

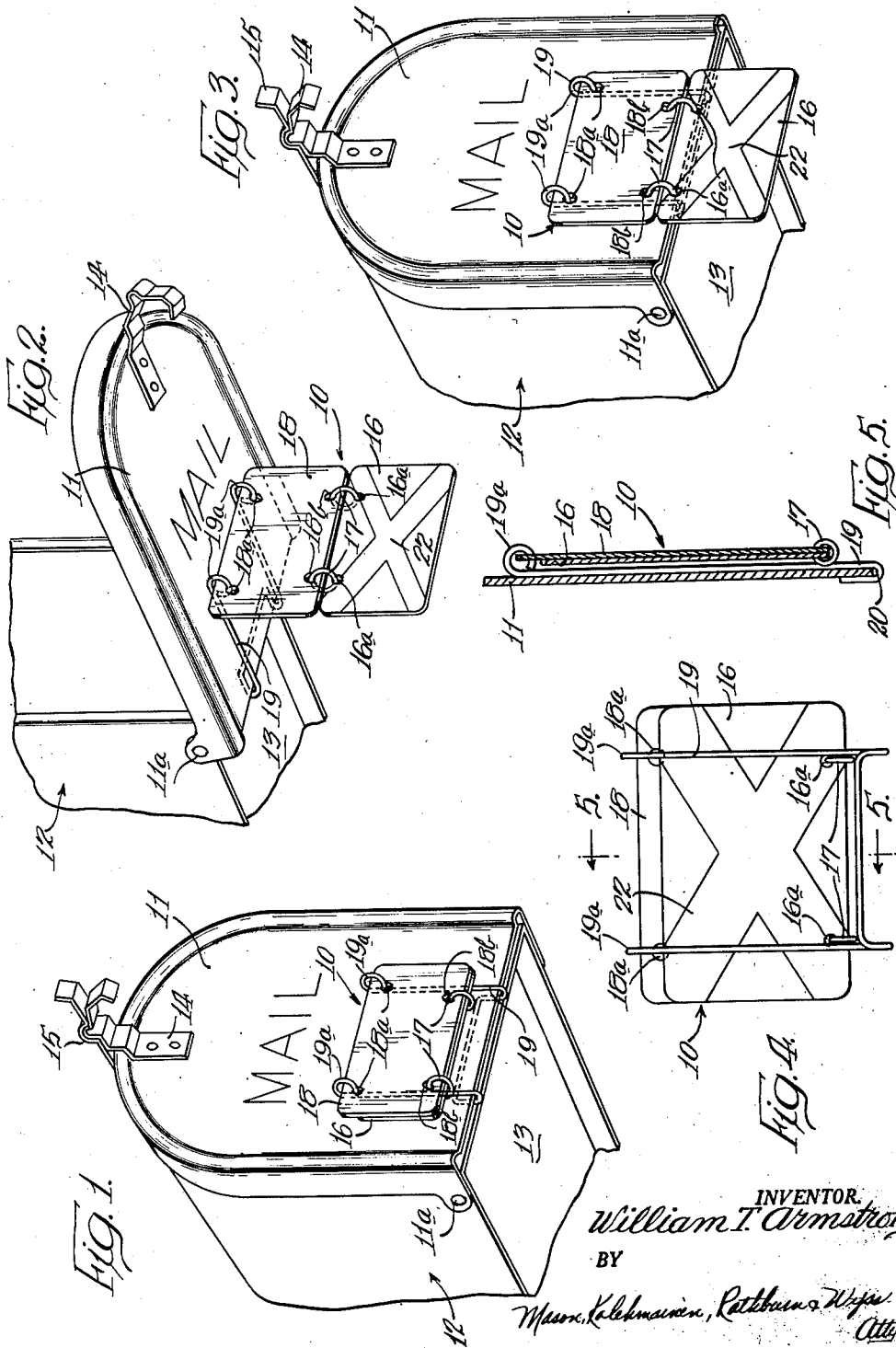
Oct. 8, 1957

W. T. ARMSTRONG
AUTOMATIC MAILBOX SIGNAL

2,808,982

Filed Sept. 14, 1954

3 Sheets-Sheet 1



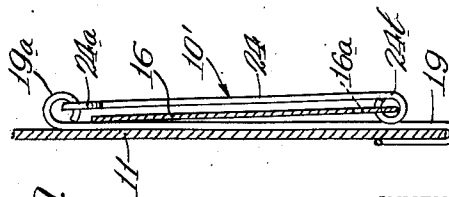
