(No Model.) 2 Sheets—Sheet 1.

W. H. TAYLOR.

STREET LETTER BOX.

No. 329,688. Patented Nov. 3, 1885.

Fig. 1.

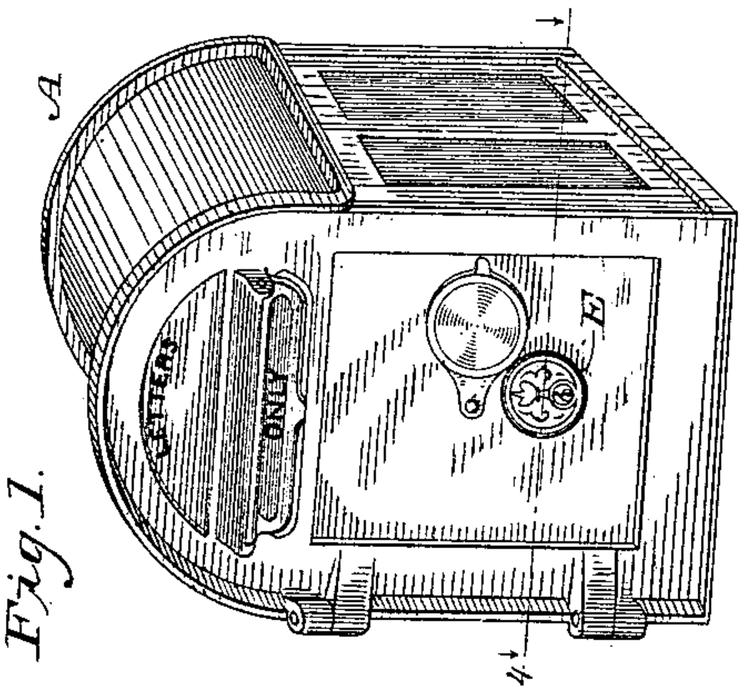


Fig. 2.

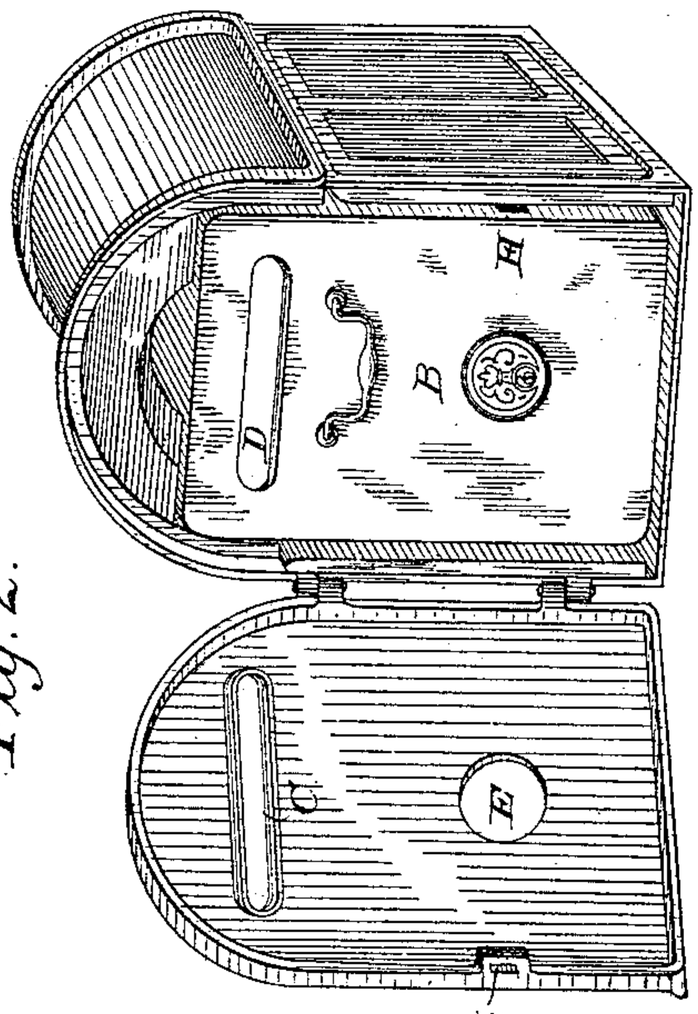


Fig. 3.

