4 Sheets--Sheet 1.

A. ROSENSTJERNA.

Letter-Box.

No. 164,041. Patented June 1, 1875.

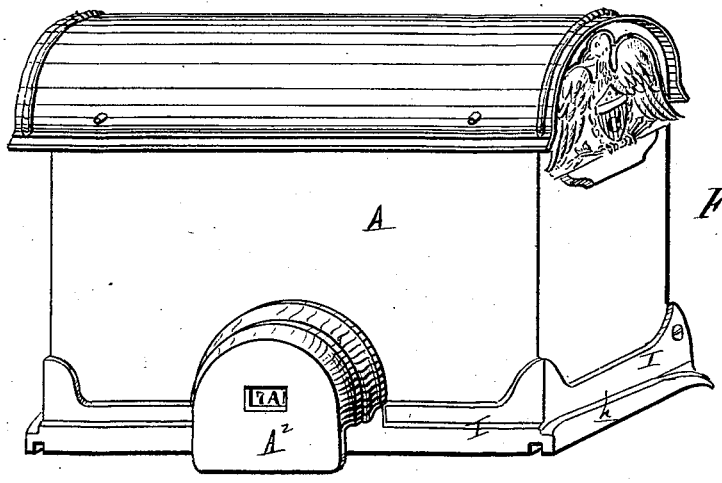


Fig: 1.

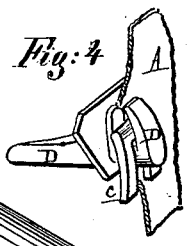


Fig: 4

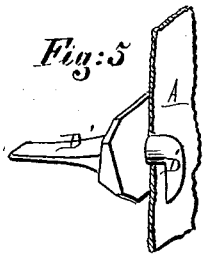


Fig: 5

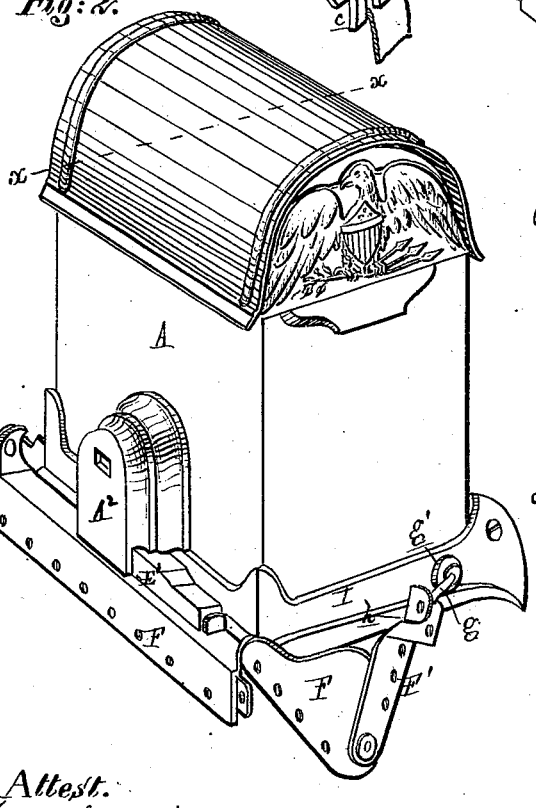


Fig: 2.

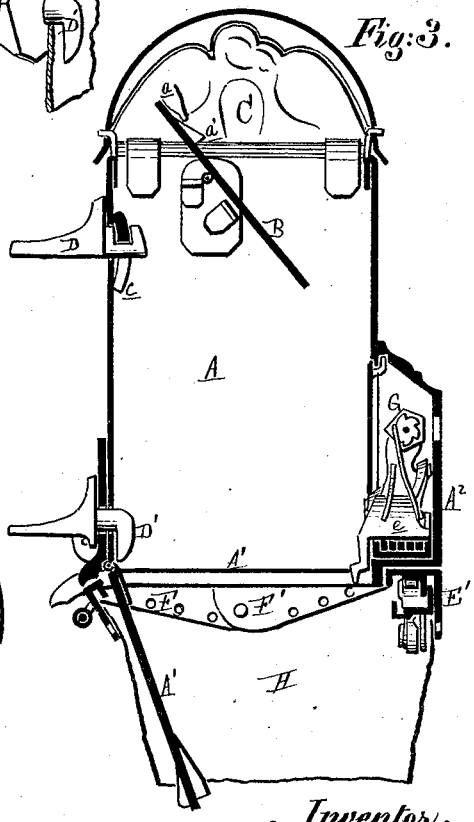


Fig: 3.