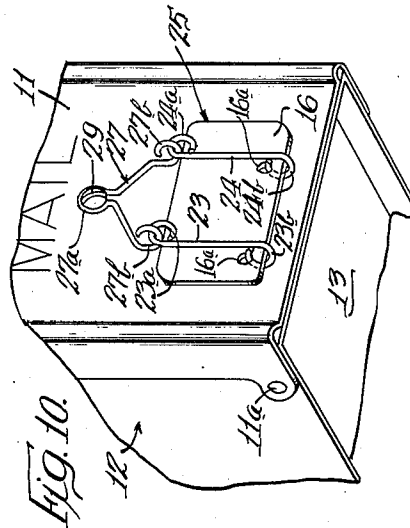
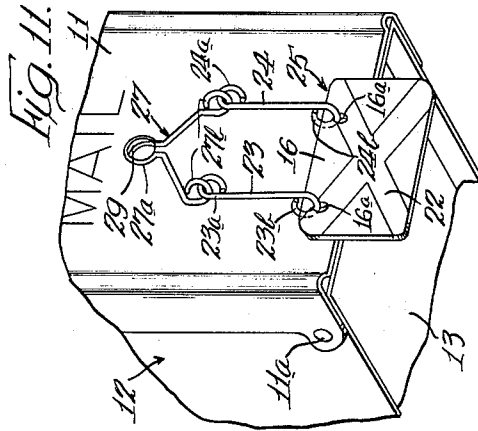
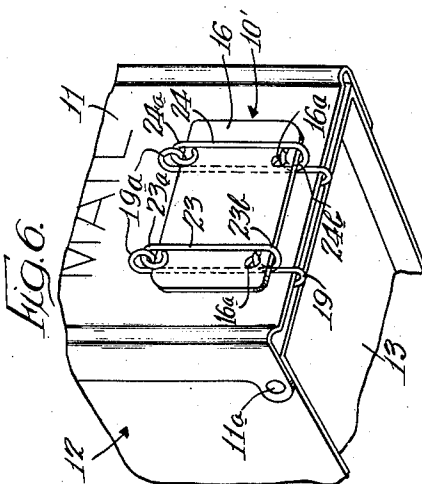
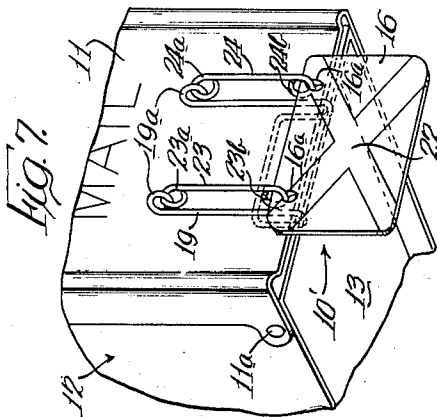
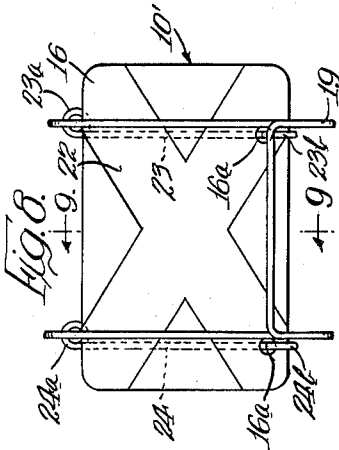
Oct. 8, 1957

