May 8, 1951 C. M. TURNER 2,551,915

MAIL DEPOSIT CARRIER ACTUATED SIGNALING FLAG

Filed Jan. 16, 1948 2 Sheets-Sheet 1

Fig. 1.

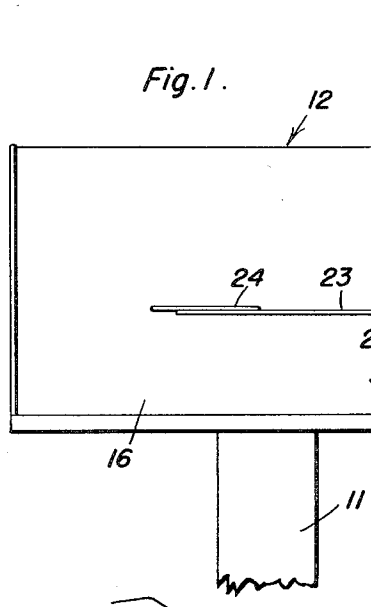


Fig. 2.

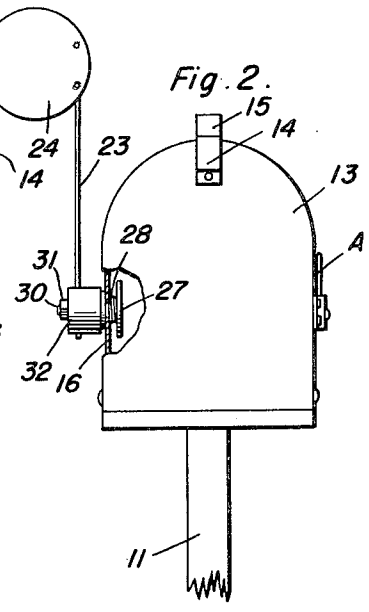


Fig. 3.

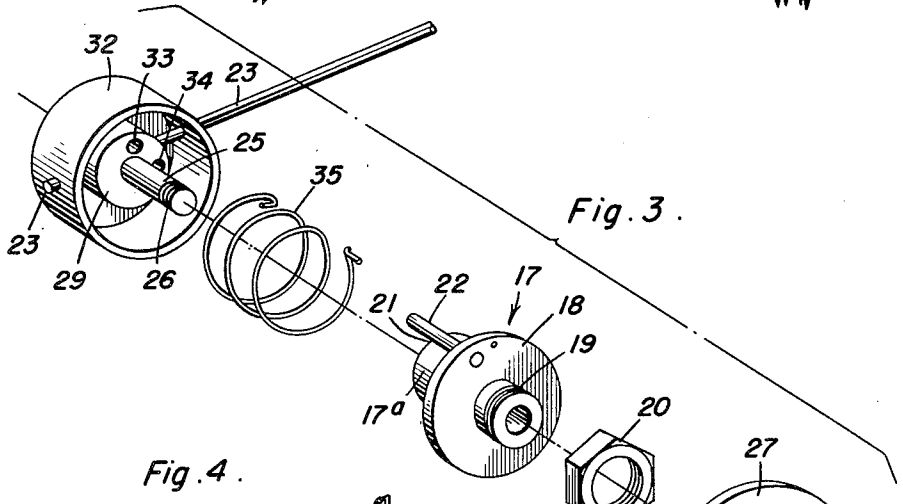


Fig. 4.

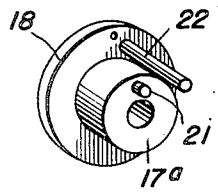
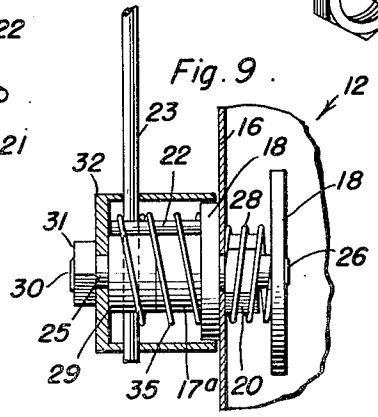


Fig. 9.



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MAIL DEPOSIT CARRIER ACTUATED SIGNALING FLAG

Filed Jan. 16, 1948 2 Sheets-Sheet 2

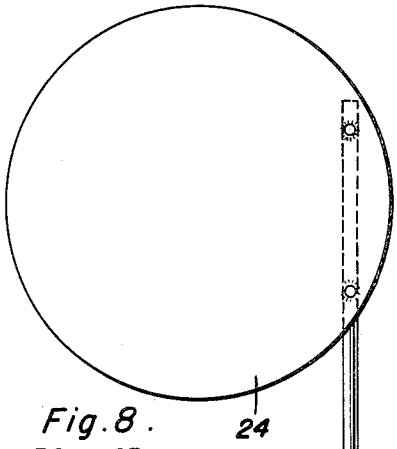


Fig. 7.