Attest.
Wm. P. Spalding
Edw. Barthel.

Inventor.
A. Rosenstjerna
By Attorney
Thos. S. Sprague

THE GRAPHIC CO. PHOTO-LITH. 39 & 41 PARK PLACE, N.Y.

4 Sheets--Sheet 2.

A. ROSENSTJERNA.

Letter-Box.

No. 164,041. Patented June 1, 1875.

Fig: 6

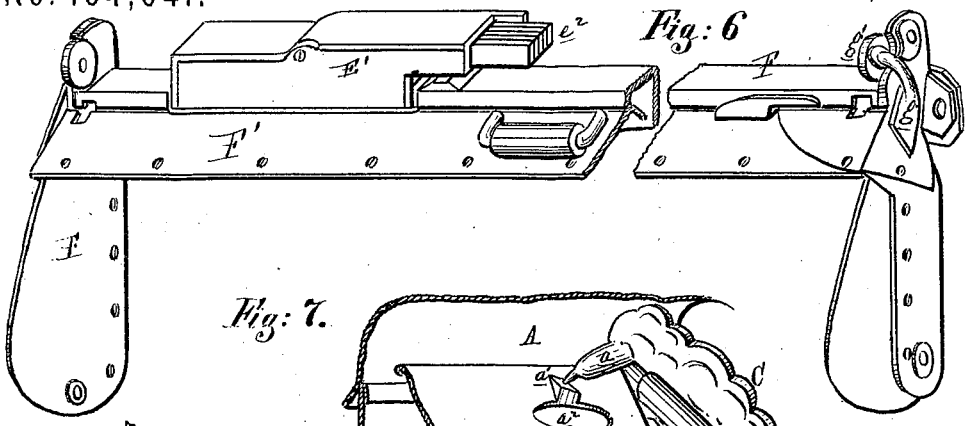


Fig: 7.

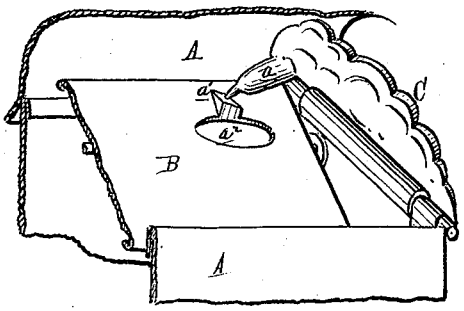


Fig: 8.

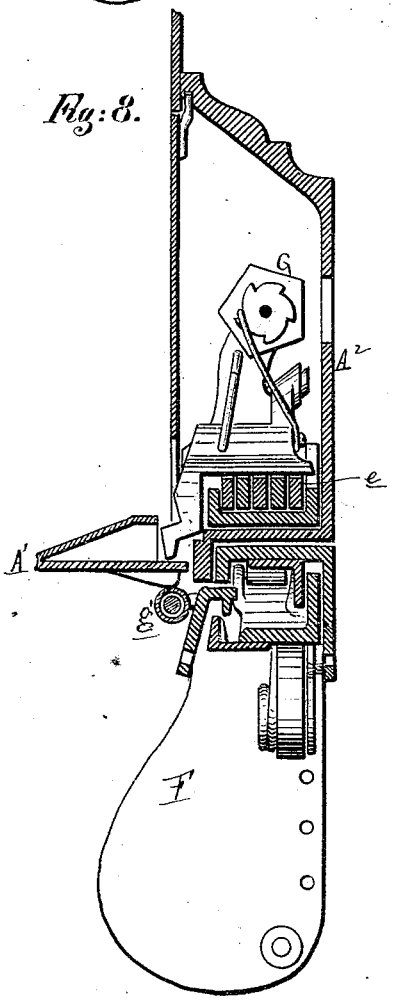


Fig: 9.

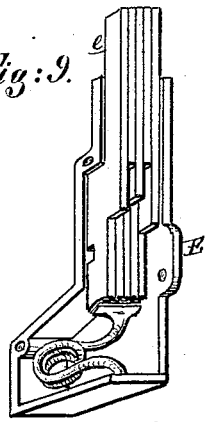


Fig: 11.

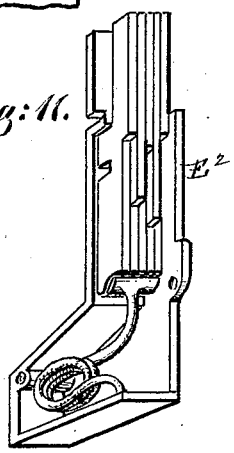


Fig: 10.