W. T. ARMSTRONG
AUTOMATIC MAILBOX SIGNAL

2,808,982

Filed Sept. 14, 1954

3 Sheets-Sheet 2



INVENTOR.
William T. Armstrong
BY
Mason, Kolchman, Rathburn & Wyse
Attys

Oct. 8, 1957

W. T. ARMSTRONG
AUTOMATIC MAILBOX SIGNAL

2,808,982

Filed Sept. 14, 1954

3 Sheets-Sheet 3

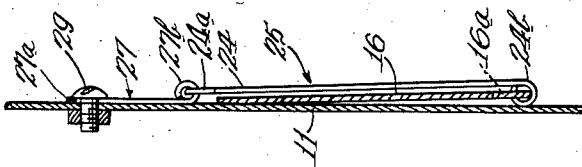
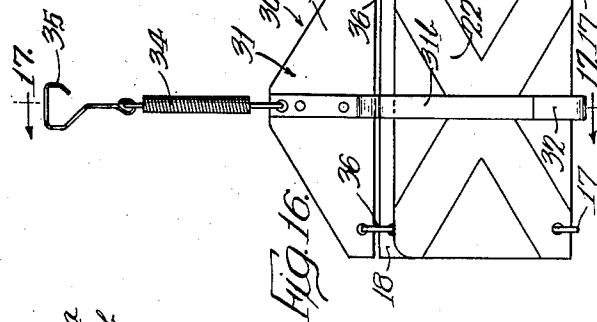
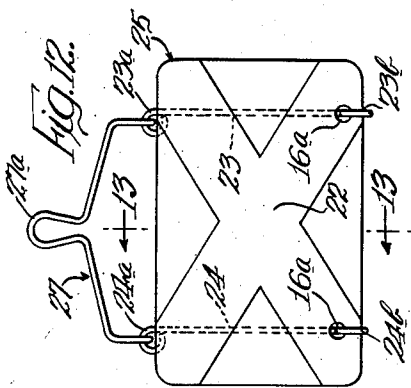
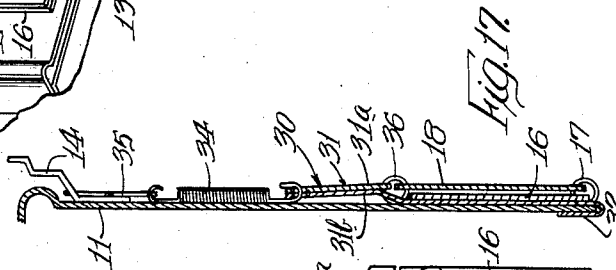
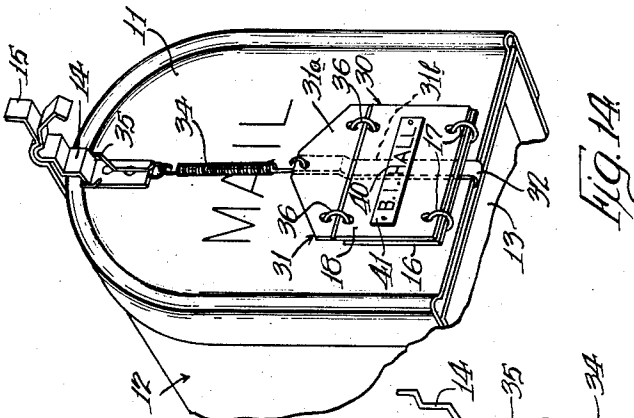
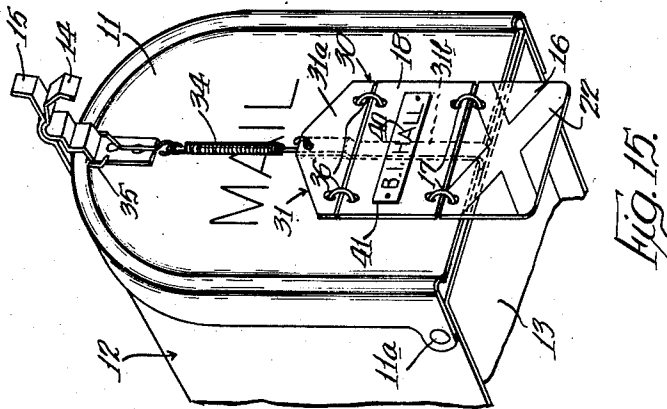


FIG. 13. *INVENTOR.*
William T. Armstrong
BY *Mason, Kolchmainer,*
Rathburn & Wyse
Attys.

1

2,808,982

AUTOMATIC MAILBOX SIGNAL

William T. Armstrong, Prairie View, Ill.

