United States Patent [19]

Morton

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[54] **MAILBOX SIGNAL**

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[52] **U.S. Cl.** **232/35**
[51] **Int. Cl.** **A47g 29/12**
[58] **Field of Search** 232/35, 34, 17

[56] **References Cited**

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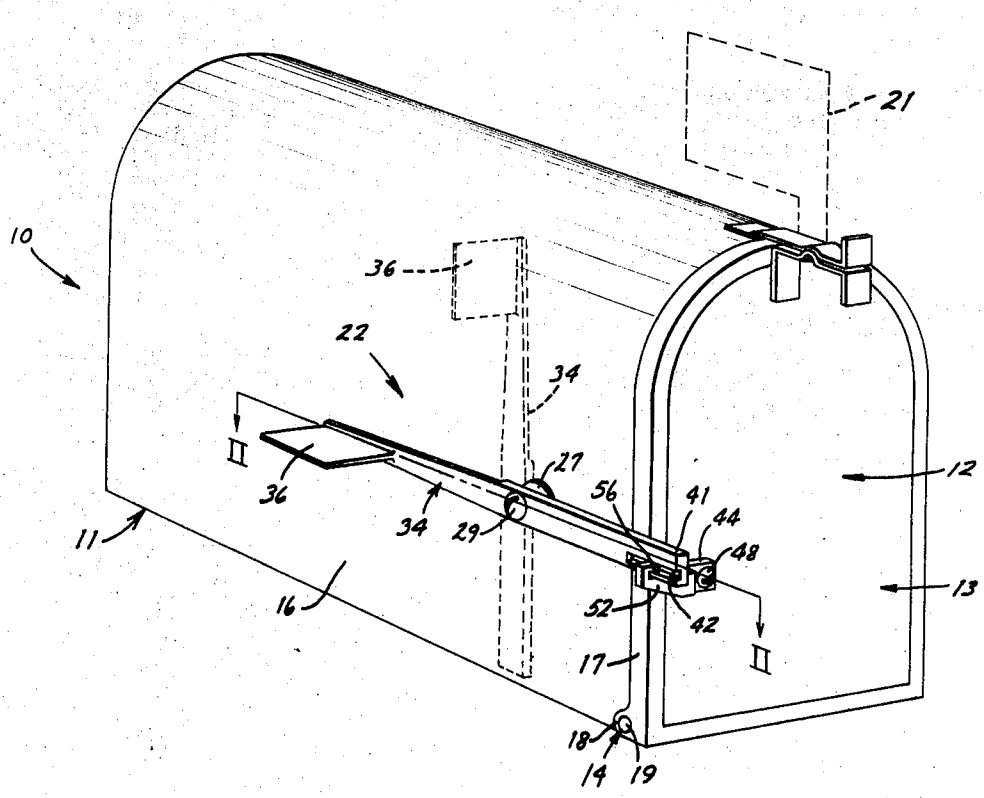
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[57] **ABSTRACT**

A signaling device for use in combination with a mailbox. The signaling device comprises a mounting bracket secured to one of the sidewalls of the mailbox and includes a shaft extending outwardly from the mailbox with a portion of the exterior surface of the shaft defining a cylindrical bearing surface. A signal flag comprises an elongated arm having an opening therethrough intermediate the opposite longitudinal ends and adapted to receive the bearing surface of the shaft which thereby pivotally supports the elongated arm. A flat, flaglike projection extends outwardly from the arm adjacent one end and a counter weight is secured to the arm at the opposite end. A slot is provided in the arm adjacent the counter weight and extends parallel to the longitudinal axis of the arm and opens outwardly at one end thereof. A latch is secured to the door of the mailbox and projects outwardly laterally of the door. A lug is mounted on the latch and is positioned to be received in the slot to hold the arm in a generally horizontal position when the door is closed. The lug is movable longitudinally out of the slot through the outwardly open end when the door is opened to release the opposite end of the arm to effect a swinging of the elongated arm to a generally vertical position.