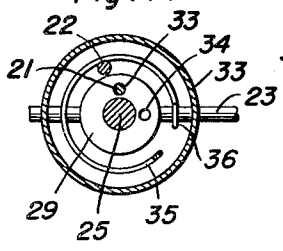


Fig. 8.

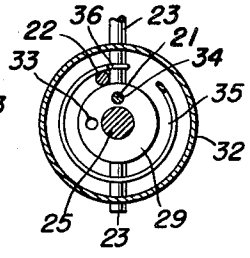


Fig. 6.

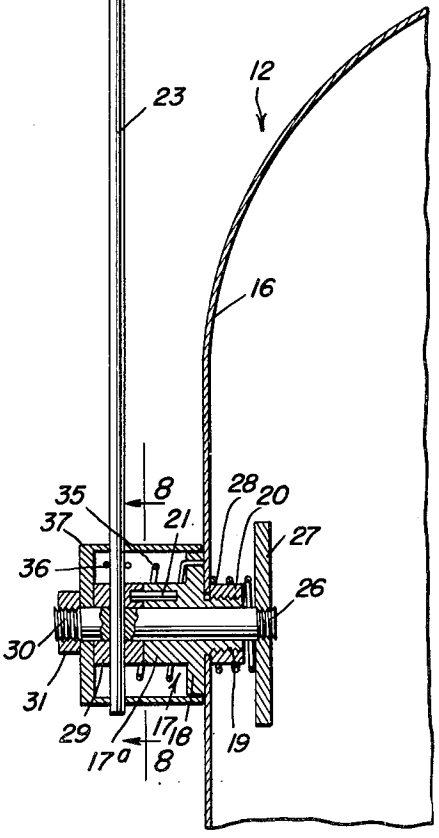
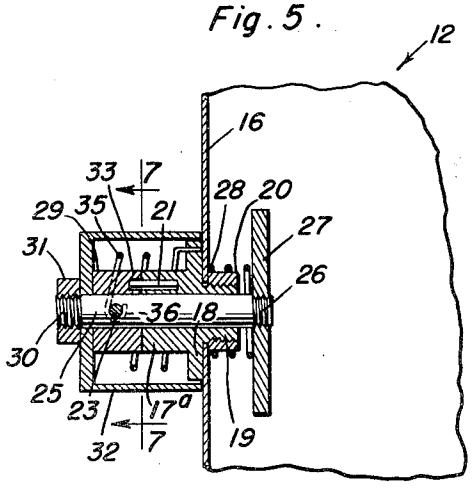


Fig. 5.



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Patented May 8, 1951

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UNITED STATES PATENT OFFICE

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MAIL DEPOSIT CARRIER ACTUATED SIGNALING FLAG

Carl M. Turner, Lima, Ohio

Application January 16, 1948, Serial No. 2,712

5 Claims. (Cl. 232—34)

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This invention relates to certain new and useful improvements in rural free delivery mailboxes and has reference, in particular, to auxiliary signalling means forming a part of the box structure and mutually performing to serve the essential requirements of both residents and mail carriers.

Needless to say, the art to which my invention relates is both active and well developed. Therefore, many and varied types of signalling flags and the like have been patented and have been used and proposed for use. Experience has shown, however, that constructions, the forms and few styles known to me, are inadequate to satisfactorily serve mail carriers and residents alike. It follows, therefore, that the chief purpose of the instant invention is to provide novel and improved means such as will, it is believed, comply with virtually all needs of the aforementioned persons as well as the demands of postal authorities.

Briefly, in carrying out the principles of the present invention, a construction is provided wherein the signalling flag assumes an "up" position when mail has been deposited by a carrier and assumes a "down" position when the deposited mail has been removed by the resident.

One object of the invention is to provide a simple and expedient signalling device which is substantially fool-proof, is possessed of reliable tell-tale requirements for all parties involved, and which is characterized by novel manually-actuated trip means situated and concealed within the mailbox and located just inwardly of the usual hingedly mounted door, whereby to permit same to be operated by the mail carrier at the time mail is deposited, by him, in the box.