Application September 14, 1954, Serial No. 455,901

3 Claims. (Cl. 232—35)

The present invention relates to an automatic mailbox signal and more particularly to a rural mailbox signal which may be mounted on any conventional mailbox and which moves automatically to signalling position in response to actuation of the door of the rural mailbox.

It is well recognized that the owner of a rural mailbox has no knowledge of when mail or other matter has been deposited in his mailbox by the mail carrier. In anticipation of the mail delivery, the owner usually makes repeated trips to the mailbox to ascertain whether or not mail has been deposited. He can many times see the box from within his home, but unless he actually sees the mailman deposit the mail he remains in ignorance as to whether mail has or has not been delivered. There have been suggested numerous signals which are actuated by the mailman to indicate that mail has been deposited into the mailbox. With such a mailbox signal the owner is put on notice that mail has been deposited in his mailbox by the mail carrier. Such a signal should be simple and inexpensive, and it should automatically be actuated to signalling position without any extra effort on the part of the mailman. Additionally, such a signal should be capable of being associated with any conventional mailbox in a simple manner preferably without the requirement of any tools or the alternation of the mailbox in any manner.

Accordingly, it is an object of the present invention to provide an improved mailbox signal which may readily be associated with the mailbox, without the necessity of altering any part of a conventional rural mailbox and preferably without the requirement of any tools whatever.

It is another object of the present invention to provide a simple folded signalling device for a mailbox which will be actuated to a signalling position by an exceptionally simple mode of operation, as relative movement occurs between two parts of a mailbox.

It is a further object of the present invention to provide an improved signal for a mailbox which will operate automatically when the mail carrier performs the single necessary operation of actuating the cover of the mailbox while depositing mail therein.

Still another object of the present invention is to provide an improved mailbox signal which is clearly visible at a substantial distance from the mailbox when in the signalling position and yet which is completely hidden and fairly well protected from the elements of nature when in the non-signalling position.

Another object of the present invention resides in the provision of improved operational parts for a mailbox signal so as to increase its operational reliability and secure successful performance under any weather conditions and at the same time to simplify the manufacturing and assembling procedures.

It is another object of the present invention to provide an improved gravity actuated mailbox signal which can readily be attached to any existing mailbox.

Further objects and advantages of the present invention will become apparent as the following description

2

proceeds and the features of novelty which characterize the invention will be pointed out with particularity in the claims annexed to and forming a part of the specification.

For a better understanding of the present invention, reference may be had to the accompanying drawings in which:

Fig. 1 is a fragmentary perspective view of the conventional rural mailbox shown with its cover in the closed position and having associated therewith one embodiment of the mailbox signal of the present invention illustrated in its non-signalling position;

Fig. 2 is a fragmentary perspective view substantially identical to Fig. 1 but with the cover of the mailbox illustrated in the open position and with the mailbox signal actuated to its signalling position;

Fig. 3 is a fragmentary perspective view substantially identical to Fig. 1 with the cover of the mailbox in the closed position and with the mailbox signal in its signalling position;

Fig. 4 is an enlarged back elevational view of the mailbox signal only of Fig. 1 in the position of Fig. 1;

Fig. 5 is an enlarged sectional view taken on line 5—5 of Fig. 4 with an associated portion of the mailbox shown in section.

Fig. 6 is a fragmentary perspective view of a rural mailbox with its cover in the closed position and having associated therewith a modification of the mailbox signal of the present invention with the signal illustrated in its non-signalling position;

Fig. 7 is a fragmentary perspective view substantially identical with Fig. 6 but with the signal actuated to its unfolded signalling position;

Fig. 8 is an enlarged back elevational view of the mailbox signal only of Fig. 6 in the position of Fig. 6;

Fig. 9 is an enlarged sectional view taken on line 9—9 of Fig. 8 with an associated portion of the mailbox shown in section;

Fig. 10 is a fragmentary perspective view of a conventional rural mailbox having associated therewith another embodiment of the mailbox signal of the present invention illustrated in its non-signalling position;

Fig. 11 is a fragmentary perspective view substantially identical with Fig. 10 but with the signal in its signalling position;

Fig. 12 is an enlarged back elevational view of the mailbox signal only of Fig. 10 in the position of Fig. 10;

