Aug. 11, 1970 W. WIEBE 3,523,639

DOOR TRIGGERED SERVICE INDICATOR FOR RURAL TYPE MAILBOX

Filed Aug. 2, 1968

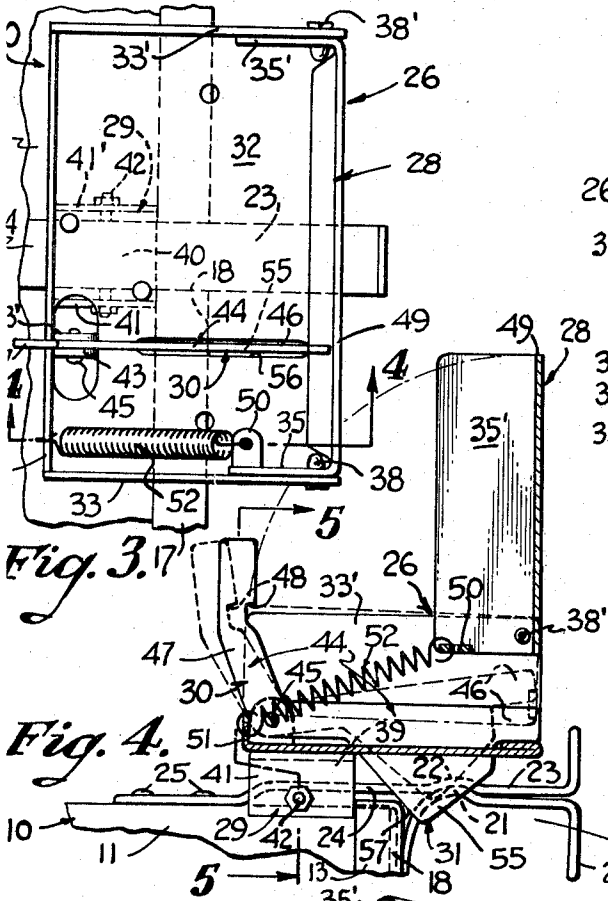


Fig. 3.

Fig. 4.

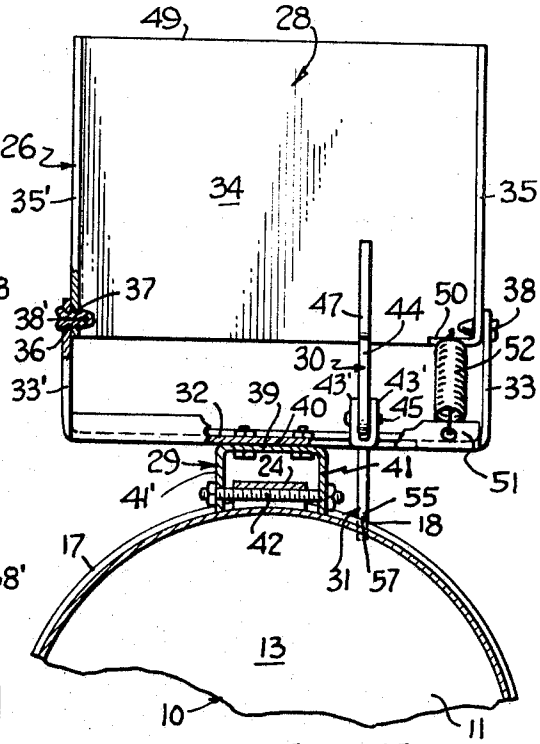


Fig. 5.