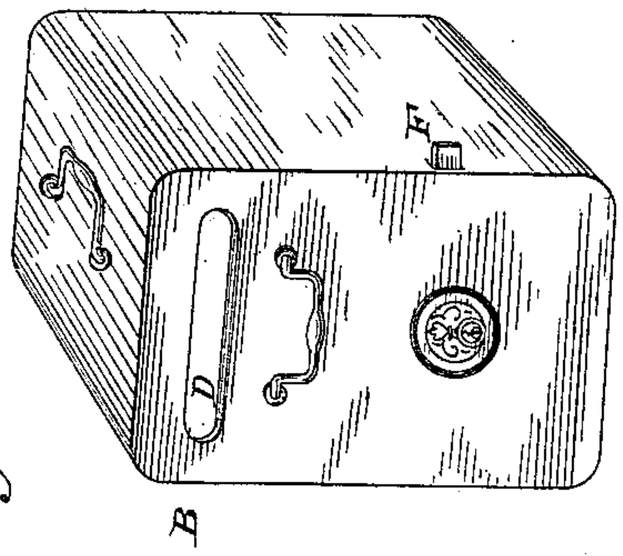
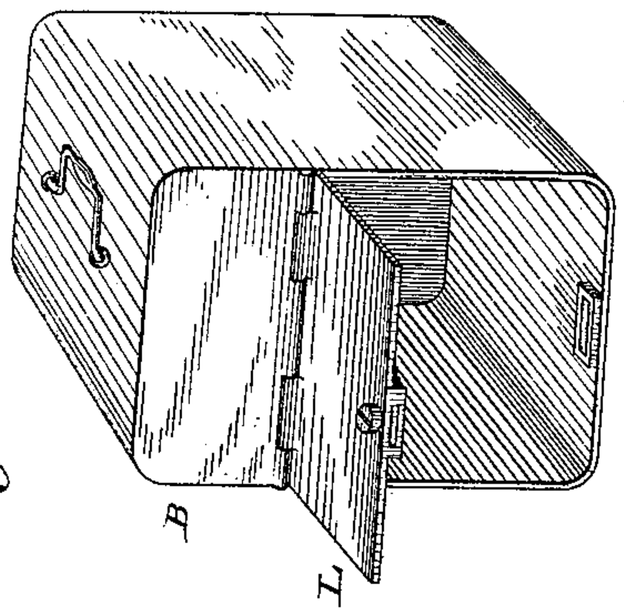


Fig. 4.



WITNESSES

Wm A. Skinkle

Robt. Nash.

INVENTOR

Warren H. Taylor.

By his Attorneys,

Baldwin, Hopkins & Peyton.

(No Model.) 2 Sheets—Sheet 2.

W. H. TAYLOR.

STREET LETTER BOX.

No. 329,688. Patented Nov. 3, 1885.

Fig. 7.

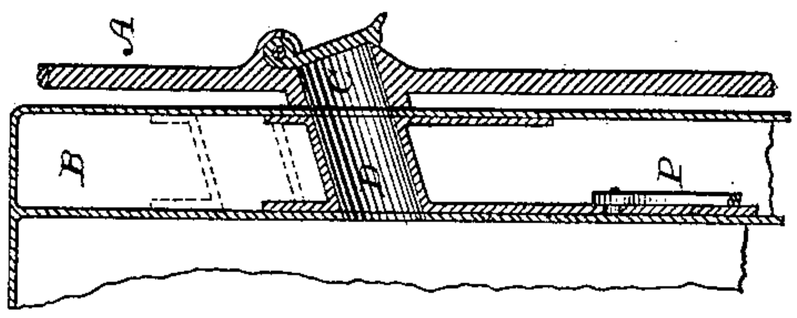


Fig. 8.

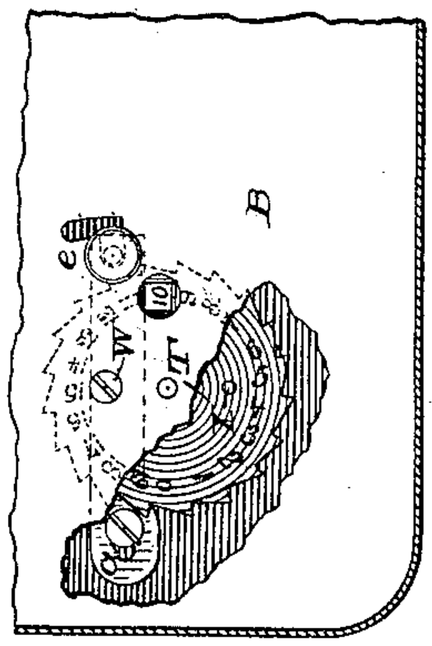


Fig. 11.