Another object of the invention is to provide a highly practical and reliable signalling device which is such in construction and adaptability that the step of swinging the signalling flag to a "down" position by the resident re-sets the mail carrier actuated means, the latter means then serving to retain the flag in the stated down position.

A further object is to provide a simple and economical signalling device characterized by a suitable casing in which the essential mechanism is housed, the finished construction being such that it meets the requirements of the manufacturer and user and forestalls the desire of would-be pranksters to tamper with same.

Another object of the invention is to provide a construction which is particularly adaptable to attainment of the end desired, the chosen embodiment thereof being devoid of complexities, and therefore simple and practical, the same being exteriorly mounted on a side of the box opposite to the usual signalling flag A, and the arrangement being such that its adoption and use

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meets not only the requirement of users but will undoubtedly comply with the more stringent requirements of postal authorities.

Briefly, the preferred embodiment of the invention is characterized by a simple hub assembly which is clamped in alignment with a simple hole formed in a side wall of the box, said assembly providing a bearing for a rocker shaft, the rocker shaft being mounted for sliding and oscillation in the bearing, said shaft carrying the flag on its outer end and a simple push button on the inner end, the button being on the interior of the box for convenience of operation by the mail carrier. In addition, simplified detent means is provided whereby the flag will be positively held and retained in both "up" and "down" positions.

Other objectives and appreciably resultful advantages will become evident as the reader considers the following detailed description and the complemental illustrative drawings.

In the drawings, wherein like numeral are employed to designate like parts throughout the views:

Figure 1 is a side elevational view of a conventional-type rural free delivery mailbox and the improved auxiliary or additional signalling flag mounted for use thereon.

Figure 2 is a front end elevation of the structure seen in Figure 1, observing it in a direction from right to left, a portion of the door and box being broken away to expose the push button.

Figure 3 is an exploded perspective view showing, in sequential order, all of the essential parts which go in to make up the complete construction.

Figure 4 is a perspective view of one of the principal parts of the stated hub assembly.

Figure 5 is a fragmentary sectional and elevational view taken vertically, the flag being in the "down" position as shown in Figure 1.

Figure 6 is a similar vertical sectional view taken on the line 6—6 of Figure 1, with the flag in its "up" position.

Figure 7 is a section on the line 7—7 of Figure 5, looking in the direction of the arrows.

Figure 8 is a similar sectional view on the line 8—8 of Figure 6, looking in the direction of the arrows.

Figure 9 is a view based on Figure 6 and showing the parts in elevation to bring out certain functions not amply readable in the consideration of Figures 5 and 6.

By way of introduction to the detailed description, I desire to point out that my invention is in the form of an attachment for a standard-type rural mailbox having the usual swingable side flag A (not detailed) for outgoing mail, and when installed, will provide a second flag, the latter functioning to denote that incoming mail has been left in the box by the mail carrier, this for the resident.

I further desire to point out at this stage that the present invention has to do with refinements and improvements based upon a broadly similar signalling flag arrangement disclosed in application Serial No. 718,632 of December 27, 1946, now Patent No. 2,539,078, of which the present application is a continuation-in-part.

Referring now to the drawings by distinguishing reference numerals, it will be seen in Figure 1 that a suitable supporting post 11 supports a more or less conventional type rural mailbox 12 which is open at its front or outer end and provided with a down-swinging door 13, said door having a finger latch 14 engageable with a retaining keeper 15. In carrying out the invention, a small opening is punctured or otherwise formed in the side wall 16 to accommodate the hub assembly 17. The latter comprises a bearing 17*a* having an outstanding flange 18 which abuts the outer surface of said wall 16. In addition, there is a neck (a part of said bearing) 19 and this protrudes into the interior of the box, the same being screw-threaded to accommodate a clamping and retaining nut 20. The outer end of the bearing is provided with a short outstanding stud 21 which constitutes a detent. The flange 18 has a projecting pin 22 which, as best shown in Figure 9, constitutes a stop to limit the swinging movement of the staff 23 of the signalling flag 24 in a direction from left to right in Figure 1. This is the position in which the staff is vertical and the flag is thus in an "up" position.

Referring now to Figures 5 and 6, the numeral 25 designates a rocker shaft which is both slidably and rotatably mounted in the bearing or hub. The inner end of the shaft protrudes through the hub and into the mailbox, where it is screw-threaded, as at 26, to accommodate a detachable disk 27 which constitutes a push button and which is operable by the mail carrier. Incidentally, a coiled spring of an expansion type, as at 28, is provided and surrounds the assembling nut and is interposed between the wall 16 and the push button 27. This obviously serves to force the push button from left to right in Figures 5 and 6.