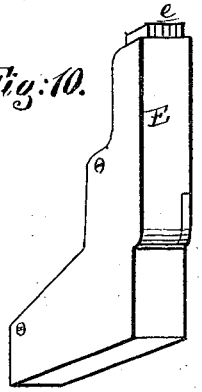
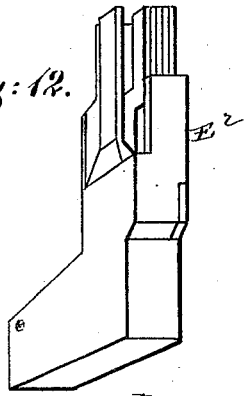


Fig: 12.



Attest.
Wm. A. Spalding
Edw. Barthel.

Inventor.
A. Rosenstjerna
By Attorney
Thos. S. Sprague

4 Sheets--Sheet 3.

A. ROSENSTJERNA.

Letter-Box.

No. 164,041. Patented June 1, 1875.

Fig: 13.

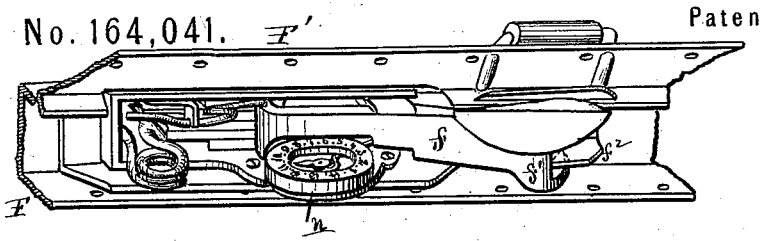


Fig: 14.

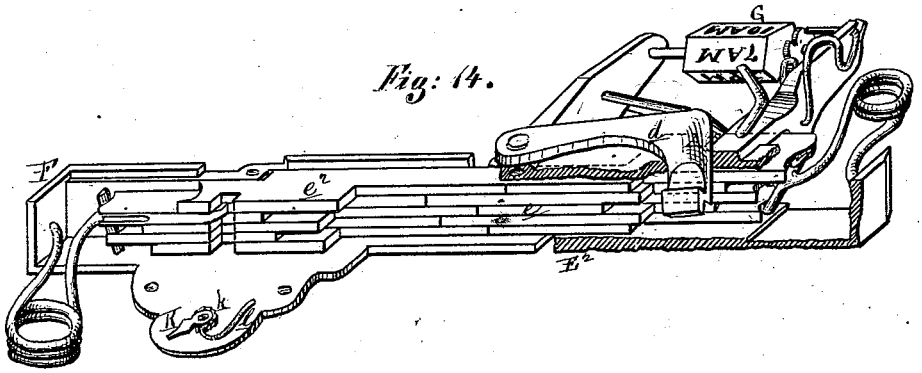


Fig: 15.

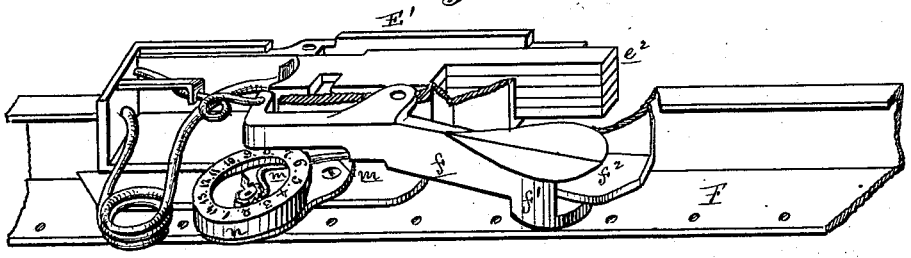


Fig: 16.