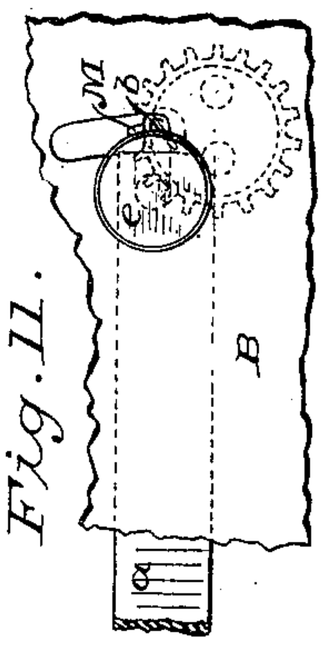


Fig. 6.

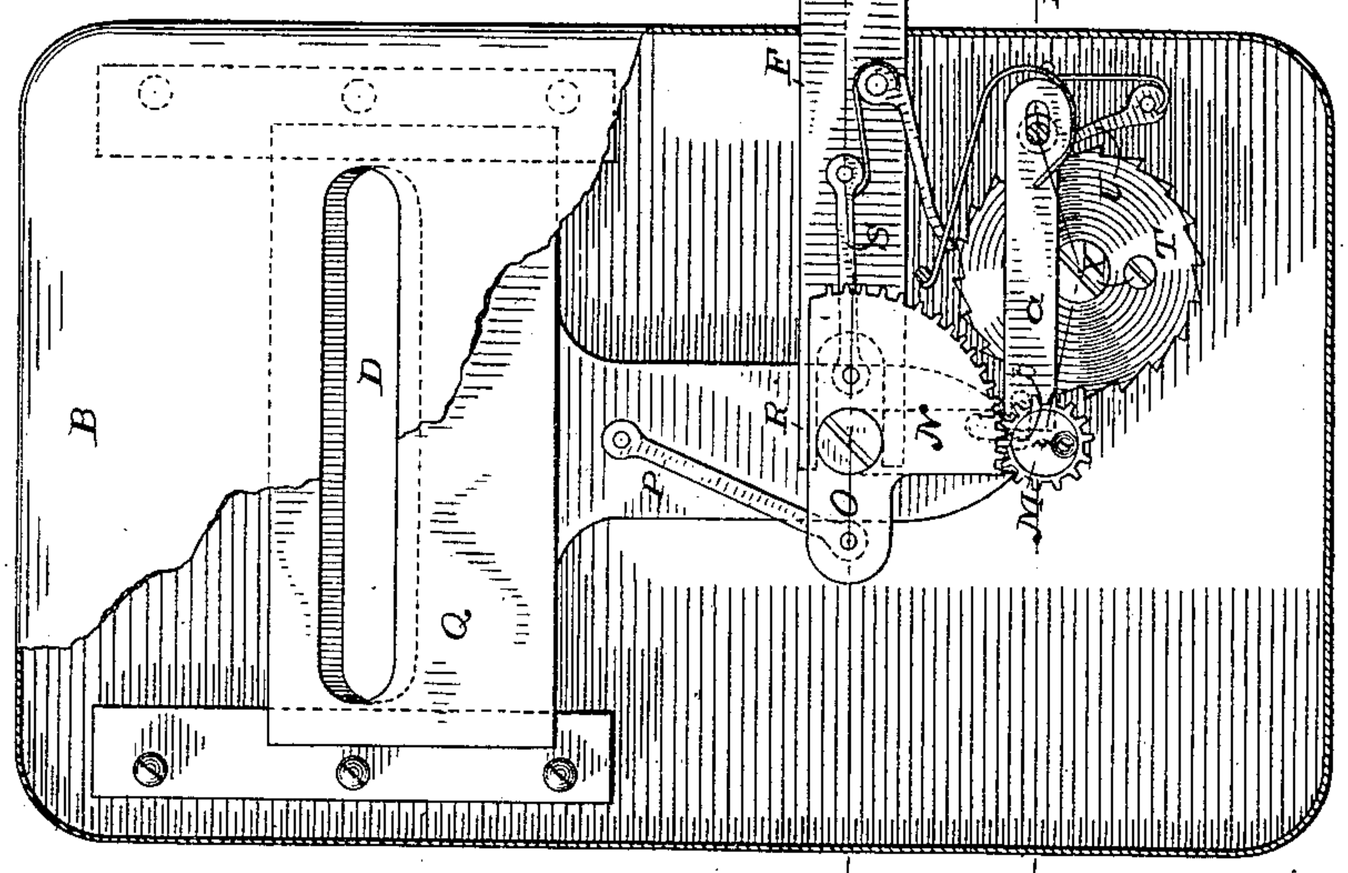


Fig. 10.