It will be noted that a collar 29 surrounds the outer end portion of the rocker shaft, and outwardly of this, the rocker shaft is screw-threaded, as at 30, to accommodate an assembling nut 31 which serves partly to hold in place a cup-like casing 32. The disk portion of the casing is interposed between the nut and the collar and, as a unique arrangement, it will be seen that the staff of the flag pierces the rim of the casing, passes through the collar and also through the rocker shaft, and thus serves to assemble the collar and casing on the rocker shaft. The collar 29 is of a diameter corresponding to the hub bearing 17*a* and one face of said bearing is in wiping contact with said collar and the face of the latter is provided with two keeper sockets 33 and 34 which serve to accommodate the projecting detent 21 on said hub bearing. The sockets 33 and 34 are approximately ninety degrees apart and the socket 33 serves to retain the flag in its "down" position while the socket 34 comes into play to hold the flag in its "up" position. To discern how this is accomplished, attention should be given to Figures 7 and 8, for in Figure 7 the flag is down, and in Figure 8 the flag is up. A torsional spring 35 is provided and is anchored at one end on the flange 18 and connected at its opposite end to the flag staff, as at 36 in Figure 8. The spring operates to automatically swing the flag from its "down" to its "up" position, as is obvious. Secondly, the stationary stop pin 22, previously mentioned, projects into the path of movement of the up-swinging flag and checks the movement of the flag staff when it arrives in its perpendicular or "up" position. In operation, when the flag is down, as shown in full lines in Figure 1, the detent 21 projects into the socket 33 and thus the flag stays down. Incidentally, the flag is swung down and placed in this position by the resident or owner of the box. It will be noted, too, that the slight horizontal sliding movement of the rocker shaft 25 in its bearing 17*a* permits the collar 29 to move out from wall 16 sufficiently to clear the detent 21, whereupon the torsional spring 35 becomes a return spring and pulls the parts together and seats the detent in its keeper socket. The spring will have to be especially made to serve as a contraction as well as a torsional member.

Obviously, when the push button 27 is depressed, that is, forced in a direction from right to left in Figures 2, 5, 6 and 9, the rocker shaft 25 slides outwardly through the bearing 17*a*, permitting the collar 29 and its socket 33 to be disengaged from the detent 21, whereupon the torsional spring 35 again comes into play and automatically swings the flag from "down" to "up" position. As the flag reaches its extreme "up" position, it comes into contact with and is stopped by the stop pin 22 and at the same time, or approximately so, the detent 21 then snaps into the socket 34, so that the flag is thus held in the stated "up" position. The same spring 35 assists in accomplishing this result, as is obvious. It might be pointed out, too, that the cushioning and button return spring 28 may be of sufficient strength to assist in feeding the detent in its respective keeper sockets 33 and 34 in both "down" and "up" positions.

It is to be understood, however, that even though there is herein shown and described a preferred embodiment of the invention, the same is susceptible to certain changes fully comprehended by the spirit of the invention as herein described and within the scope of the appended claims.

Having described the invention, what is claimed as new is:

1. A rural mailbox attachment of the class shown and described comprising a flanged bearing having means whereby same may be securely mounted on an apertured wall of a mailbox, a rocker shaft mounted for oscillation in said bearing, a collar surrounding the rocker shaft and having one end in rotary abutting contact with a coacting end of the bearing, keeper seat means embodied in said collar, detent means carried by said bearing and engageable with said keeper seat means, a casing clamped on an end portion of said rocker shaft and enclosing the flanged adjacent end portion of the bearing and collar, a stop element carried by said flange and enclosed in said casing, a signalling flag including a staff passing through the rim portion of the casing, through said collar and through said rocker shaft, a coiled spring housed and confined in said casing, surrounding said collar and coacting end portion of said bearing, and attached at one end to said staff and attached at its opposite end to the flange.