5 Claims, 4 Drawing Figures



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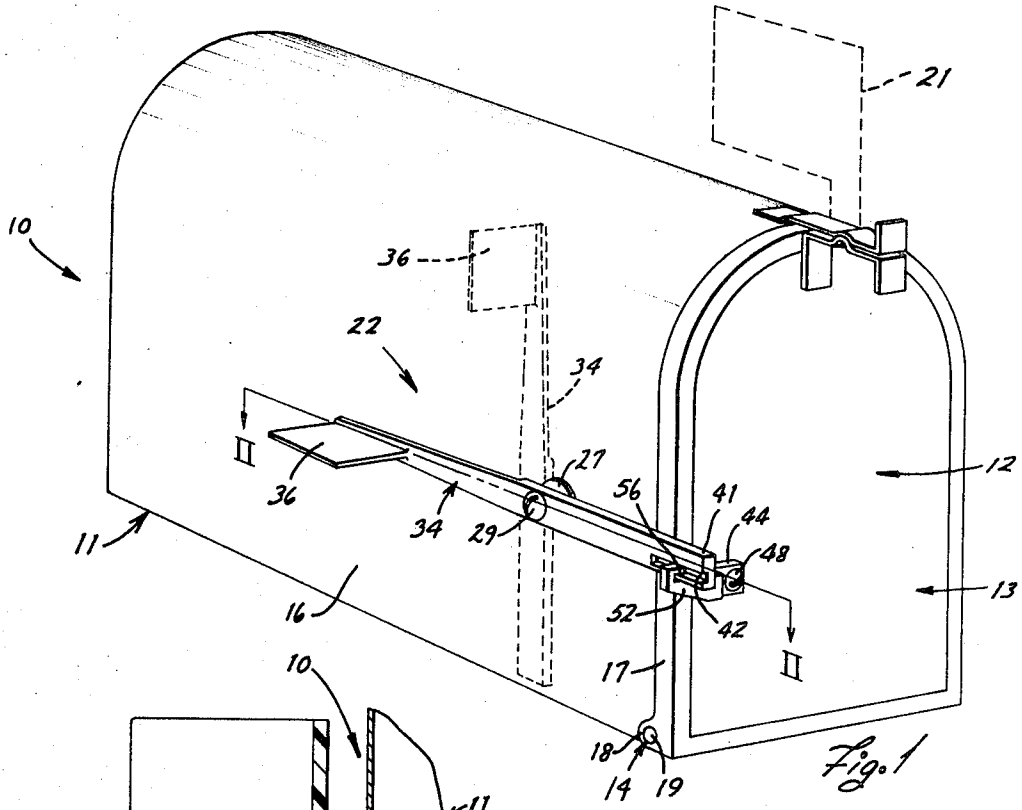