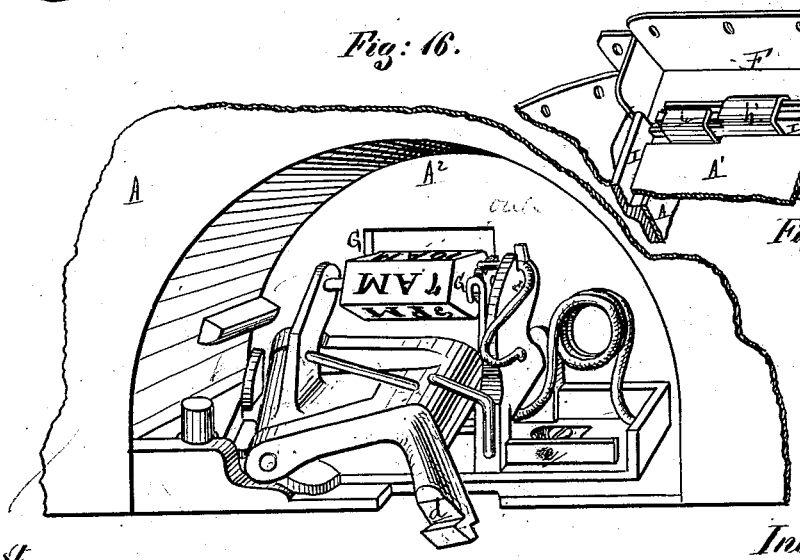
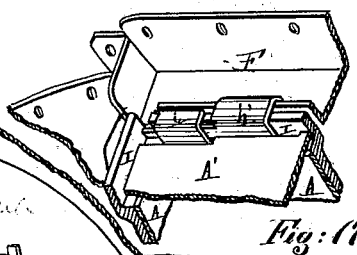


Fig: 17.



Attest
Wm. P. Harding
Edwd. Barthell.

Inventor.
A. Rosenstjerna
By Attorney
Phil. S. Sprague

A. ROSENSTJERNA.

Letter-Box.

No. 164,041. Patented June 1, 1875.

Fig: 18.

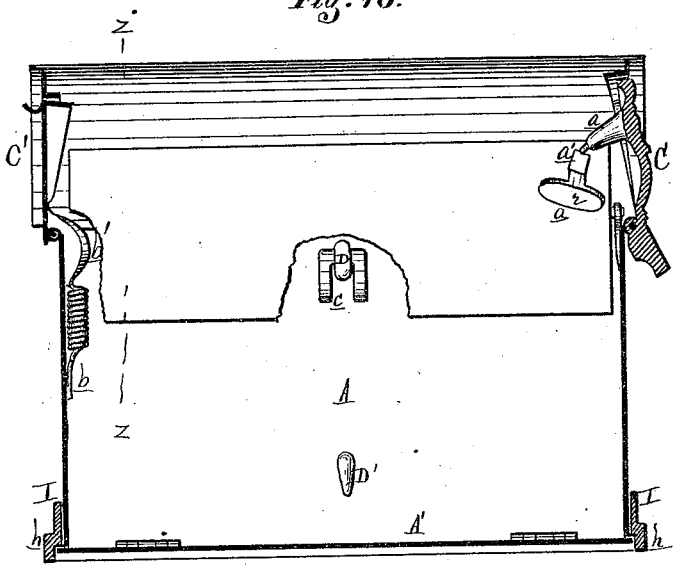


Fig: 19.

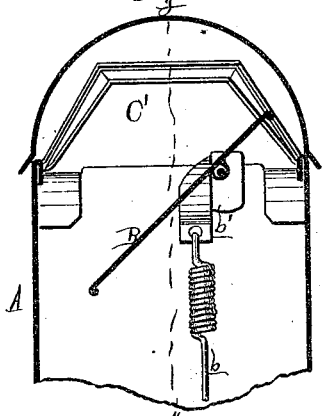
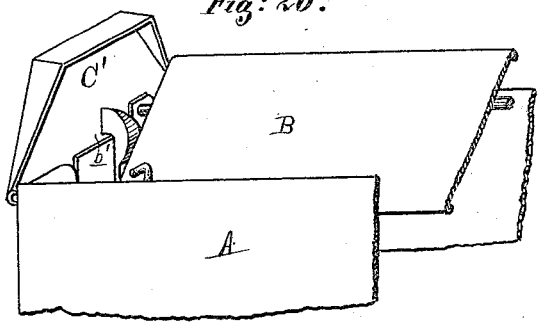


Fig: 20.



Attest.
Wm. P. Spalding
Edm. Barthel

Inventor.
A. Rosenstjerna
By Attorney
Thos. S. Sprague

UNITED STATES PATENT OFFICE.

ANDERS ROSENSTJERNA, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN LETTER-BOXES.

Specification forming part of Letters Patent No. 164,041, dated June 1, 1875; application filed June 23, 1874.