2. A rural mailbox attachment of the class shown and described comprising a hub assembly embodying a bearing having an outstanding

flange provided with a laterally disposed eccentric stop pin parallel to the bearing, one end of the bearing being screw-threaded, the other end of the bearing being provided with an outstanding detent pin in spaced parallelism to said stop pin, an assembling nut carried by the screw-threaded end of said bearing, a rocker shaft mounted for oscillation as well as sliding in said bearing, a push button detachably mounted on one end of said rocker shaft at a point beyond the bearing and stated assembling nut, a cylindrical cup-like casing including a body portion and a rim portion, said rim portion surrounding the peripheral edge portion of said flange, one end of said rocker shaft extending through an aperture in the body portion and being screw-threaded, a collar surrounding the rocker shaft and enclosed within the casing in end-to-end abutting contact with an adjacent end of said bearing, said collar having circumferentially spaced keeper sockets for alternate reception of said detent pin, said rim, collar and rocker shaft having aligned staff openings, a signalling flag comprising a flag and a staff, said staff extending through the aligned openings and being axially turnable to permit the display position of said flag to be angularly adjusted, and a coiled spring in said casing anchored at one end on the flange, surrounding the bearing, and collar, and anchored at its opposite end on said staff, and an assembling and clamping nut screwed on the screw-threaded end of said shaft and clamping said casing in its assembled position and binding said staff in an established position.

3. In a rural mailbox and mail carrier actuated signal of the class described, in combination, a conventional-type mailbox having an entrance at one end normally closed by the usual hingedly mounted door, a horizontal bearing fixed in one vertical side wall of said mailbox near the floor of the latter and just inwardly of said door, a rocker shaft mounted for both rotation and sliding in said bearing and having its inner end projecting beyond said bearing into said mailbox and its outer end projecting beyond said bearing and said one side, a signalling flag having a staff connected with the outer end of said rocker shaft and disposed at right angles to the latter and parallel to said one side, detent means interposed between said staff and bearing for releasably maintaining said staff in a horizontal "down" position, relatively fixed stop means on said bearing and in the path of swing of said staff for checking and retaining the latter in its "up" position, spring means connected with said staff and bearing and functioning to swing the staff from its "down" to its "up" position when said detent means is released, a trip button secured to the inner end of said rocker shaft and adapted to be pushed to slide the shaft in said bearing against the tension of the spring means and to thus release said detent means, and a spring interposed between said side wall and button to return the button to its usual "set" position.

4. In a rural mailbox and mail carrier actuated signal of the class described, in combination, a conventional-type mailbox having an entrance at one end normally closed by the usual hingedly mounted door, a horizontal bearing fixed in one vertical side wall of said mailbox on a plane above the bottom of the latter and just inwardly of said door, a rocker shaft mounted to both rotate and slide in said bearing and having its inner end projecting beyond said bearing into said mailbox and having its outer end projecting beyond said bearing and said one side, a collar surrounding the outer end portion of said rocker shaft and the adjacent end of said bearing, detent means interposed between abutting surfaces of said collar and bearing, a casing mounted on the outer end portion of said rocker shaft and having a cylindrical rim portion concentrically surrounding said bearing and collar, said rim portion, collar and rocker shaft having aligned holes therein, a signal flag having a staff, said staff passing through all of said aligned holes and serving to key the collar and casing to the shaft and to simultaneously mount the staff for operation in conjunction with said shaft, collar and casing, a stop pin fixedly mounted on said bearing and confined within the limits of said casing, and a push button secured to the inner end portion of said rocker shaft, said detent means serving to maintain said staff normally in a horizontal position and said stop means serving to check the upswing of the staff and to maintain same in a vertical "up" position.

5. In a rural mailbox and mail carrier actuated signal of the class described, in combination, a conventional-type mailbox having an entrance at one end normally closed by the usual hingedly mounted door, a horizontal bearing fixed in an aperture in one vertical side wall of said mailbox, said bearing having a flange bearing against the exterior surface of the stated side wall and of a diameter greater than said aperture and substantially sealing said aperture, a rocker shaft mounted for rotation as well as sliding in said bearing and having its inner end projecting beyond said bearing into said mailbox and its outer end projecting beyond said bearing and said one side, a collar surrounding the outer end portion of said rocker shaft and having an end abutting the adjacent end of said bearing, the latter end of said bearing having an outstanding detent pin, the corresponding end of said collar having circumferentially spaced keeper sockets for selective reception of said detent pin, a horizontal stop pin secured eccentrically to said flange and disposed in parallelism with said bearing and the periphery of said collar, a substantially cylindrical casing mounted on the outer end of said rocker shaft and having a rim portion enclosing the collar, coacting portion of said bearing and fitting telescopically over and rotatable about the periphery of said flange, a signalling flag having a staff piercing said rim, collar and rocker shaft, a coiled spring within the confines of said rim and surrounding the bearing and collar and having one end anchored on said flange and the other end attached to said staff, and a spring returned push button secured to the inner end of said rocker shaft.

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