Fig. 13 is an enlarged sectional view taken along the line 13—13 of Fig. 12 with an associated portion of the mailbox shown in section;

Fig. 14 is a fragmentary perspective view of a conventional rural mailbox having associated therewith still another embodiment of the mailbox signal of the present invention with the signal illustrated in its non-signalling position;

Fig. 15 is a fragmentary perspective view substantially identical with Fig. 14 but with the mailbox signal illustrated in its signalling position;

Fig. 16 is an enlarged back elevational view of the mailbox signal only of Fig. 14 in the position of Fig. 14; and

Fig. 17 is a sectional view taken along line 17—17 of Fig. 16 with an associated portion of the mailbox shown in section.

Referring now to the drawings, there is generally illustrated a folded signal secured to a movable portion of the mailbox, which signal is automatically actuated to its signalling position by the action of gravity when the mailbox cover is opened. The signal may be secured to the mailbox in different ways as described in detail hereinafter. The folded signal includes a signalling element which is pivotally connected at its lower end when

in the non-signalling position to the rest of the signal so that under the force of gravity it will automatically pivot about its lower end and depend downwardly to a signalling position.

Referring specifically now to the drawings, there is illustrated in Figs. 1 through 5, inclusive, a first embodiment of the automatic mailbox signal of the present invention. This signal generally indicated at 10 is associated with the cover 11 of a conventional mailbox 12. As will be understood, the rural mailbox 12 of the conventional type consists of an elongated closed receptacle for the storage of mail and other matter whose parallel, rectangular longitudinal sides extend upward to form a half cylindrical top. The back end of the receptacle is closed by an end wall (not shown) while the bottom is closed by a wall 13. The front open end is closed by the cover 11 which is adapted to be pivoted at its lower end about a hinged pivot pin 11a between a closed, substantially-vertical position as shown in Figs. 1 and 3 of the drawings to an open, substantially-horizontal position as shown in Fig. 2. Preferably the mailbox 12 is provided with suitable latching means for maintaining the cover 11 in the closed position. Such latching means preferably comprises cooperating spring clips 14 and 15, secured to the cover 11 and box 12, respectively, which are readily releasable means conventionally employed with such mailboxes.

The rural mailbox automatic signal 10 of the present invention illustrated as associated with the mailbox 12 includes a signalling element 16 pivotally mounted by hinge means 17 to an intermediate support element 18, hereinafter referred to as intermediate element 18, which, in turn, is pivotally connected to a signal mounting element 19, hereinafter referred to as mounting element 19, suitably secured to the mailbox 12.

In order to affix the mailbox signal 10 to the cover 11 of said mailbox 12, without the use of any tools and without altering the mailbox in any way, the mounting element 19 is illustrated as a U-shaped wire element having the ends of each arm of the U formed into a closed loop 19a. These closed loops 19a provide pivotal connections with the intermediate element 18 which is provided with cooperating openings 18a to receive the loops 19a. The arms of the U-shaped support adjacent the bight portion are folded back to form a pocket 20 best shown in Fig. 5 of the drawings clampingly to receive therein the lower edge of the cover 11 of mailbox 12. Preferably, the mounting element 19 is formed of somewhat resilient or spring wire to insure good clamping action with the cover 11. It will be apparent that the mounting element 19 can be secured to this cover 11 merely by forcing the lower edge of the cover into the pocket 20 which comprises an upward movement of the mounting element 19 as viewed in Fig. 1 of the drawings. The resilient nature of the mounting element 19 will cause it firmly to grip the cover 11 as if it were integrally united therewith.

To provide a folded signal the intermediate element 18 is pivoted at its upper edge to the mounting element 19. When the cover 11 is closed as shown in Fig. 1 the intermediate element 18 hangs vertically parallel to the cover 11. When, however, the cover 11 is open as shown in Fig. 2 the intermediate element 18 again hangs vertically but now it is substantially perpendicular with the cover 11. In other words, the intermediate element 18 hangs freely and remains in a consistently, substantially-vertical position during the pivotal rotation of both the mailbox cover 11 and the attached mounting element 19. In short, the angle of incidence between the intermediate element 18 and the cover 11 will range from 0° to 90° as the mailbox cover 11 is pivotally rotated from its closed, substantially-vertical position to its open, substantially-horizontal position.