To all whom it may concern:

Be it known that I, ANDERS ROSENSTJERNA, of Chicago, in the county of Cook and State of Illinois, have invented an Improvement in Letter-Boxes, of which the following is a specification:

The nature of my invention relates to certain improvements in that class of letter-boxes which are made in two separable parts—the one being fixed, to serve as a receptacle for letters, and the other portable, in which the mail-matter can be collected by mail-carriers, and so arranged that the mail-matter cannot be manipulated by the collector. The invention relates, more particularly, to certain improvements on the letter-box for which Letters Patent were issued to me July 29, 1873, and numbered 141,237.

The invention consists, first, in the combination of one of two peculiar guard-flaps with the tilting diaphragm in the upper part of the box; secondly, in the construction of the bag-jaw, so as to dispense with the intermediate receptacle described in the aforesaid Letters Patent, and in the construction and operation of an indicator on the bag-lock, and other devices more fully hereinafter set forth.

Figure 1, Sheet 1, is a perspective view of the box. Fig. 2 is a similar view with the bag-jaw attached. Fig. 3 is a cross-section at *x x*, Fig. 2. Figs. 4 and 5 are perspective views, respectively, of the upper and lower hooks which secure the box to the wall. Fig. 6, Sheet 2, is a perspective view of the bag-jaws closed. Fig. 7 is a detached perspective view of the flap at the right end of the box, showing its method of operating the tilting diaphragm. Fig. 8 is an enlarged cross-section of the box-lock and bag-jaws, on the plane *x x* in Fig. 2. Figs. 9 and 10 are perspective views of a key that will unlock the box, intended to be in the possession of the post-master. Figs. 11 and 12 are similar views of a key that will unlock the bags, intended to be in possession of a responsible post-office clerk. Fig. 13, Sheet 3, is a perspective view of the bag-lock while open, looking at it from the inner side. Fig. 14 is a perspective view of the bag-lock and box-lock engaged with each other, to unlock the box and the bag. Fig. 15 is a perspective view of the bag-lock locked, while a portion of the frame is removed. Fig. 16 is a perspective view of the box-lock, looking at it from the inside of the box. Fig. 17 is a detached perspective of portions of the bottom of the box and the bag-jaw, showing the hook on the latter and the guide on the former, said hook being also shown in Fig. 6. Fig. 18, Sheet 4, is a longitudinal vertical section of the box on *y y* in Fig. 19, which is a cross-section on *z z*, Fig. 18, showing, in elevation, the flap-plate at the left end of the box. Fig. 20 is a perspective view of the same.

Like letters refer to like parts in the several figures.

In the drawing, A represents the letter-box, in which is hung a tilting diaphragm, B, by eccentrically-placed trunnions, so that it will tilt forward of its own gravity. The ends of the box have openings at the top. Over the right-end opening is hung an inwardly-opening flap-cover, C, hinged at its lower edge to the end plate of the box. The flap C is provided with a stud, *a*, which strikes an inclined lug, a^1, on the back corner of the diaphragm B, when pushed in to introduce a letter, depressing the higher edge of said diaphragm until it assumes a horizontal position, when the stud slips off the lug and down its face through a hole, a^2, in the diaphragm, locking the latter in that position until the flap resumes its normal position, when the former tilts and dumps the mail-matter thereon into the bottom of the box. While the flap is tilted the contents of the box are not accessible, by reason of the diaphragm being so turned as to prevent anything from passing into the bottom of the box. (See Figs. 3, 7, 18.)

At the left-hand end of the box is shown a modification of the flap described. In this case the flap C′ swings outwardly, to give access to the interior of the box for the introduction of letters. It is closed against the opening by a spiral spring, *b*, inside the box, below the diaphragm, which is tilted up by a

cam, b', projecting from the inner lower edge of the flap under the heavy end of the diaphragm.

I do not make any claim to the invention of the tilting diaphragm, the devices for operating it, as described, alone being new.

The box is fastened to the wall or other support in the following manner: Two hooks, D D′, Figs. 4 and 5, each provided with a shoulder-plate, are driven into the wall a given distance apart, the hook of the former turning up, and that of the latter turned down. The back of the box has two slots cut in it to slip over the hooks, the back wall resting against the shoulder-plates. A metal stirrup, c, is dropped over the shank of the upper hook, between the hook and the back wall, which effectually prevents the box from being drawn off the hooks. The bottom A^1 of the box is hinged at its back edge thereto, and is arranged to open downwardly. The bottom is held up by the engagement of its internal socket with a hasp, d, of a lock, E^2, contained in the casing A^2, in the lower front part of the box. The lock embodies a set of longitudinally-moving tumblers, e, of varying length, which disengage the hasp from the box-bottom when pushed longitudinally into the casing by the introduction of the bits e^1 of the key E, Figs. 9 and 10, when the latter is pushed into an opening in the side of the casing. As hereinbefore stated, this key is intended to be kept by the postmaster, only to be used in case repairs are to be made to a box, which is opened by the tumblers e^2 of a lock, E^1, on one of the jaws F of the collector's mail-pouch, which tumbers are inserted in like manner into said lock.

