MAILBOX WITH MULTIPLE SIGNAL DEVICES

ABSTRACT: A rural-type mailbox has two flags pivotally mounted at opposite sides of the box. Inside the box are slidable rods engageable with spring fingers on the pivotal door of the box. The rods are operatively connected to the flags by rotatable discs for holding one flag elevated and the other flag lowered when the door is closed and the rods are engaged with the spring fingers. A switch in the box is disposed for contact by a radial extension of one disc when the other flag is raised upon opening the door. A signal device such as a lamp or bell is connected in circuit with the switch to operate when the door is opened to raise the lowered other flag.
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This invention concerns a mailbox of the rural type having a pivotable flag to indicate the presence of mail in the box. Generally a mailbox of the rural type has only one flag. This flag is put up when mail is to be removed or when mail has been placed in the box by a mailman. This leads to some confusion since the upright flag does not positively indicate that the mailman has visited the box to pickup and/or deliver mail. A further objection is that the mailman must raise the flag to indicate he has delivered mail. This he sometimes forgets to do. When the mailbox is a considerable distance from a rural residence it is often inconvenient for a householder to come to the mailbox if he has not yet delivered any mail. Very often the mailbox is out of sight of the house to which it belongs so that the position of the signal flag is not known to the householder unless he visits the box. It has been proposed in U.S. Pat. No. 2,438,785 to provide a door mounted letter-box with a trap switch operated by mail being deposited in the box to activate a remote signaling device. This only partially overcomes the objections to conventional rural mailboxes. There is still lacking any visual indication that the mailman has visited the box. Also the trap-type switch is only operable by small pieces of mail insertable through a slot in the top of the mailbox. This is not feasible for a rural mailbox which often contains large articles such as magazines, packages and the like.

The present invention overcomes the above and other difficulties and disadvantages of prior rural-type mailboxes by providing two signal flags. A first flag signals the presence of outbound mail in the box. The second flag signals that the mailman has visited the box to pickup or deliver mail. A switch in the mailbox is automatically actuated when the mailman opens the box to operate a remotely located signal device such as a lamp. At the same time the second flag is raised automatically. This provides automatically local and remote visual signals that the mailman has visited the box. Furthermore when the mailman visits the box, the first flag is automatically lowered. Thus the mailman does not have to take the time to raise or lower any one of the signal flags.

The invention is explained in further detail in connection with the drawing, wherein:

FIG. 1 is a perspective view of a mailbox embodying the invention, with left flag shown raised and right flag lowered.

FIG. 2 is a fragmentary right side view with portions of the box broken away, the door of the box being shown closed, and with left flag raised.

FIG. 3 is a vertical cross-sectional view taken on line 3-3 of FIG. 2.

FIG. 4 is a fragmentary right side view similar to FIG. 2, but with door open, the box open and left flag lowered.

FIG. 5 is a fragmentary left side view of the mailbox, portions being broken away, the right flag being lowered, and door being closed; an associated electric circuit is shown schematically.

FIG. 6 is a view similar to FIG. 5 but with door open and right flag raised.

FIG. 7 is a fragmentary left side view similar to a portion of FIG. 6, illustrating another embodiment of the invention. Referring to the drawing, there is shown in FIGS. 1–6, a rural-type mailbox 10 with integral vertical sidewalls 12, 14 curved top wall 16, flat bottom wall 18 and closed end wall 20, defining a generally cylindrical axially horizontal container. A flat door 22 provided with a curved flange 24 at top and sides is hinged by pins 26 to lower front corners of the sidewalls 12, 14. To the extent described, the mailbox is conventional. Now according to the invention two flags 30 and 32 are provided at opposite sides of the box. The left flag as viewed in FIGS. 1 and 2 is shown in a lowered position. This flag has a shaft 34 pivoting on a stub shaft 36. Centrally engaged on shaft 36 inside the box is a linkage member in the form of a circular disc 38. Pivotally engaged by pin 39 near the periphery of the disc is a rod 40 slidably in guide bracket 42 on the inner side of wall 12. Spring fingers 44 are secured to the inner side
person opens the door 22. The bell will keep ringing until the
householder visits the box to reset the raised flag 32. If
desired, switch 85 can be closed and switch 85 can be opened
so only the bell rings.

