May 14, 1929. J. H. KEERAN 1,712,827

PAPER AND MAIL BOX

Filed April 30, 1928

Fig. 1.

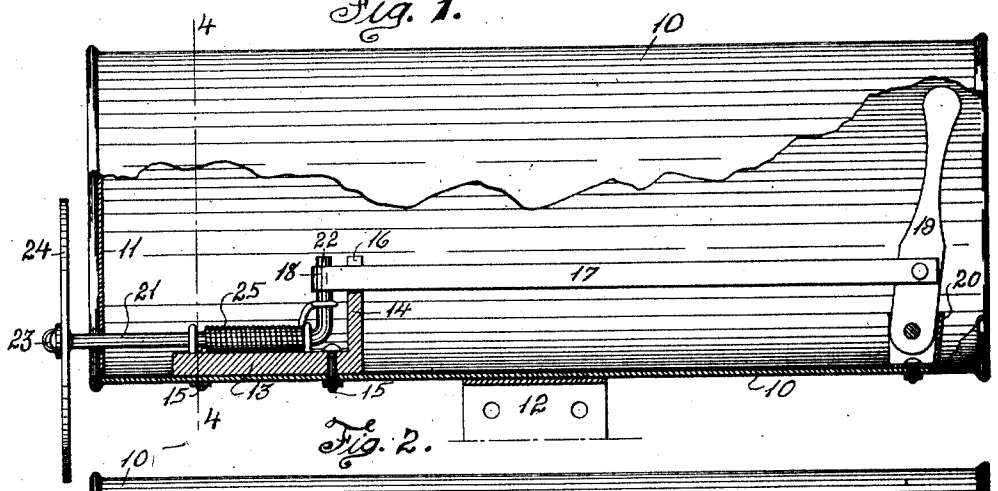


Fig. 2.

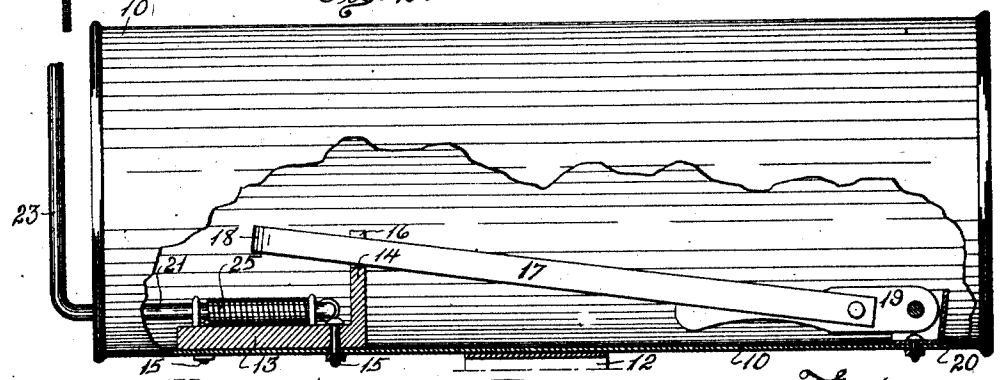


Fig. 4.

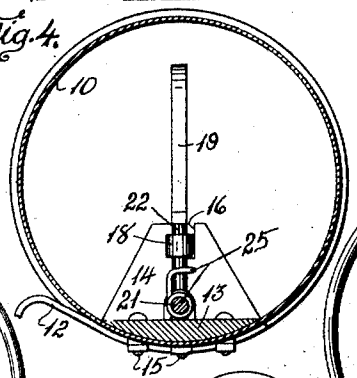


Fig. 6.

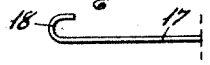


Fig. 5.

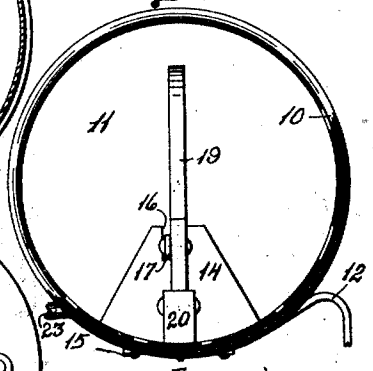


Fig. 3.