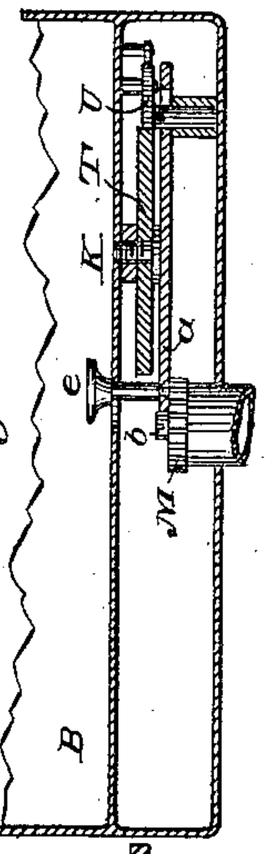


Fig. 5.

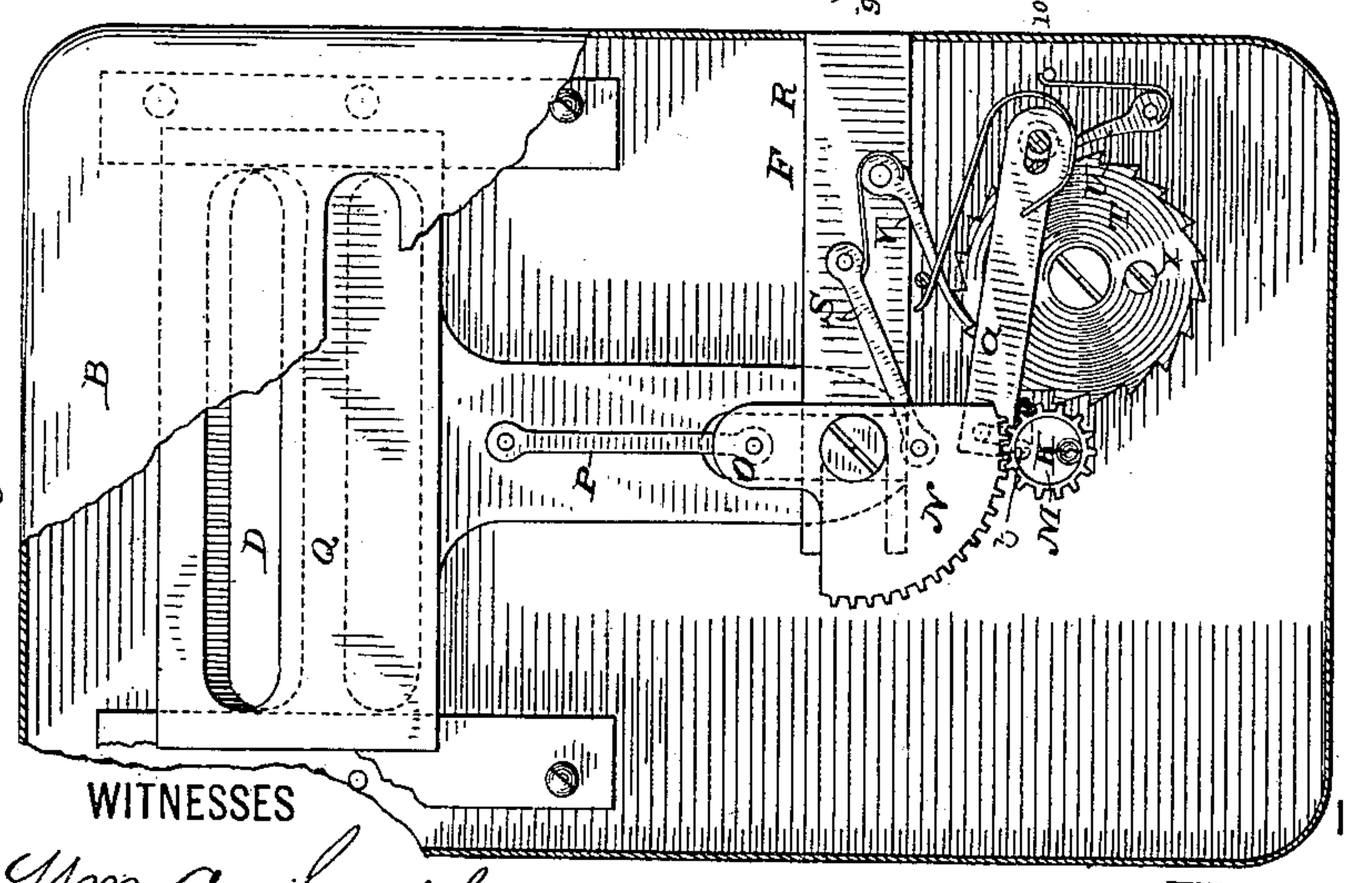
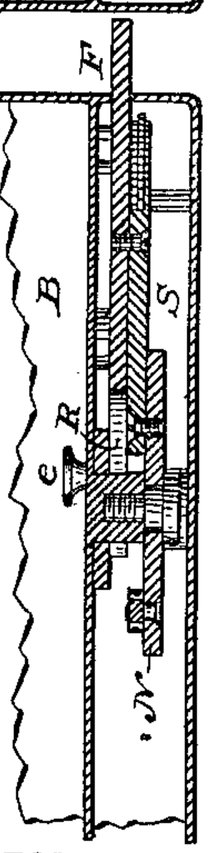


