(No Model.) 3 Sheets—Sheet 1.

R. F. ANDERSSON.

PACKAGE REGISTERING DEVICE.

No. 494,050. Patented Mar. 21, 1893.

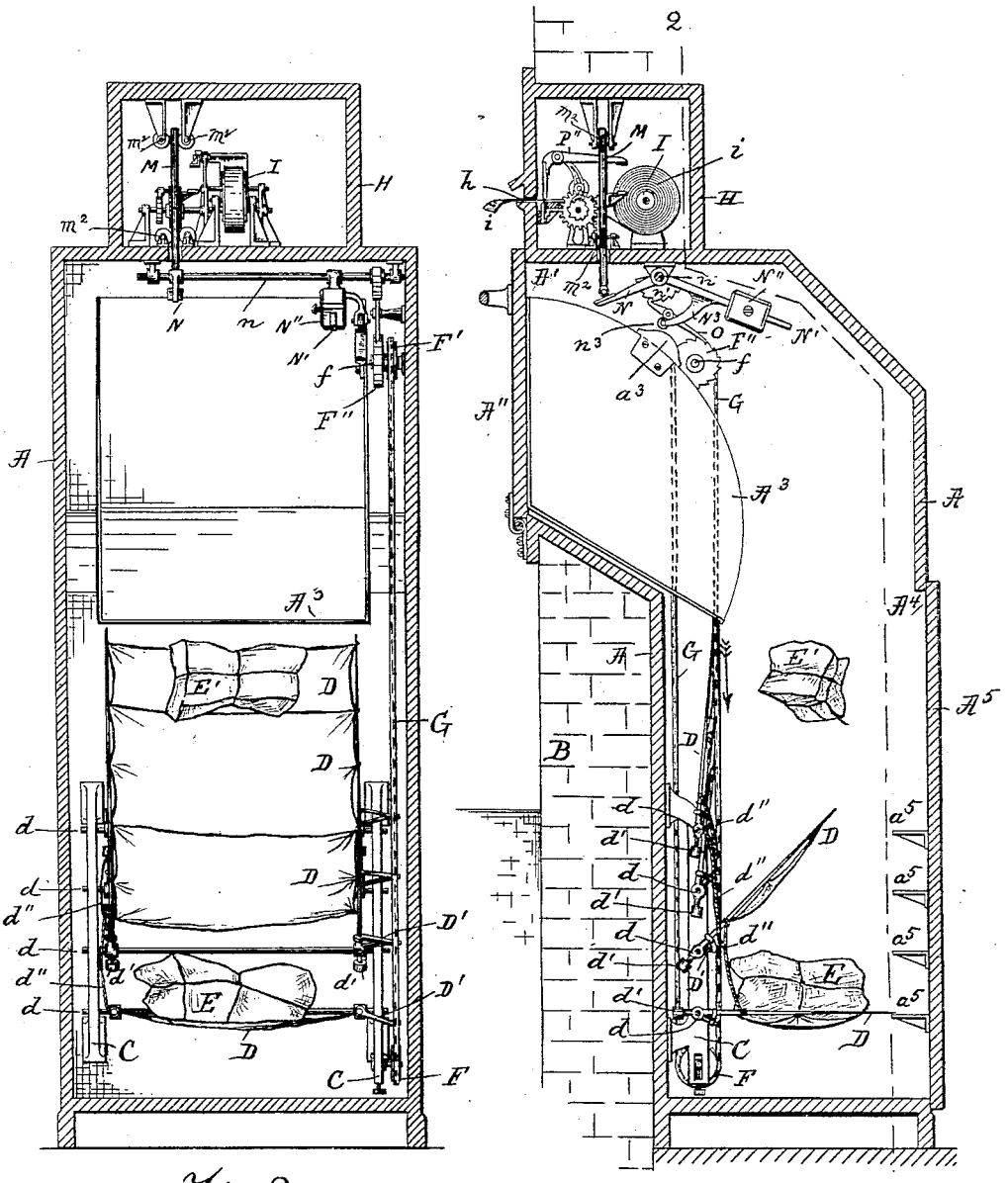

Fig. 2.