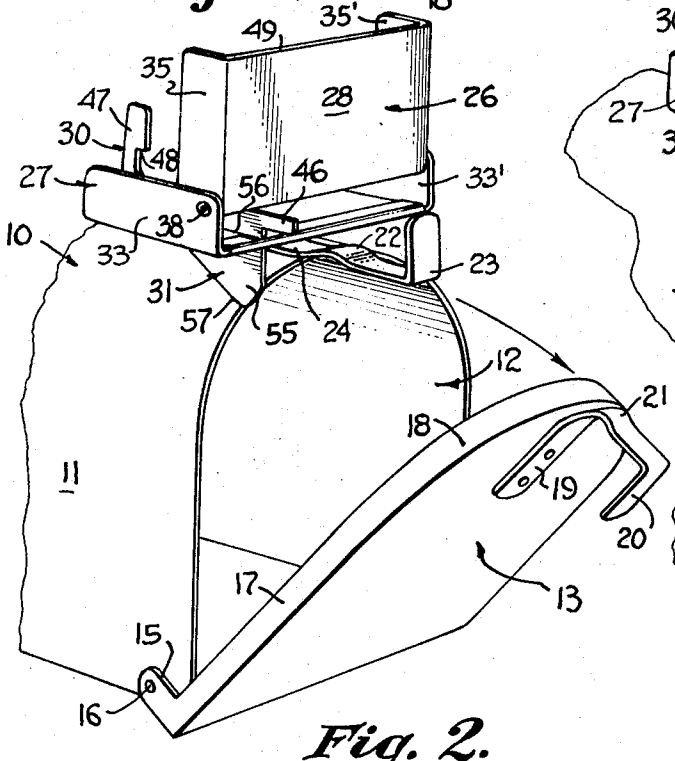


Fig. 2.

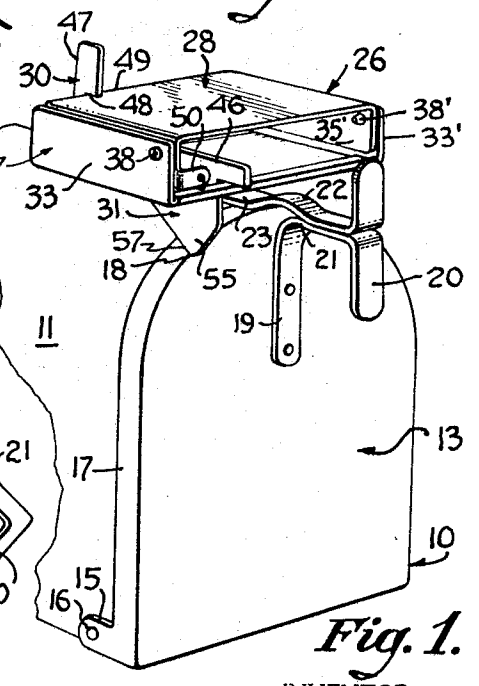


Fig. 1.

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DOOR TRIGGERED SERVICE INDICATOR FOR RURAL TYPE MAILBOX

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ABSTRACT OF THE DISCLOSURE

A service indicator including a channel-like housing mountable on the steel strap door latch of a rural type mailbox into which a spring loaded pivoted flag is nestingly housed in non-indicating condition by engagement with one notched leg of a dog-leg lever pivotally mounted within and on the housing and having a cam detent normally disposed in the path of swing of the door of such box toward opened position for automatically releasing the spring loaded flag for movement into raised-indicating condition.

BACKGROUND

This invention is related to mailbox signals and particularly to a device for automatically indicating that a rural type mailbox has been opened. There are many types and styles of flag indicators adapted for use on rural type mailboxes. The art is found mainly in class 232, sub-class 35 of the United States Patent Office.

SUMMARY OF INVENTION

The present invention contemplates the provision of a service indicator which is easily applied to a rural type mailbox for operation by the door thereof when the latter is moved from closed to open condition.

Another object is to provide a service indicator in which a flanged spring loaded flag is adapted to be nested in non-indicating condition within a channel-like mounting and the latter secured to the spring steel door catch of a rural type mailbox for supporting a cam detent of a flag latching means in the path of swing of the door to be operated thereby for automatically releasing the flag for movement into a raised, indicating condition upon opening of such door.

These and other objects and advantages of the present invention will become apparent from a reading of the following description in the light of the drawings in which:

FIG. 1 is a fragmentary perspective view of the door end of a rural type mailbox having the service indicator of the present invention applied thereto.

FIG. 2 is a view similar to that of FIG. 1 with parts in a different position following opening of the door.

FIG. 3 is a plan view of the service indicator of FIG. 2, the mailbox and door being fragmentarily shown.

FIG. 4 is a vertical section through FIG. 3 taken along line 4—4 thereof.

FIG. 5 is a vertical section through FIG. 3 as seen from line 5—5 thereof.

Referring to the drawing a rural type mailbox, generally designated **10**, is shown as of the conventional and regulation style of a receptacle **11** closed at all sides except at one open end **12** which is coverable by a front door **13**. The door **13** is hingedly mounted on the base of the receptacle **11** by a pair of rearwardly extending ears **15** for swinging movement about a horizontal axis A. The ears **15** are pivotally connected by rivets **16** which extend co-axially of each other on axis A into the respective sides of the receptacle.