Fig. 1

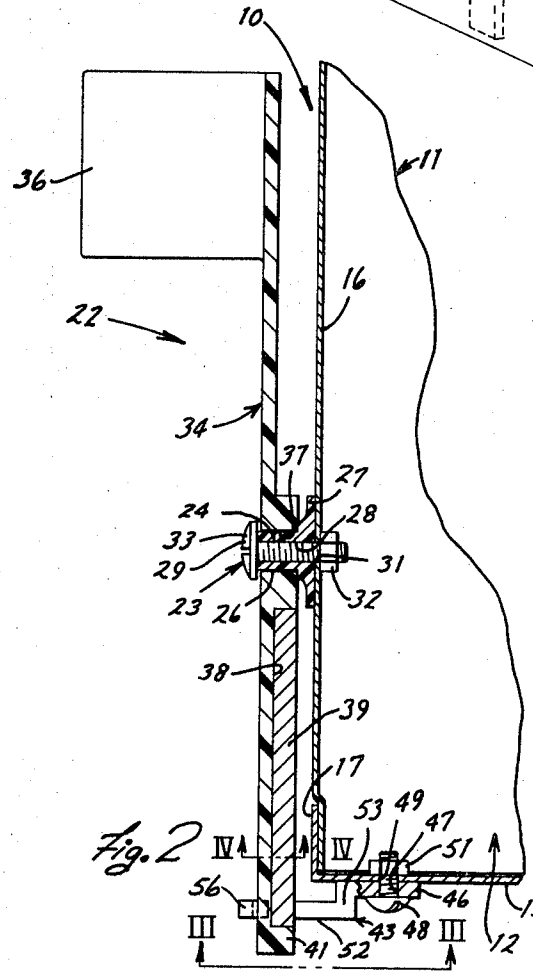


Fig. 2

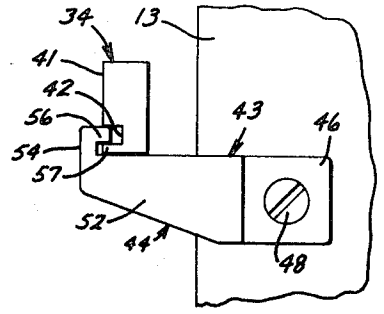


Fig. 3

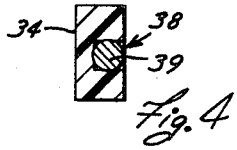


Fig. 4

MAILBOX SIGNAL

FIELD OF THE INVENTION

The present invention relates to rural mailboxes generally and, more particularly, to an indicator flag for incorporation in a mailbox for signaling when mail has been picked up from the mailbox or delivered to the mailbox.

BACKGROUND OF THE INVENTION

Previously proposed and presently in use are rural mailboxes having signal means for indicating when mail has been delivered thereto or mail has been picked up therefrom. Generally, such devices depend upon the opening of the door of the mailbox for actuation. Such devices as have been proposed are not fully satisfactory for the reason that many of them are extremely complicated and hence expensive and subject to breakdown. Some fail to signal when mail has been picked up from the associated mailbox or fail to indicate when mail has been delivered to the mailbox in such a manner as to be clearly understandable to the householder and user of the mailbox. Additionally, some of the devices proposed or in use require the attention of the person delivering the mail for actuation thereof. Negligence or haste on the part of the person delivering the mail thus frequently results in a spurious signal which gives rise to considerable annoyance to the householder.

Accordingly, the objects of this invention are:

1. To provide a mailbox signal which is dependable in use and operation and is incapable of giving spurious signals to the householder.

2. To provide a mailbox signal, as aforesaid, which may be employed to signal the householder that the door to the mailbox has been opened, generally indicating that mail has been delivered thereto or that mail has been picked up therefrom.

3. To provide a mailbox signal, as aforesaid, which is simply constructed, and made of durable material essentially free of deterioration by the elements.

4. To provide a mailbox signal, as aforesaid, which may be easily attached to a mailbox with a minimum of instruction.

Other objects and purposes of this invention will become apparent to persons acquainted with mailbox signals upon a reading of the following specification and an inspection of the accompanying drawing, in which:

FIG. 1 is a perspective view of a mailbox having a mailbox signaling device embodying the invention attached thereto;

FIG. 2 is a sectional view taken along the line II—II of FIG. 1;

FIG. 3 is an elevational view taken along the line III—III of FIG. 2; and

FIG. 4 is a sectional view taken along the line IV—IV of FIG. 2.

Certain terminology will be used in the following descriptive material for convenience in reference only and will not be limiting. The words "up", "down", "right" and "left" will designate directions in the drawing to which reference is made. The words "in" and "out" will refer to directions toward and away from, respectively, the geometric center of the device and designated parts thereof. Such terminology will include derivatives and words of similar import.