Fig. 9.



WITNESSES

Wm A. Skinkle

Ed. C. Newman

INVENTOR

Warren H. Taylor,

By his Attorneys

Dodderidge, Hopkins & Peyton.

UNITED STATES PATENT OFFICE.

WARREN H. TAYLOR, OF STAMFORD, CONNECTICUT, ASSIGNOR TO THE YALE & TOWNE MANUFACTURING COMPANY, OF SAME PLACE.

STREET LETTER-BOX.

SPECIFICATION forming part of Letters Patent No. 329,688, dated November 3, 1885.

Application filed January 28, 1884. Renewed March 13, 1885. Serial No. 158,730. (No model.)

To all whom it may concern:

Be it known that I, WARREN H. TAYLOR, of Stamford, in the county of Fairfield and State of Connecticut, have invented an Improved Street Letter-Box, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to that class of street letter-boxes in which a fixed outer case contains an inner removable letter-box proper, and in which the box cannot be removed from the case so long as the letter-receiving aperture of the box is open; and my object is to improve the construction of that class of street letter-boxes for practical purposes, as hereinafter set forth.

I provide a street letter-box of this class so constructed that the door of the outer case cannot be opened while the letter-receiving aperture of the inner box remains open, and in which much improved safety mechanism is organized and applied in the letter-box.

Referring to the accompanying drawings, which illustrate my improvements, Figure 1 is a perspective view of my improved street letter-box complete, with its door closed and in the ordinary condition of use for receiving letters. Fig. 2 is a perspective view of the same with the door swung open. Fig. 3 is a perspective view of the inner letter-box proper removed from its fixed case and showing its front elevation. Fig. 4 is a similar perspective view of the letter-box proper in reverse position, showing its rear end with its door swung open. Figs. 5, 6, 7, 8, 9, 10, and 11 are sectional views, showing the details of register and other safety mechanism connected with the lock, including a slide for opening and closing the letter-receiving aperture of the inner box.

Referring to the letters upon the drawings, A indicates the fixed outer case of a street letter-box, which is preferably made of metal, and may be cast or otherwise formed in any usual way, and may be of any suitable or preferred shape or size, as taste, fancy, or convenience may dictate.

B indicates the letter-box proper, which fits within the fixed case loosely, and which is provided with suitable handles, as indicated, for withdrawing it from the case and carrying it. This inner box is also preferably made of metal, for example, corrugated sheet metal, or metal stamped up with figures or devices which will add stiffness to the sheets, the desiderata being lightness and strength.

The usual letter-receiving apertures, C and D, are provided in the door of the fixed shell and in the front end of the inner letter-box.