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UNITED STATES PATENT OFFICE.

JOSEPH H. KEERAN, OF ANKENY, IOWA.

PAPER AND MAIL BOX.

Application filed April 30, 1928. Serial No. 274,063.

An object of this invention is to provide an improved mail box adapted to display a visual signal when and after mail matter has been deposited in said box.

A further object of the invention is to provide an improved mail box equipped with a visual signal adapted to be tripped and displayed by the deposit of mail matter in said box.

A further object of the invention is to provide an improved visual signal and signal trip mechanism for mail boxes.

A further object of the invention is to be found in the provision of improved signal operating mechanism for mail boxes.

A further object of the invention is to be found in the provision of improved trip mechanism adapted for the actuation of a visual signal in combination with a mail box, said mechanism being operated by the deposit of mail matter in said box.

My invention consists in the construction, combination and arrangement of elements hereinafter set forth, pointed out in my claims and illustrated by the accompanying drawing, in which—

Figure 1 is a side elevation of a mail box equipped with my improvement, the signal being set in its untripped position, certain parts of the mail box being broken away to show interior construction. Figure 2 is a side elevation similar to Figure 1, the signal and operating mechanism being shown in tripped position. Figure 3 is a rear end view of the showing of Figure 1, dotted lines indicating the tripped position of the signal. Figure 4 is a vertical section on the indicated line 4—4 of Figure 1. Figure 5 is a front end elevation of the showing of Figure 1. Figure 6 is a detail plan view of one end of a lock bar employed in the improvement.

In rural districts, particularly, mail boxes are frequently located at a considerable distance from the habitations served thereby and hence it becomes important, in order to save frequent and futile trips to the mail box, that some signalling means be had in combination with the mail box to indicate when mail has been deposited therein. Numerous and varied signalling devices have been employed in the past, most of which are designed to be set or operated by the postman at the time the mail is deposited, but none of which are as efficient and positive in action as that hereinafter described.

In the construction of my improvement as shown, the numeral 10 indicates a mail box, in this instance cylindrical in form, preferably formed of sheet metal, having one open end through which mail matter may be inserted and a closing plate 11 transversely of the other end and a suitable bracket 12 whereby the box may be mounted on and secured to a support. The type and general form of mail box illustrated is in common and general use and indicates but one of many forms to which my improvement may be applied with advantage. A base 13 is formed with an upwardly-extending flange 14 at one end and is adapted to be positioned within the box 10 adjacent the closed end thereof and suitably secured thereto by means of bolts 15, or otherwise, the flanged end 14 of the base 13 being toward the open end of the box 10. A notch 16 is formed in and opens upwardly through the upper margin of the flange 14 and a lock bar 17, having one end curved to form a hook 18, is slidingly mounted in the notch 16 with the hook 18 between the flange 14 and plate 11 and above the base 13, said bar 17 extending longitudinally of the box 10 toward the open end of said box where it is pivotally connected to a lever 19. The lever 19 is pivoted for actuation through a vertical arc longitudinally of the box 10 in a suitable base 20 which is bolted or otherwise secured to the bottom of said box in such manner as to position the lever 19 centrally of and substantially across the open end of said box when said lever is in its vertical or raised position. It is of course apparent that as the lever 19 is rocked about its pivot longitudinally of the box 10, the bar 17 is caused to reciprocate longitudinally of said box, the hooked end of said bar sliding in and being supported by the notch 16 of the flange 14. A rod 21 is mounted for rotation on the base 13 longitudinally of the box 10 and extends through an aperture in the plate 11, the end 22 of said rod within the box 10 being bent at right angles to the rod 21 to form a leg parallel with the flange 14 and the end 23 of said rod without said box being also