The door **13** has a rearwardly extending flange **17** at its sides and arcuate top **18** which embraces the open end **12** of the receptacle **11** to close the same when the door is in raised or covering position. At the arcuate upper end **18** of the door **13** a spring clip **19** is secured to the outer face of the door. This clip **19** has a forwardly extending handle portion **20** provided with a slight depression **21** on its upper surface. The depression **21** is adapted to receive and engage a comparable detent **22** on the forwardly extending portion **23** of a spring steel arm **24** secured by rivets or the like to the top of the receptacle **11** as at **25** adjacent the open end **12** of the latter.

GENERAL DESCRIPTION

The service indicator of the present invention designated **26** in the drawings generally comprises a mounting **27** for a flag **28**, means **29** for securing the mounting to the mailbox **10** and a triggered latching means **30** between the flag and mounting including a cam **31** disposed to be engaged by the door **13** when the latter is moved from closed toward opened condition.

DETAILED DESCRIPTION

As best seen in FIG. 1 the flag **28** and mounting **27** are a pair of channel shaped members which nest together, channel to channel to provide a partial closure for the triggered latching means **30** of the indicator **26**.

The channel shaped mounting **27** has a web **32** from which side flanges **33–33′** extend upwardly to provide a trunnion-like support for the flag **28**. The flag **28** is also channel shaped having a web **34** from which a pair of side flanges **35–35′** extend at a spaced relation such as to fit within the side flanges **33–33′** of the mounting member **27**. Each of the flanges **33–33′** and **35–35′** are provided with aligned bores **36** and **37** through which loosely fitted rivets **38** and **38′** extend. The rivets **38–38′** pivotally mount the flag **28** upon the trunnion-like support thus provided for swinging movement about an axis B adjacent one end of the mounting **27**.

A mounting bracket **39** is secured to the underside of the web **32** of mounting **27** adjacent that end of the channel opposite the axis B of the trunnion-like support for the flag. The bracket **39** is a U shaped clip having its bight portion **40** secured by bolts or the like to the web **32** along the fore to aft center thereof.

The legs **41–41′** of the U shaped bracket **39** are spaced to straddle the steel spring arm **24** of the door latch on the mailbox (see FIGS. 3, 4 and 5). A single bolt **42** extending through the legs **41–41′** of bracket **39** and beneath the steel spring arm **24** serves to secure the service indicator **28** to and centrally of the mailbox **10**.

The web **32** of the channel shaped mounting member **27** has a pair of ears **43–43′** die punched upwardly within such channel and offset slightly from the fore to aft center thereof. These ears **43–43′** are spaced apart sufficiently to receive a flat plate dog-leg lever **44** therebetween. The lever **44** is pivotally mounted on the ears **43–43′** by a pin **45** extending therethrough. This pivotal connection by pin **45** is at the heel or corner of the dog-leg lever **44** such that one arm **46** thereof extends parallel to the web **32** of member **27** and the other leg **47** extends upwardly therefrom.

The upwardly extending leg **47** is slightly offset rearwardly from the axis of pivotation at pin **45** such that the upper extremity of leg **47** is disposed rearwardly of the back edge of the mounting member **27**. The leg **47** has a notch **48** formed in its front edge for engaging the free edge **49** of the web **34** of the flag **28** opposite its pivotal connection with the mounting member **27**. This maintains the web **34** substantially parallel to the web **34** of the mounting member **27** as best seen in FIG. 1 and in dotted lines FIG. 4.

One side flange **35** of the channel shaped flag **28** has an inwardly projecting ear **50** adjacent to but spaced from the pivotal connection at rivet **38**. The rearward end of the web **32** of mounting member **27** has an upturned reinforcing flange **51** to which one end of a tension spring **52** is attached. The opposite end of the spring **52** is attached to the ear **50** on the flag **28** so as to normally pull the same into a raised or indicating condition as illustrated in FIGS. 4 and 2. However, when the flag **28** is manually swung down into nested, parallel and non-indicating relation to the mounting member **27**, the free end **49** of the flag **28** engages in the notch **48** on the triggered latching means **30** to thereby resist the action of the now tensioned spring **52**.