The locking mechanism and registering and safety devices are contained between two plates forming the front end wall of the inner letter-box, as shown in Figs. 5 to 11. I provide an aperture, E, through the door of the case to give access to the lock for use of the key, and I provide that the lock-bolt F shall project far enough out of the inner box, when in the locked position, to pass through the slotted lug G of the door of the case, and into the keeper-recess H in the side wall of the case, so as to fasten the door securely. This door is not provided with a separate lock, but is locked by the lock K contained in the front end wall of the letter-box, as well illustrated in the drawings. This lock performs the function of operating the lock-bolt and the slide which opens and closes the letter-receiving aperture D. Any lock may be employed which is suitable for the purpose; but I prefer to use a pin tumbler-lock having a rotary cylinder and a corrugated plate-key of the type indicated in the drawings.

At the rear end of the letter-box I provide a hinged door, L, (see Fig. 4,) which is provided with any suitable lock and key, and by means of which the accumulated mail is taken from the box at the central office, where the key is always kept when the box is brought in by wagon or carrier. The door of the emptied box is then locked, and it is ready to be sent out to take the place of another box of mail to be removed from a fixed case.

The foregoing indicates the outlines of the structure and general features of my improved street letter-box, the object being to provide one of the character indicated which shall be simple and economical in construction and secure and convenient for practical use.

Referring now more particularly to Figs. 5 to 11, inclusive, I will describe the mechanism

contained between the two plates forming the front wall of the letter-box proper.

M indicates a pinion on the hub or cylinder of the lock which gears with a segmental pivoted rack, N, having an upward projection, O. Pivoted to the latter is a link, P, also pivoted at its upper end to the vertically-moving slide Q, for opening and closing the letter-receiving aperture.

R indicates the lock-bolt, which is slotted at one end so as to straddle the pivot of the rack N, and slides horizontally, and is connected to the segmental rack by a pivoted link, S, as illustrated. This connecting mechanism between the bolt and slide and the rotary hub of the lock may of course be varied, and that just described serves merely as a good example, and is the one I prefer. Now, whenever the lock is operated by the key to rotate the pinion, it is evident that as the bolt is thrown into the locked position, as shown in Fig. 6, the slide will be lowered so as to open the letter-receiving aperture, and as it is thrown into the unlocked position, as shown in Fig. 5, the slide will be raised so as to close the aperture. It is preferable to have the adjustments and connections of the bolt and slide to the segmental rack such that the slide will always be thrown to the position of fully closing the aperture before the bolt is moved, so as to unfasten the door of the case, which will prevent the carrier from tampering with the contents of the box.

It is evident that, having unlocked the lock with his key and removed the letter-box, there would ordinarily be nothing to prevent the carrier from using his key to throw the lock into the locked position and move the slide so that he could get access to the mail through the letter-receiving aperture. To serve as a precautionary check against this I provide a registering mechanism, which the carrier cannot see, to register the exact number of times the lock has been operated, so that the officials at the post-office, by observing its indications, may know whether the carrier has done more than his duty or not.

T indicates a ratchet-wheel, and U a spring pawl or stop of ordinary construction, which serves to prevent the ratchet-wheel from turning toward its end. V is a similar spring-pawl pivoted on the lock-bolt and moving horizontally with it, whereby it takes up one tooth each time the bolt is thrown into the locked position, and turns the ratchet-wheel the distance represented by one tooth on its periphery each time the bolt is thrown into the unlocked position. A series of numbers may be placed on the ratchet-wheel, which may be displayed, one at a time, through a suitable small aperture in the inner plate of the front end of the letter-box, as illustrated in Fig. 8; or any ordinary series of wheels and dials constituting a suitable registering mechanism may be connected with the plug of the lock and employed to indicate the operations of the lock. The principle and details of such mechanism are so well known as not to need description, and it forms no part of my invention.

I provide a stop, W, to limit the operation of the registering mechanism, so that it cannot run beyond its highest number. The object of this is to prevent the carrier from unlocking the lock enough times to bring the registering device around to the point from which he started. This stop may be placed at any desired point, so that the registering mechanism may be brought to a stand at any desired number.

As illustrated, the stop consists merely of a screw projecting through the inner plate of the front end wall of the box into the pathway of a stud, X, on the register-wheel. When this wheel shows the highest number marked on it, the stop will prevent any further operation of the bolt or slide until the door of the inner box is opened and the stop unscrewed, and the register-wheel set again at zero or at any desired number.