There has thus been provided a mailbox with multiple signal
means for both local and remote indications. The circuit 80
can employ a battery or may employ a low voltage source pro-
vided by a bell transformer powered by a higher voltage power
supply.

I claim:
1. A mailbox, comprising top, bottom, side and end walls
defining an axially horizontal generally cylindrical container
open at one end; a flat door pivotally engaged with opposed
vertical sidewalls of the container to close the open end of the
container; a first flag having a shaft pivotally mounted at a first
sidewall; a first rod slidably mounted inside the container at
said first sidewall; first spring means on the door engageable
with said first rod to hold the same in forwardly extended posi-
tion; first linkage means operatively connecting said rod and
shaft so that the flag is raised when the rod is engaged with
said first spring means, said flag having a rearwardly extending
body and pivot means for automatically gravitationally turning and lowering the flag when the door is
opened; a second flag having a second shaft pivotally mounted
at a second sidewall; a second rod slidably mounted inside the
container at said second sidewall; second spring means on the
doors engageable with said second rod to hold the same in for-
wardly extended position; second linkage means operatively
connecting said second rod and second shaft so that the
second flag is lowered when the second rod is engaged with
said second spring means, said second linkage means compris-
ing counterweight means to hold the flag raised when the door is
opened to disengage the second spring means from the
second rod; switch means inside the container engageable by
said counterweight means when the second flag is raised; and
circuit means connected to said switch means and actuated
thereby when the switch means is actuated upon raising of the
second flag.

2. A mailbox as defined in claim 1, wherein said circuit
means comprises a power supply and an electrically operable
signal device connected in series with said switch means for
actuating said signal device when the door is opened to release
said second rod and cause the second flag to rise.

3. A mailbox as defined in claim 1, wherein said second
linkage means comprises a stub shaft rotatably supporting the
second flag; a disc secured on said shaft pivotally engaging the
second rod; and a weighted radial extension on the disc for
contacting said switch means and for holding the second flag
in a raised position.

4. A mailbox as defined in claim 3, wherein said circuit
means comprises a power supply and an electrically operable
signal device connected in series with said switch means for
actuating said signal device when the door is opened to release
said second rod and cause the second flag to turn and rise
while the radial extension of the disc contacts said switch
means.

5. A mailbox as defined in claim 4, wherein said switch
means comprises a spring contact mounted by insulation
means inside the container, and wires connected to said spring
contact and to said container respectively and terminating at
said circuit means.

6. A mailbox as defined in claim 4 wherein said switch
means comprises a normally open microswitch mounted in-
side the container, and wires connected between said switch
means and said circuit means, said microswitch having an
operating arm connectable by the radial extension of the disc
for closing the switch to actual said signal device.

7. A mailbox as defined in claim 4, wherein said signal
device is a lamp, and wherein said circuit means further com-
prises an electrically operable audible alarm connected in
parallel with said lamp for sounding when said switch means is
operated.

8. A mailbox as defined in claim 7, further comprising in-
dividual switches connected in series with the lamp and audi-
able alarm for selective operation when either one of the in-
dividual switches is closed.

9. A mailbox as defined in claim 5, wherein said signal
device is a lamp, and wherein said circuit means further com-
prises an electrically operable audible alarm connected in
parallel with said lamp for sounding when said switch means is
operated.

10. A mailbox as defined in claim 1, wherein the first link-
age means comprises stub shaft supporting said first flag and a
disc centrally secured on said stub shaft, said first rod being
pivotingly secured near the periphery of said disc.