SUMMARY OF THE INVENTION

The objects and purposes of the invention are met by providing a mailbox signal for connection to a mailbox having a pair of horizontally spaced upright sidewalls, an open end and a door for closing the open end. The mailbox signal comprises a mounting bracket secured to one of the sidewalls of the mailbox and includes an elongated shaft extending outwardly from one side of the mailbox with a portion of the exterior surface thereof defining a cylindrical bearing surface. A signal flag comprises an elongated arm having an opening therethrough intermediate its ends and is adapted to receive the bearing surface on the shaft to thereby effect a pivotal support for the arm. A flat, flaglike projection extends outwardly from the arm adjacent one end thereof. A counter weight is secured to the arm on the opposite side of the pivot axis from the flat, flaglike projection. The combined weight of the counter weight and the arm is greater than the combined weight of the flat, flaglike projection and the arm on the opposite side of the pivot axis. A slot is provided in the arm adjacent the counter weight and extends parallel to the longitudinal axis of the arm and opens outwardly at the end thereof. Latch means are provided and are secured to the door and project outwardly laterally thereof. The latch means include a lug positioned to be received in the slot to hold the arm in a generally horizontal position when the door is closed. The lug is adapted to move longitudinally out of the slot through the outwardly open end when the door is opened to release the end of the arm containing the counter weight to effect a swinging of the arm to a generally vertical position to thereby signal that the door to the mailbox has been opened.

DETAILED DESCRIPTION

The mailbox **10** (FIG. 1) comprises a casing **11** having one end closed and the other end **12** open. A door **13**, here hinged at the bottom as at **14**, normally closes the open end **12** of the casing **11**. The casing **11** generally has a pair of horizontally spaced and upright sidewalls, one of which is indicated at **16** in FIGS. **1** and **2**. The door **13** has a flange **17** projecting from its perimeter overlying the adjacent end portion of the open end **12** of the casing **11**. Tabs **18** project from the flange **17** on each side of the mailbox or casing **11** and are connected by loose rivets **19** to the sides of the mailbox or casing **11** to define the hinge **14** for swinging movement of the door **12** from a normally closed position to an open position. A conventional signaling device **21**, illustrated in broken lines in FIG. **1**, is secured to the not illustrated sidewall of the mailbox. The signaling device **21** as already known is for the purpose of signaling the mail carrier that a stop is necessary in order to pick up mail that is in the mailbox. The signaling device **21** is operated by the householder to raise same to the position illustrated in FIG. **1** and the mail carrier will lower the flange after the mail pickup has occurred.

A mailbox signaling device **22** embodying the invention is secured to the sidewall **16**, on the opposite side of the mailbox from the signaling device **21**.

The signaling device **22** comprises a mounting bracket assembly **23** including an elongated shaft **24**, the exterior surface **26** thereof defining a cylindrical bearing surface, and has a radially outwardly extending flange **27** secured thereto adjacent one end thereof. An

opening 28 is provided through the central portion of the shaft 24 and is adapted to receive a bolt 29 therethrough. An opening 31 is provided in the sidewall 16 of the mailbox casing 11 and receives the end of the bolt 29. In this particular embodiment, the axially facing surface of the flange 27 remote from the cylindrical bearing surface 26 is flat and is adapted to engage the sidewall 16 of the mailbox casing 11. A nut 32 is threadedly engaged with the end of the bolt 29 on the inside of the mailbox casing 11 to secure the mounting bracket assembly 23 to the side 16 of the mailbox casing 11. The diameter of the head 33 of the bolt 29 is greater than the diameter of the cylindrical bearing surface 26.

The mailbox signaling device 22 further comprises an elongated arm 34 having a flat, flaglike projection 36 extending laterally outwardly therefrom adjacent one end thereof. An opening 37 is provided in the arm 34 and is preferably slightly larger in diameter than the diameter of the bearing surface 26. The opening 37 receives the bearing surface 26 of the shaft 24 therein and the head 33 of the bolt 29 prevents the arm 34 from slipping off of the free end of the shaft 24. The annular flange 27 serves as a spacer to prevent the arm from contacting the sidewall 16 of the mailbox. The portion of the arm 34 on the opposite side of the pivot axis, defined by the bearing surface 26, from the flat, flaglike projection 36 is over twice as thick as the portion of the elongated arm 34 between the bearing surface 26 and the flaglike projection 36 and comprises a latch portion 41.