Means for automatically releasing the flag **28** for movement into raised or indicating condition comprises a cam detent **55** formed on the one arm **46** of the dog-leg lever **44** so disposed as to be engaged by the crown **18** of the door **13** as the latter swings toward opened condition. As illustrated in FIGS. 3 and 4 the entire service indicator **26** projects forwardly beyond the open front **12** of the mailbox **10**. The cam detent **55** projects downwardly so as to extend over the arcuate crown **18** of the door **13** when the latter is in closed condition. To accommodate the cam detent **55** the web **32** of the mounting member **27** has a slot **56** formed therein in alignment with the mounting ears **43–43'** upon which the lever **44** is pivoted. It will thus be seen that the cam detent **55** extends through the slot **56** while the lever arm **46** rests upon the web **32** (FIG. 4) the back edge **57** of the cam detent **55** is thus disposed in the path of movement of the door **13** as the latter is swung away from covering or closed condition relative to the open end **12** of the mailbox **10**.

In a normal operation the service indicator **26** has its flag **28** latched in nested, non-indicating condition parallel to the mounting member **27**. When the mailman or anyone deposits a letter or communication in the box **10** the door **13** of the latter must be opened. The arcuate crown **18** of the door **13** thus strikes the aft edge **57** of the cam detent **55**, raises the latter upwardly thus rocking the dog-leg lever **44** to dotted line position (counterclockwise FIG. 4). This releases the notched edge **48** of the lever from engagement with the free end **49** of the flag **28** whereupon the tensioned spring **52** rocks the flag **28** into upright-indicating condition as illustrated in FIGS. 2 through 5 of the drawings.

As is well gnown rural type mailboxes are grey or metallic in color. To make the flag **28** more visible from a distance its exposed sides and upper surface are coated with a distinguishing color such as red. Consequently, when the flag is down, in non-indicating condition, the flag is nested within the channel shaped mounting member **27** and its top (web **34** of the flag) not visible from a distance. However, when the flag **28** is in raised, indicating condition, the exposed sides as well as the web of the channel shaped flag **28** are visible from all angles of the compass.

The foregoing is so even though the door **13** is again closed after deposit of the mail in the receptacle portion **11** of the box **10**. When the owner or addressee of the box **10** empties the box and closes the door **13**, he simply presses or swings the flag **28** down into nested position within the mounting member **27**. The dog-leg lever **44** being weighted on its arm **46** by the cam detent **55** will assume latching condition wherein the notch **48** on leg **47** of the triggered latching means **30** again latches onto the free end **49** of flag **28** to latch the latter in non-indicating condition.

Having thus described the foregoing service indicator for rural type mailboxes in specific detail it will be appreciated by those skilled in the art that the same may be modified, altered and/or varied without departing from

the spirit of my invention therein. I therefore desire to avail myself of all modifications, alterations and/or variations as may fairly come within the purview of the appended claims.

What I claim as new and desire to protect by Letters Patent is:

1. A service indicator for a rural type mailbox having a steel spring door latch secured to its upper surface and extending over the open end of such box for securing engagement with a front door pivotally mounted at its lower end to such box for swinging movement about an axis transverse to the latter comprising in combination:

(a) a channel like mounting member;

(b) means for securing said mounting member to the upper surface of said box, with the flanges of said mounting member upstanding;

(c) a channel shaped flag having side flanges disposed to nest within the upstanding flanges of said mounting member;

(d) means for pivotally mounting the flanges of said flag to the upstanding flanges of said mounting member adjacent the fore end of the latter for pivotal movement of said flag about an axis parallel to and offset from the axis of swing of said door;

(e) spring means between said flag and said mounting member for normally urging said flag into raised, indicating condition relative thereto;

(f) a dog-leg lever pivotally mounted on said mounting means and having an upstanding leg offset rearwardly of said mounting means and provided with a notch in its fore edge for engaging the free end of said flag to hold the latter nested within said mounting means; and

(g) a cam formed on said dog-leg lever and disposed in the path of swing of said door for engagement thereby when said door is moved toward opened position for automatically releasing said flag from engagement with said notch in the fore edge of the upstanding leg of said dog-leg lever and for movement into raised condition under the influence of said spring means.

2. The service indicator of claim **1** in which said dog-leg lever has:

(a) a forwardly extending arm formed integrally with the cam thereof, and in which;

(b) said mounting member has a slot formed therethrough in the plane of swing of said dog-leg lever and in the region of the upper edge of said door for passage of said cam through such slot for engagement by said door and for weighting said dog-leg lever in a direction wherein the notched fore edge of said upstanding leg thereof is constantly urged toward latching engagement with the free end of said flag except when said cam is engaged by said door as the latter is moved past said cam.

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