In connection with the registering and other mechanism described, I also combine and employ with the same, for greater assurance of safety, a stop mechanism, as illustrated. This mechanism is so constructed and arranged as to operate with the registering bolt and slide mechanisms harmoniously, so that after the letter-box proper has been taken from the post-office and inserted in the outer case and locked in, and then the case unlocked and the letter-box removed by the carrier, the slide and bolt will be absolutely fixed in place until the person in charge at the main office has opened the rear door of the inner box and made the necessary adjustment. Thus not only do I provide for registering the movements of the locking mechanism, but also for positively stopping them by means of this additional safety mechanism, which I will now describe in detail.

a indicates a spring-pawl pivoted to one of the plates forming the front end wall of the letter-box, as illustrated. Its pivot-aperture is elongated, as shown, in order that it may have longitudinal play, and its free end rests on a pin, *b*, in the end of the plug of the lock.

Fig. 5 illustrates the position of the pawl with reference to the pin and rotary plug of the lock when the letter-box leaves the post-office to be placed in the case in the street. In this condition the slide is closed and the lock-bolt in the unlocked position. The carrier inserts the box in place in the case, then closes the case-door and applies the key to throw the bolt, which opens the slide and allows the pawl to drop off from the pin *b* and fall until the button *e*, projecting inwardly from the pawl, reaches the bottom of the curved slot or bayonet-cut in the inner plate (see Figs. 10 and 11) of the front wall into the position shown in Fig. 6.

In order to fully lock the bolt so that the key can be withdrawn the plug must be rotated so

that the pin *b* comes around and presses against the end of the pawl which is resting in the bottom of the curved slot or bayonet-cut, and pushes it backward on its pivot, where it is held by friction and the action of its spring. Now, when the carrier unlocks the bolt and locks the slide, the plug must be rotated in a direction contrary to that indicated by the arrow, and so far that the pin *b* will pass beyond the end of the pawl, as shown in Figs. 6 and 10. The parts being in this position are absolutely locked against further action. In order to restore them so that they can be again operated in a similar manner, I use the button *e*, fixed to the pawl, and extending to the interior of the box through the bayonet-cut, as shown. The officer holding the key to the inner box upon opening the box can raise the button and shove it forward, so that the pawl will rest on the pin *b*, as shown in Fig. 5.

Having thus described my invention, what I claim is—

1. A mail-receptacle composed of an inner box and an outer case, the inner box being provided with a lock which locks the door of the outer case, substantially as set forth.

2. In combination with a mail-receptacle composed of an inner box and an outer case, a locking mechanism which operates a bolt for locking the door (having a letter-aperture) of the outer case, and a slide for closing the letter-aperture of the inner box, and connecting mechanism between the lock and slide so arranged that when the door is unlocked the slide is closed, and when the door is locked the slide is open, substantially as set forth.

3. In a mail-receptacle, an inside removable box, one of the sides of which is double, and through which is a mail-receiving aperture, substantially as set forth.

4. In a mail-receptacle, an inside removable box, one of the walls of which is double, and carries locking and safety mechanism, and another of which is provided with a door, substantially as set forth.

5. In a street mail-receptacle consisting of an outer case and an inner removable box, the combination of the outside door of the case and its locking mechanism carried by one wall of the box, and an automatic stop mechanism connected and operating with the lock mechanism, as set forth, and set from the inside of the box which will only permit the door of the outer case to be locked and unlocked a predetermined number of times before said stop mechanism shall be reset, substantially as set forth.

6. In a street mail-receptacle consisting of an outer case and an inner removable box, the combination of the outside door of the case and its locking mechanism carried by one wall of the box, and an automatic stop mechanism and a registering mechanism connected and operating with the locking mechanism, as described, the combination being and operating substantially as set forth.

7. The combination, with the inner box and the outer case and its door, (having a letter-aperture,) of the lock, the bolt, the slide, the segmental rack, and pinion, all connected and operating together substantially as set forth.

8. The combination, with the inner box and the outer case and its door, (having a letter-aperture,) of the lock, the bolt, the slide, the rack, and the register mechanism, all connected and operating together substantially as set forth.

9. The combination, with the inner box and the outer case and its door, (having a letter-aperture,) of the lock, the bolt, the slide, the rack, the registering mechanism, and the stop mechanism, all organized and operating substantially as set forth.

In testimony whereof I have hereunto subscribed my name this 3d day of January, A. D. 1884.

WARREN H. TAYLOR.

Witnesses:

SCHUYLER MERRITT,

THOS. W. CAPEN.