An elongated recess 38 is provided in the latch portion 41 of the arm 34. An elongated metal rod 39, defining a counter weight, is inserted into the elongated recess 38. The width of the recess 38 is slightly less than the diameter of the counter weight. However, the arm 34 is made of a moldable and flexible synthetic plastic material and the resiliency of the plastic material permits the reception of the counter weight 39 in the recess 38 and to cause the counter weight to be held therein. The end 41 of the arm 34 containing the counter weight 39 is sufficiently long so as to extend in front of the plane defined by the door 13 to the mailbox 10. An elongated slot 42 is provided in the end 41 of the arm 34 and opens outwardly at the end and along the side of the arm 34 remote from the mailbox, as illustrated in FIG. 1.

The combined weight of the arm 34 and the counter weight 39 on one side of the pivot axis defined by the bearing surface 26 is greater than the combined weight of the arm 34 on the opposite side of the bearing surface 26 and the flaglike projection. Accordingly, the end 41 of the arm 34 containing the counter weight 39 has a tendency to urge the arm 34 from a nonsignaling generally horizontal position to a signaling generally vertical position illustrated in broken lines in FIG. 1.

A latch device 43 comprises a generally S-shaped bracket 44 made of a moldable synthetic plastic material and having one leg thereof 46 with an opening 47 therethrough for receiving a bolt 48. A corresponding opening 49 is provided in the door 12 of the mailbox 10 and adapted to receive the stem portion of the bolt 48 on the inside of the door 13 and is adapted to secure the latch device 43 to the door 13.

A leg 52 of the S-shaped bracket 44 is secured to the leg 46 by an connecting piece 53. An upstanding L-shaped projection 54 is secured to the free end of the leg 52 and the horizontal leg 56 thereof is receivable in the slot 42 in the end 41 of the arm 34. The leg 52 of the bracket 44 extends beneath the end 41 of the arm 34 to support the end 41 when the arm 34 is in the nonsignaling horizontal position as illustrated in FIG. 1.

OPERATION

Although the operation of the mailbox signal will be apparent from the foregoing description, a brief summary thereof will be given for convenience.

The mailbox signal 22, described above, is fastened to the upstanding sidewall 16 of the mailbox casing 11 by first drilling a hole 31 in the sidewall 16. The opening 37 in the arm 34 is placed over the bearing surface 26 on the shaft 24 and the bolt 29 is then inserted into the opening 28 through the bracket assembly 23. The bolt 29 is then inserted into the opening 31 in the sidewall 16 of the mailbox and the nut 32 is applied thereto to secure the bracket assembly 23, with the arm 34 pivotally carried thereon, to the sidewall 16 of the mailbox casing 11. The latch device 43 is located in a position so that the leg 56 is received in the slot 42 to hold the arm 34 in a generally horizontal position. The hole 49 is then drilled in the proper location in the door 13 of the mailbox 10. The bolt 48 is then placed in the opening 47 of the bracket 44 and inserted through the opening 49 in the mailbox door 13 and the nut 51 applied thereto to secure the bracket 44 in the proper location to the door 13. It is desirable that the bracket 44 be mounted as far rightwardly (FIGS. 2 and 3) as possible so that the end 41 of the arm 34 will have to be flexed leftwardly in order to cause the lower lip 57 of the slot 42 to snap beneath the leg 56 when the door 12 is closed and the signaling device 22 is set to the horizontal position. This construction will prevent strong winds from dislodging the end 41 from the latch device 42 to give spurious signals to the householder.

Although a particular preferred embodiment of the invention has been disclosed in detail for illustrative purposes, it will be recognized that variations or modifications of the disclosed apparatus, including the rearrangement of parts, lie within the scope of the present invention.