An indicator-roller, G, is journaled in standards inside the casing, behind a glazed opening, and is actuated by a pawl and ratchet, through the movement of the hasp, to show the hour of the next collection, substantially as described in said Letters Patent. A detailed description of its construction and operation is, therefore, unnecessary.

By referring to the said Letters Patent it will be seen that the lower part A^1 of the box described is made removable, so as that it could be taken to the post-office to have the contents discharged into it from the box A removed.

In the present case I have dispensed with the said part A^1, and instead thereof I provide the mail-pouch H, Fig. 3, with a pair of jaw-frames, F F′, pivoted together. To the former I attach a lock, E^1, whose bits or tumblers e^2, when inserted in the lock E^2 of the box, are pushed against those of said lock until the two sets of tumblers are moved back, when both bolts are thrown, the bolt f having a socket, f^1, which is then disengaged from a clip, f^2, on the inner face of the bag-jaw F′. The jaws of the bag can now be opened by sliding back the jaw F′, and the bottom door of the box will drop, to discharge the contents of the box into the bag.

It will be noticed that the locks serve each as a key for the other, as described in said Letters Patent; hence a detailed description of their construction is deemed unnecessary.

On each corner of the jaw F′ there is an inwardly-bent arm, g, carrying a roller, g', which runs over an inclined flange, h, formed at the ends of a frame, I, with which the bottom of the box is bound, which thereby keeps the rear part of the bag in contact with the box. On the left-hand inner flange of the jaw-frame F there is a hook, h', projecting laterally from said flange, which hook slides behind the pendent front edge of the frame-binding I, and into a socket, i, on the under side of said binding when the two locks are in juxtaposition, thereby securing the front of the bag to the bottom of the box, as in Fig. 17. The bag being in this manner secured to the box while both are open, the collector cannot have access to the mail-matter. The contents of the box being transferred to the bag, the latter is closed by drawing forward the jaw F′, which throws up the door A^1, which engages with the spring-hasp, and the jaw F′ engages with the jaw F by the interlocking of the clip and socket f^1 f^2, as described. An indicator-arm, K, Fig. 14, is pivoted to an extension of the lock-plate of the bag. There is a ratchet, k, on the hub of said arm, with which engages a spring-dog, l, on said plate, to hold it in any position in which it may be left. The arm K is rotated by a hooked spring-pawl, m, actuated by the bag-bolt f each time the bag is opened. The hook end of said pawl engages with the ratchet, and moves the arm one notch each time the bag is opened, indicating on a dial, n, Figs. 13 and 15, how many boxes the collector has opened on a trip. The bag is opened by a key, E^2, Figs. 11 and 12, which forms a counterpart of the bag-lock, and which is intended to be in the possession of the office clerk who has charge of the mail-collections; and it will be observed that the responsible official has, through the indicator last referred to, a means of knowing whether the collector has visited all the mail-boxes on his route during each trip; that when the flap is opened for any purpose the contents of the box are rendered inaccessible by the turning of the tilting diaphragm; that the box cannot be unlocked without the proper application of the lock on the mail-bag; that the collector can have no chance to manipulate the mail-matter, and that the time of the next collection is indicated to every passer-by.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination of the flap C, provided with small stud a, and the tilting diaphragm B, provided with the beveled stud a^1 and the aperture a^2, substantially as described, and operating in the manner set forth.

2. The combination, with the bag-jaw F and box A, of the locks E^1 E^2, the former being

provided with the indicating-roller and operating mechanism, and the latter with the indicating device, both being operated when the locks are brought in contact, as set forth.

3. The bag-jaw, provided with the hook a^1, in combination with the box having the socket i upon the binding I, for the purpose of securing the front of the bag to the bottom of the box when the locks are in juxtaposition.

4. The combination of the flap C′, provided with the cam b', the spring b, and the tilting diaphragm B, substantially as described and shown.

ANDERS ROSENSTJERNA.

Witnesses:
WM. H. LOTZ,
ALEX. SEYFARTH.