bent at right angles to said rod to form a leg in a plane parallel with that of the end 22, the end 23 and rod 21 lying in a plane at right angles with the plane common to the end 22 and rod 21. Thus, when the leg 22 is vertical the leg 23 is horizontal and vice versa, contact of the leg 22 with the base 13 limiting rotation of the rod 21 in one direction and contact of said leg with the hooked end of the bar 17 limiting rotation of said rod in the other direction, so that said rod and the legs 22 and 23 are free to rotate through arcs of substantially ninety degrees. A target 24, of any desired size and shape and preferably painted or colored so as to be readily visible at a considerable distance, is secured to the outer end of the leg 23, said leg being of a length sufficient to permit said target to rise above the box 10 when said leg is in its vertical position. A helical spring 25 is wound around the rod 21 between its bearings on the base 13, one end of said spring bearing against said base and the other end of the spring being hooked about the leg 22, the action of the spring 25 being such as to normally hold the leg 22 against the base 13 and the leg 23 bearing the target 24 in vertical position.

In the practical operation of my improvement, the elements being in the tripped position shown in Figure 2, the leg 23 and target 24 are manually depressed from vertical to horizontal position against the action of the spring 25, bringing the leg 22 into vertical position against the lock bar 17, the lever 19 is moved upwardly and toward the open end of the box 10, moving the lock bar 17 forwardly longitudinally of the box 10 and engaging the hooked end of said bar with and about the upper end of the leg 22, thus retaining said leg in its vertical position and the leg 23 with its target 24 in its horizontal position as shown in Figure 1. When the elements have been positioned as shown in Figure 1, the device is in its set position, and insertion of mail through the open end of the box 10 will displace the lever 19, unhook the bar 17 from its engagement with the leg 22 and permit the spring 25 to operate and raise the leg 23 to its vertical position, displaying the target 24 above the box 10, thus indicating that mail has been placed in said box.

Since many changes and modifications may be had in the form and construction of the elements of my improvement without departing from the spirit of my invention, I wish to be understood as being limited solely by the scope of the appended claims rather than by the illustrative showing or foregoing description.

I claim as my invention—

1. The combination with a mail box of a visual signalling device comprising a rotatable shaft within and extending without said box, an arm on and at right angles to said shaft without said box, a target on the outer end of said arm, yielding means for normally holding said arm in substantially vertical position and manually-operable means for latching said arm in substantially horizontal position against the pressure of said yielding means.

2. The combination with a mail box of a visual signalling device comprising a rotatable shaft within and extending without said box, an arm on and at right angles to said shaft without said box, a target on the outer end of said arm, yielding means on said shaft for normally holding said arm in substantially vertical position, a lever pivotally mounted in the receiving end of said box and extending substantially across the opening thereof and connections between said lever and shaft whereby said shaft may be latched with said arm in substantially horizontal position against the pressure of said yielding means.

3. The combination with a mail box of a visual signalling device comprising a rotatable shaft within and extending without said box, an arm on and at right angles to said shaft without said box, a target on the outer end of said arm, a second arm on said shaft at right angles to said shaft and to said first arm and within said box, yielding means about said shaft engaging said second arm to normally hold the latter in substantially horizontal position, a lever pivotally mounted in and extending substantially across the receiving end of said box, a bar pivoted at one end to said lever and extending across the plane of rotation of said second arm and a hooked end on said bar adapted to engage said second arm when said lever is in raised position and hold said second arm in substantially vertical position against the pressure of said yielding means.

4. The combination with a mail box of a visual signalling device comprising a rotatable shaft extending within and without said box, an arm on and at right angles to said shaft without said box, a target on the outer end of said arm, yielding means engaging said shaft within said box for normally holding said arm in vertical position, latching means within said box for retaining said arm in horizontal position against the pressure of said yielding means and a trip lever within and extending substantially across the receiving end of said box whereby said latching means may be released to permit said arm to assume its normal vertical position.

5. The combination with a mail box of a visual signalling device comprising a rotatable shaft extending within and without said box, the ends of said shaft being bent at right angles thereto to form arms at right angles with each other, one of said arms

being without said box and bearing a target on its outer end, a spring on said shaft engaging the arm within said box to normally hold said arm in horizontal position, means for latching said latter arm in vertical position against the pressure of said spring and means including a lever adjacent and extending substantially across the receiving end of said box whereby said latter arm may be unlatched when mail matter is inserted in said box.

In witness whereof I affix my signature.

JOSEPH H. KEERAN.