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. In combination with a mailbox having a pair of horizontally spaced upright sidewalls, an open end and a door for closing said open end, a signal device, comprising:

mounting bracket means secured to one of the sidewalls of said mailbox, said mounting bracket means including elongated shaft means extending outwardly from said one side of said mailbox, said shaft means including means on the exterior surface thereof defining a cylindrical bearing surface;

signal flag means comprising an elongated arm made of a synthetic moldable plastic and having means defining an opening therethrough intermediate the opposite longitudinal ends thereof and adapted to receive said bearing surface on said shaft and to thereby pivotally support said elongated arm, a flat, flaglike projection extending outwardly from said elongated arm adjacent one end thereof, counterweight means comprising means defining an elongated recess in said elongated arm extending in the longitudinal direction of said elongated arm and a

metal weight mounted in said recess, said metal weight comprising an elongated rod having a width slightly greater than the width of said recess so that said metal weight can be inserted into said recess and the resiliency of said plastic of said elongated arm will effect a retention of said metal weight in said recess, said counterweight means being provided on said elongated arm on the opposite side of said pivot axis from said flat, flaglike projection, the combined weight of said counterweight means and said elongated arm on said opposite side of said pivot axis being greater than the combined weight of said flat, flaglike projection and said elongated arm on said one side of said pivot axis and means defining a slot in said elongated arm adjacent said counterweight means extending parallel to the longitudinal axis of said elongated arm and opening outwardly at one end thereof; and

latch means secured to said door and projecting outwardly laterally thereof, said latch means including lug means positioned to be received in said slot to hold said elongated arm in a generally horizontally aligned position when said door is in the closed position, said lug means moving longitudinally out of said slot through said outwardly opened end thereof when said door is opened to release said opposite end of said elongated arm to effect a swinging of said elongated arm to a generally vertically aligned position.

2. A signal device according to claim **1**, wherein said mounting bracket means comprises a flange extending radially outwardly from one end of said elongated shaft means, means defining an opening through the central portion of said shaft means and said flange and adapted to receive an elongated fastening member therein and an aligned opening in said one sidewall of said mailbox adapted to receive said fastening member to facilitate a fastening of said mounting bracket means to said mailbox.

3. A signal device according to claim **1**, wherein said flat, flaglike projection is integral with said elongated arm.

4. A signal device according to claim **1**, wherein a plane containing said flat, flaglike projection also contains said pivot axis.

5. In combination with a mailbox having a pair of horizontally spaced upright sidewalls, an open end and a door for closing said open end, a signal device, comprising:

mounting bracket means secured to one of the sidewalls of said mailbox, said mounting bracket means including elongated shaft means extending outwardly from said one side of said mailbox, said shaft means including means on the exterior surface thereof defining a cylindrical bearing surface;

signal flag means comprising an elongated arm having means defining an opening therethrough intermediate the opposite longitudinal ends thereof and adapted to receive said bearing surface on said shaft and to thereby pivotally support said elongated arm, a flat, flaglike projection extending outwardly from said elongated arm adjacent one end thereof, counterweight means secured to said elongated arm on the opposite side of said pivot axis from said flat, flaglike projection, the combined weight of said counterweight means and said elongated arm on said opposite side of said pivot axis being greater than the combined weight of said flat, flaglike projection and said elongated arm on said one side of said pivot axis and means defining a slot in said elongated arm located on said opposite side and extending parallel to the longitudinal axis of said elongated arm and opening outwardly at one end thereof, said shaft means being secured to said one sidewall of said mailbox on the opposite side of said elongated arm from said flat, flaglike projection and said slot; and

latch means including bracket means for securing said latch means to said door, said latch means projecting outwardly laterally from said door, said latch means includes an elongated support secured to said bracket means which extends laterally outwardly therefrom beneath said opposite end of said elongated arm to support said opposite end of said elongated arm when said elongated arm is in said horizontally aligned position and includes an upstanding L-shaped projection adjacent the outer end of said support, the horizontal leg of which is received in said slot to hold said elongated arm in a generally horizontally aligned position when said door is in the closed position, said horizontal leg moving longitudinally out of said slot through said outwardly opened end thereof when said door is opened to release said opposite end of said elongated arm to effect a swinging of said elongated arm to a generally vertically aligned position.

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