To pivotally connect the lower edge of the signalling element 16 as viewed in Figs. 1 and 5 of the drawings,

which is illustrated as a generally rectangular member, but which might have any other shape, to the intermediate element 18 the hinge means 17 are provided which merely may be wire loops extending through cooperating openings 16a and 18b in the elements 16 and 18, respectively, at the adjacent edges thereof. The hinged relationship of the elements 16 and 18 provides the folded signal of the present invention which may assume a folded or overlapping non-signalling position or an unfolded or extended signalling position.

When the mailbox cover 11 is in a closed position and the signal 10 is in the folded non-signalling position, the signalling element 16 is disposed in a substantially vertical plane, between the cover 11 and the intermediate element 18 which intermediate element hides it from view. The force of gravity maintains the element 18 vertical under these conditions and prevents the signalling element 16 from moving out of this non-signalling position. When, however, the cover 11 is moved to the open position, the intermediate element 18 tends to stay vertical with the result that it swings away relative to the cover 11 and no longer restrains the signalling element 16 between it and the cover 11, whereupon the signalling element 16 pivots about pivot means 17 to the extended or unfolded position shown in Fig. 2 of the drawings. Even after the cover 11 has been moved to the closed position as shown in Fig. 3, the signalling element 16 in its unfolded signalling position extends below the bottom of the mailbox 12 and provides notice to all that a mail delivery has been made or at least that the cover 11 has been actuated.

Preferably the signalling element 16, at least on the surface exposed when in its signalling position, but usually on both surfaces, is provided with a readily visible surface. These surfaces might be colored a bright, readily visible color or preferably there might be applied thereto some paint or fabric which can be seen for substantial distances. Such material is indicated in somewhat of an X pattern and designated at 22 in the drawings.

The mailbox signal 10 may be easily reset to the non-signalling position of Fig. 1 by a simple manual operation. When the mailbox cover 11 is in the closed position one can merely pivot the signalling element 16 about hinge means 17 behind the element 18. When the mailbox cover 11 is in the open position one can similarly pivot the signalling element 16 behind the intermediate element 18 and then hold these elements in this position while moving the mailbox cover 11 from its open position to its closed position.

In view of the detailed description included above the operation of the folded signal means 10 will readily be understood and hence no further discussion will be included herewith. It will be appreciated, however, that a very simple signal means is provided which can be attached to a mailbox in a simple manner without the requirement of any tool. The operation of the signal is positive and resetting is very simple. It can readily be applied to any new or old mailbox.

It will be understood that the intermediate element 18 of Figs. 1 to 5 is merely a support for the signalling element 16 and it need not take the rectangular form illustrated. Thus, in Figs. 6 to 9, of the drawings there is illustrated a modification of the mailbox signal 10 generally designated as 10' in which every element with the exception of the intermediate element 18 is the same as in the preceding embodiment. The corresponding parts of Figs. 6 to 9 are designated by the same reference numerals as in the preceding figures. Instead of the intermediate element 18 which merely acts as a support for the signalling element 16 there is provided another intermediate element in the form of a pair of parallel wire-like elements 23 and 24 provided with loops 23a and 24a, respectively, at the upper ends and loops 23b and 24b at the lower ends, respectively, thereof. The loops 23a and 24a make hinging connection with the

5

mounting element 19 by engagement with the loops 19a of mounting element 19 as clearly shown in Figs. 6, 7 and 9 of the drawings. The loops 23b and 24b similarly make hinging connection with the lower edge as viewed in Figs. 6 and 9 of the signalling element 16 by engaging the openings 16a therein. The functional operation of the parallel members 23 and 24 is identical to the functional operation of intermediate element 18 described heretofore.

In the arrangements described thus far the mailbox signals 10 and 10' are designed for frictional attachment to any conventional rural mailbox which can be accomplished without the use of tools and without altering the mailbox in any way. For factory installation of the foldable signal of the present invention the mounting element 19 could have many forms, one of which is shown in Figs. 10 to 13 of the drawings. This signal generally indicated by the reference numeral 25, is identical with the signal 10' just described except that instead of the mounting element 19 a mounting element 27 is provided. The corresponding parts of Figs. 10 to 13 are designated by the same reference numerals as in Figs. 6 to 9 of the drawings.

