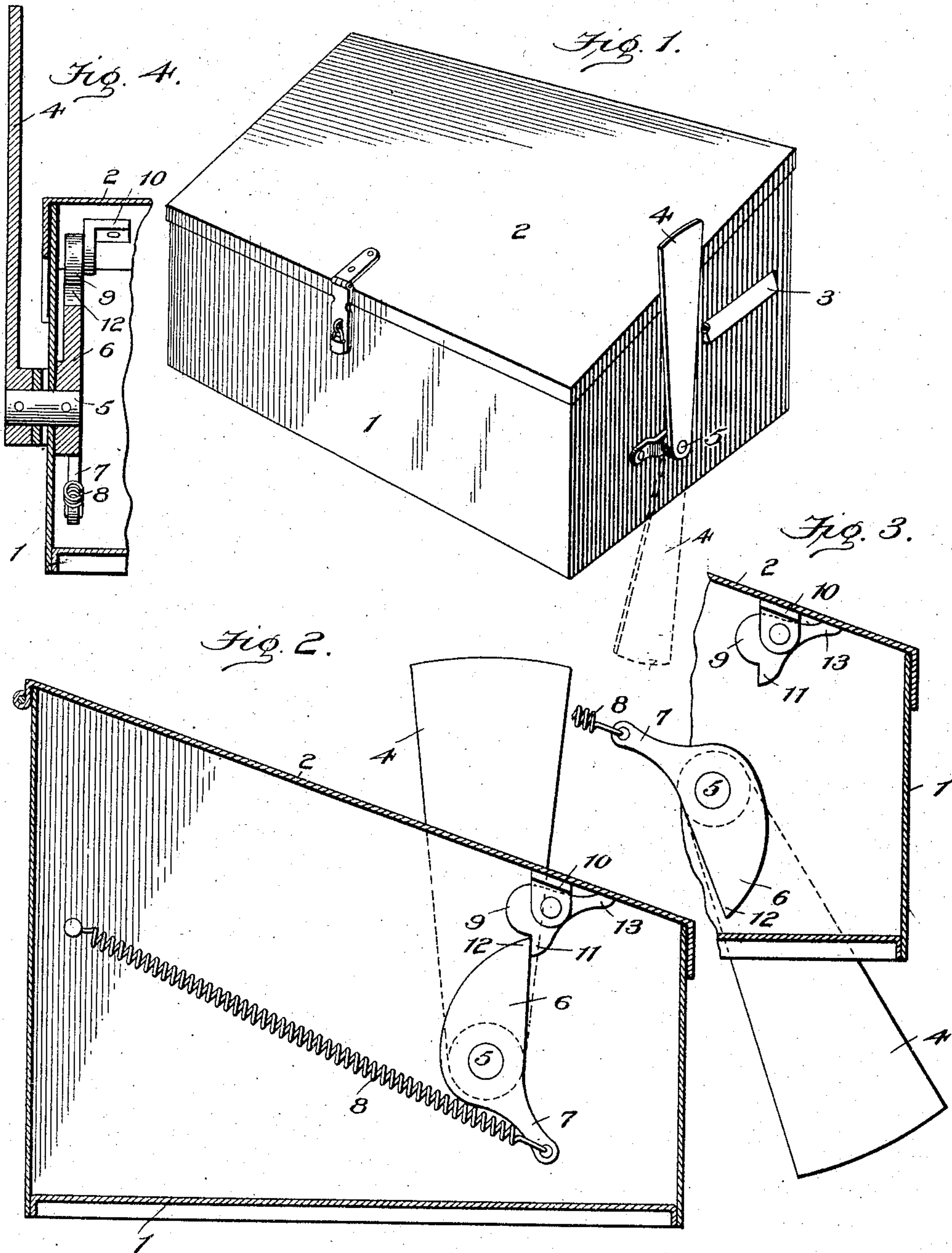


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E. B. KITCHEN.
SIGNAL FOR FREE DELIVERY MAIL BOXES.
APPLICATION FILED MAR. 15, 1904.



Witnesses:

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UNITED STATES PATENT OFFICE.

ERNEST BERNARD KITCHEN, OF WHITEPOST, VIRGINIA.

SIGNAL FOR FREE-DELIVERY MAIL-BOXES.

SPECIFICATION forming part of Letters Patent No. 780,509, dated January 21, 1905.

Application filed March 15, 1904. Serial No. 198,316.

To all whom it may concern:

Be it known that I, ERNEST BERNARD KITCHEN, a citizen of the United States, residing at Whitepost, in the county of Clark and State of Virginia, have invented certain new and useful Improvements in Signals for Free-Delivery Mail-Boxes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

In the rural free delivery and collection of mail the postman must open every box in his route to see if it contains any letters; and it is the object of my improvement to give notice to him when a box does not contain mail, and thereby save him the loss of time and the trouble to stop and open the box. For this purpose I have provided a signal for each box which in one position will show that the box contains no letters, while when turned in another position the signal will show to the postman that the box contains mail, and the important matter of my invention is that in such position the signal is automatically locked by the act of putting it in such position and can only be changed from such position by the postman in opening the lid to remove the mail and which thereby leaves the signal in the position when the box is again closed which indicates "no mail." The opening of the lid causes the unlocking of the signal and allows it to fall by gravity, and it is in this position that it remains until it is again turned up and locked by the person who shall again put mail into the box to tell the postman of such fact.

