end, a door hinged to the container and adapted to close said opening, mechanical means on top of said container including a housing and a latch member partially enclosed in the housing and tending to hold said door in closed position, a manually operated releasing device for said latch member, a signal member mounted for oscillation in a vertical, longitudinal plane of said housing on a pivot in an opening of said housing, said releasing device having an abutment portion for limiting such forward oscillation and a stop on said box for limiting rearward oscillation of the signal, and a yieldable element for positively holding said signal

5

member in extreme forward and rearward positions respectively.

4. A mail box for rural districts, comprising a container open at one end, a door hinged to the container and adapted to close said opening, mechanical means on top of said container including a housing and a latch member partially enclosed in the housing and tending to hold said door in closed position, a manually operated releasing device for said latch member, a signal member mounted for limited oscillation back and forth in an opening of said housing, and a similarly mounted shield for said opening adapted for closing said opening and for actuation by said signal member to uncover the opening.

5. A mail box for rural districts, comprising a container open at one end, a door hinged to the container and adapted to close said opening, mechanical means on top of said container including a housing and a latch member partially enclosed in the housing and tending to hold said door in closed position, and a manually operated releasing device for said latch member, said releasing device consisting of a carriage mounted for longitudinal travel in said housing, a spring element for holding the carriage retracted in neutral position, said carriage being provided with an actuating member adapted for lifting said latch member when the carriage is in forward position.

6. A door latching and signaling mechanism for a rural mail box having a top wall and a door, comprising a housing adapted to be mounted upon the box top wall adjacent to the top of the door, a latch movably supported within the housing and having an end adapted to engage the top of the door to secure the door in closed position, a member mounted for longitudinal reciprocation in the housing, means carried by the member to engage and actuate the latch to door releasing position upon movement of the member in one direction, means facilitating manual movement of the member in the said one direction, a signal element pivotally mounted on the housing, and cooperating means between the reciprocable member and the signal for moving the signal from signaling to non-signaling position simultaneously with the actuation of the latch to door releasing position.

7. A mechanism of the character stated in claim 6, with resilient means normally urging movement of the latch to door securing position, and resilient means normally urging movement of the reciprocable member oppositely to the said one direction to permit movement of the latch by the resilient means engaged therewith.

8. A door latching and signaling mechanism of the character stated in claim 6, wherein said signal element comprises a flag and a shank, said shank having a portion below the pivotal mounting for the signal extended into the housing when the signal is in signaling position and constituting a part of the said cooperating means, the other part of the said cooperating means comprising an upstanding arm carried by the reciprocable member and forming a stop against which the end of said signal shank engages when the signal is in signaling position.

9. A door latching and signaling mechanism for a rural mail box having a top wall and a door, comprising a housing having a hood top provided with a longitudinal opening, the housing being adapted to be mounted upon the top wall of the mail box adjacent to the top of the mail box door, a latch movably supported within the housing and having an end adapted to engage

6

the top of the door to secure the same in closed position, a sliding carriage in the lower part of the housing, means carried by the carriage for engaging the latch to shift the latter to door releasing position upon forward movement of the carriage, means normally urging rearward movement of the carriage in the housing, a pivot support having its pivotal axis extending transversely of the opening of the hood top, a signal flag having a relatively long shank, said shank adjacent to its free end being traversed by the pivot mounting for swinging movement of the flag in a vertical plane and longitudinally of the housing opening, the flag shank being disposed below the pivot and within the housing when the flag is in signaling position, and an upstanding arm carried by the carriage and engaged upon its forward side by the said end of the shank when the carriage is in its rearmost position in the housing and the signal flag is raised.

10. A door latching and signaling mechanism of the character stated in claim 9, wherein said carriage has the forward end extended forwardly to the outside of the housing and beyond the latch to provide a manual means for grasping and shifting the carriage forwardly to effect the release of the latch.

11. A door latching and signaling mechanism of the character stated in claim 10, with means carried by the housing for closing the hood top opening when the signal flag is in non-signaling position.

12. A door latching and signaling mechanism of the character stated in claim 10, with a cover member pivotally supported upon the hood top of the housing in a position to swing into shielding relation over the opening in the hood top when the signal flag is swung to non-signaling position.

13. A door latching and signaling mechanism of the character stated in claim 10, with a cover member pivotally attached to the hood top forwardly of the opening therein and adapted to swing rearwardly and downwardly to cover said opening upon movement of the signal flag to non-signaling position, said cover member and the shank of the signaling flag being operatively coupled whereby upon raising the signal flag to signaling position the cover will be swung upwardly from the hood top opening.

14. A mechanism of the character described for a rural mail box, comprising a housing having a hood top provided with a longitudinal opening, the housing being adapted to be mounted adjacent to the mail box, a sliding carriage in the lower part of the housing, means normally urging rearward movement of the carriage in the housing, a pivot support having its pivotal axis extending transversely of the opening of the hood top, a signal flag having a relatively long shank, said shank adjacent to its free end being traversed by the pivot mounting for swinging movement of the flag in a vertical plane and longitudinally of the housing opening, the flag shank being disposed below the pivot and within the housing when the flag is in signaling position, and an upstanding arm carried by the carriage and engaged upon its forward side by the said end of the shank when the carriage is in its rearmost position in the housing and the signal flag is raised.

15. A mechanism of the character stated in claim 14, with means carried by the housing for closing the hood top opening when the signal flag is in non-signaling position.

16. A mechanism of the character stated in claim 14, with a cover member pivotally supported upon the hood top of the housing in a position to swing into shielding relation over the opening in the hood top when the signal flag is swung to non-signaling position.

17. A mechanism of the character stated in claim 14, with a cover member pivotally attached to the hood top forwardly of the opening therein and adapted to swing rearwardly and downwardly to cover said opening upon movement of the signal flag to non-signaling position, said cover member and the shank of the signaling flag being operatively coupled whereby upon raising the signal flag to signaling position the cover will be swung upwardly from the hood top opening.

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