As illustrated, the mounting element 27 is of somewhat V-shape with the apex of the V formed into a loop 27a and the ends of the arms of the V each provided with a loop 27b. The loop 27a may be secured to the cover 11 of the mailbox by a rivet screw or other fastening means specifically indicated as a bolt 29. The loops 27b are hingedly related to the parallel supports 23 and 24 just as these supports were hinged to the mounting element 19 in the preceding embodiment. It will be understood that the mounting element 27 might be dispensed with and instead loops from the cover 11 could be punched out to hinge with the intermediate element which intermediate element could be the members 23 and 24 of the intermediate element 18. Moreover, the mailbox signal 25 can be attached by the mailbox owner to an existing box merely by drilling a small hole in the cover 11 and attaching the signal with the bolt 29. The functional operation of the mailbox signal 25 is identical with that described for the signals 10 and 10'.

In Figs. 14 to 17 of the drawings there is illustrated still another embodiment of the present invention employing a foldable signalling element with modified means for securing the same to a mailbox. This signal generally designated at 30, comprises the intermediate support element 18 of Fig. 1 hingedly related to the signalling element 16 by the hinge loops 17. Instead of the mounting element 19 an entirely different mounting element 31 is provided comprising a plate 31a and an extension member 31b one end of which is secured to the plate 31a and the other end of which is terminated in a hook 32. This hook 32 is adapted to receive therein the lower edge of the mailbox cover 11. Unlike the mounting element 19 this hook alone will not secure the mounting element 31 to the cover 11. To further secure the mounting element 31 there is provided a tension spring 34 having one end connected to the plate 31a and the other end connected to a hook member 35 which is shaped to readily engage the latch mem-

6

ber or spring clip 14 which is conventionally provided on rural mailboxes. The tension spring therefor maintains the hook 32 in engagement with the lower edge of the mailbox cover 11 thus firmly supporting the mailbox signal 30 in position. Suitable hinge member 36 hingedly relate the intermediate element 18 and the plate 31a. The mailbox signal 30, except for the means of supporting the same from the mailbox, functions in exactly the same way as in the preceding embodiments.

It will be appreciated that the intermediate element 18 which is always visible provides an excellent surface to which the mailbox owner's name may be applied. In Figs. 14 and 15 of the drawings there is illustrated the indicia 40 which can be applied directly to the plate or intermediate element 18 or which may be on a separate plate 41 suitably secured to the intermediate element 18.

While there have been illustrated several embodiments of the mailbox signal of the present invention, it will be apparent that numerous changes and modifications thereof will occur to those skilled in the art. It is aimed in the appended claims to cover all those changes and modifications which fall within the true spirit and scope of the present invention.

What is claimed as new and desired to be secured by Letters Patent of the United States is:

1. In a mailbox of the type having a pivotally mounted cover disposed in a generally vertical position when closed and movable to a nonvertical position when opened, a mailbox signal comprising a signal mounting element including means for securing said element to said pivotally mounted cover, a gravity-actuated signaling element movable between a signaling and a non-signaling position, an intermediate support element pivotally mounted at its upper end to said mounting element to swing about a horizontal axis parallel to the pivotal axis of said cover in order to be pivoted relative to said cover incident to its opening, the lower end of said intermediate support element pivotally supporting said signaling element at one end thereof in its non-signaling position between said intermediate element and said cover and in its signalling position beneath said intermediate support element, said intermediate support element pivoting relative to said cover during opening movement of said cover to permit said signaling element to pivot about the lower end of said intermediate support element under the force of gravity into its signaling position.

2. The device of claim 1 wherein said signaling element is pivotally supported by hinge means interconnecting the lower end of said intermediate support element and one end of said signaling element.

3. The device of claim 1 wherein said signal mounting element is removably secured to said cover.

References Cited in the file of this patent

UNITED STATES PATENTS

1,483,255	Tonge	Feb. 12, 1924
2,438,314	Dalton	Mar. 23, 1948
2,581,880	Price	Jan. 8, 1952
2,707,075	Van Duzer	Apr. 26, 1955