In the claims appended hereto I point out the precise improvement, in connection with the accompanying drawings, which constitutes my invention, and in which—

Figure 1 is a view in perspective of a mail-box containing my signal device locked in the turned-up position it occupies to indicate that the box contains mail, the dotted lines showing the signal in hanging position to indicate that there is no mail in the box. Fig. 2 shows the box in vertical section with its signal turned up and automatically locked to indicate that the box contains mail. Fig. 3 shows

the same in partial vertical section with the signal turned down to indicate that there is no mail in the box. Fig. 4 is a vertical section showing the mounting of the signal and its locking device at the end of the box and the signal turned up in locking position.

The box 1, with its hinged lid 2 and the hooded opening 3 for the dropping of the mail therein, may be of any suitable construction.

The signal consists of an arm 4, of any suitable color and material and fixed, preferably, at the outer end of the box upon a stud 5, which passes through a hole in the box-wall, is firmly supported in said wall, and has fixed on its inner end adjacent the inner wall of the box an eccentric or cam shaped tumbler 6, which extends from the stud in the same direction as the signal-arm. At its mounting end the tumbler has an arm 7, to which a coil-spring 8 is connected, the other end of the spring being connected to the box-wall so as to constantly tend to pull the tumbler in a direction to maintain the signal in locked position when raised. Vertically above the tumbler a dog 9 is pivotally mounted in a bracket 10, fixed to and depending from the under side of the box-lid, and this dog has a shoulder 11, which when the signal is turned up carrying the tumbler with it will cause the free end 12 of the tumbler to strike the back of the shoulder of the dog and force it back, thereby allowing the tumbler to pass under it and allow the dog to fall to its normal position and be engaged with the shoulder of the dog, which will thereby lock the tumbler and the signal in their turned-up positions when the box-lid is closed. The dog by its gravity is caused to maintain its shoulder in position to engage the tumbler when the latter is turned up, while the spring constantly pulls the tumbler to maintain such engagement. The dog is held in its locked position with the tumbler by an arm 13, which is caused to abut against the under side of the lid by the action of the tumbler pressing against the shoulder of the dog, and the arm of the latter by its engagement with the lid prevents the tumbler from turning, and thus renders the lock of the signal secure. The opening of the lid to remove the mail lifts the shoulder of the dog from its

engagement with the tumbler, and thereby unlocks the tumbler, when the spring will pull it and its connected signal-arm down in hanging positions. In closing the box-lid the dog
 5 is carried by it to the position to again automatically lock the tumbler and its signal when they are turned up by the person who has dropped mail in the box, and for this purpose it will be understood that the box will have a
 10 notice to this effect.

While I have shown and prefer the dog pivoted, carried by the lid, and movable with it as the means for automatically locking and unlocking the signal-arm in and from its
 15 raised position, obviously other means may be employed for this purpose so long as such means is rendered operative in the way described.

It will be understood that the resident has a
 20 key to the box for collecting mail for him delivered therein.

I claim—

1. In a mail-box, a hinged lid, a weighted dog pivoted to and freely depending from its
 25 under side and having an arm abutting against said lid, a signal-arm pivotally mounted on the outer end of the box, a tumbler mounted on said arm-pivot and adapted to engage the hanging end of the dog to maintain the en-
 30 gagement of the latter with the lid, and a spring connecting and controlling the tumbler, the tumbler formed to be locked with the dog when moved in one direction and to strike, lift and pass beneath the dog and be locked
 35 therewith when moved in the opposite direction.

2. A signal for a mail-box having a hinged lid, comprising a signal-arm, a mounting-stud therefor, a tumbler fixed on said stud within
 40 the box, a spring connecting the tumbler with the box, a dog carried by and pivotally mounted on the under side of the box-lid and adapted to engage the tumbler when the lid is closed and the signal turned up and to release the
 45 lock of the signal when the lid is opened.

3. A signal for a mail-box having a hinged

lid, comprising a signal-arm, a mounting-stud in the box-wall therefor, a tumbler fixed on said stud within the box, a dog carried by and pivotally mounted on the under side of the
 50 box-lid having a shoulder adapted to engage the tumbler and an arm adapted to engage the under side of the lid, and a spring connected to the tumbler to maintain its engagement with the shoulder of the dog.
 55

4. The combination with a mail-box having a hinged lid, a dog pivoted to and depending from the under side of the lid, movable with it and having a stop-arm adapted to abut
 60 against the lid and free to swing away from said lid, a signal-arm pivotally mounted on the outer end of the box, a tumbler mounted on said arm-pivot within the box adapted to engage the pivoted dog, and a spring connected to maintain the engagement of the tumbler
 65 with the dog.

5. In a mail-box, a hinged lid, a locking-dog pivotally mounted on the under side of the lid, a pivotally-mounted tumbler, a pivotally-mounted signal-arm and a spring connect-
 70 ing and controlling the pivoted tumbler, a shaft connecting the tumbler and the arm, and means on the tumbler adapted for engagement with the arm to lock it in position indicating mail.
 75

6. In a mail-box, a hinged lid, a locking member pivoted to, depending therefrom and movable with said lid, a cooperating locking member pivotally mounted in the walls of the
 80 box, a signal-arm external to the box, connected to and movable with the cooperating member, and means for maintaining the locking relation of the members when the lid is closed.

In testimony whereof I have signed my name
 85 to this specification in the presence of two subscribing witnesses.

ERNEST BERNARD KITCHEN.

Witnesses:

A. E. H. JOHNSON,
 HERBERT L. FRANC.