Fig. 1.

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Fig. 3.

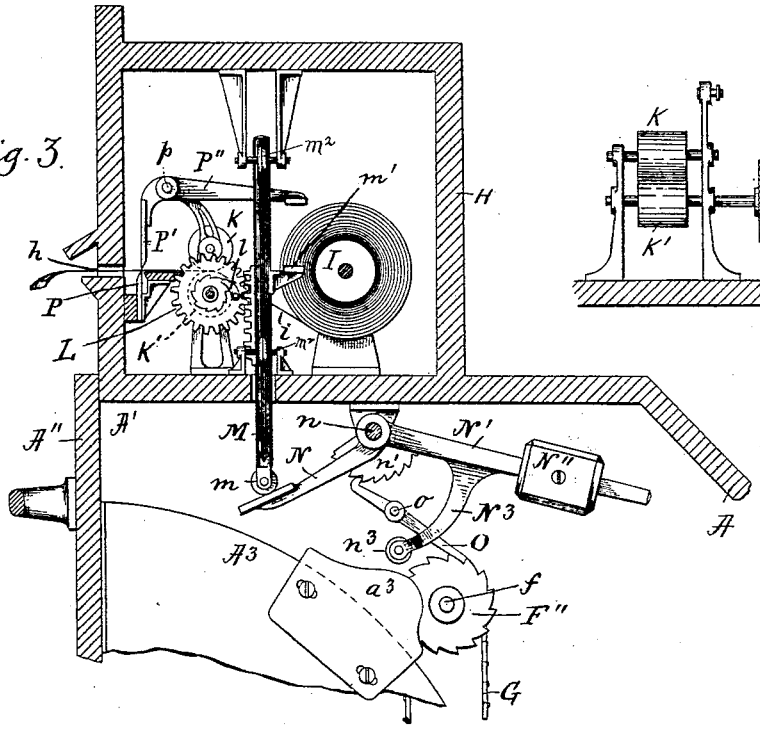
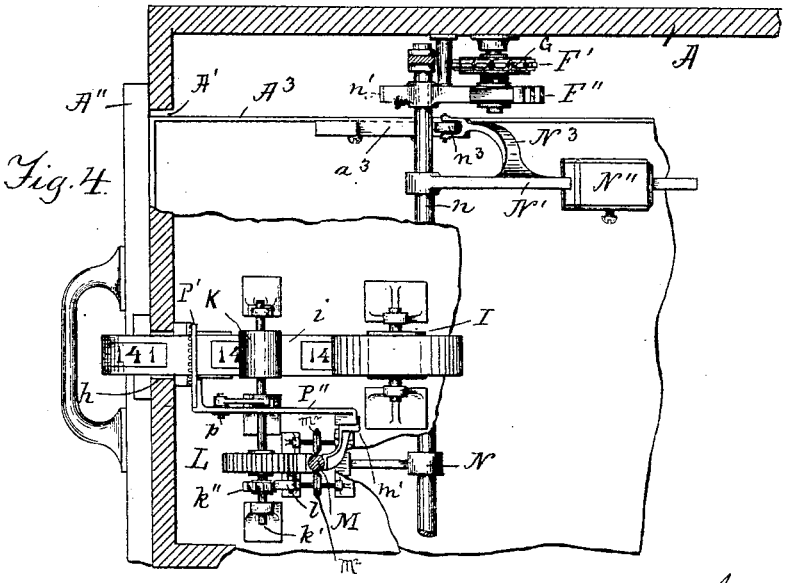


Fig. 5.

Fig. 4.



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(No Model.) 3 Sheets—Sheet 3.

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PACKAGE REGISTERING DEVICE.

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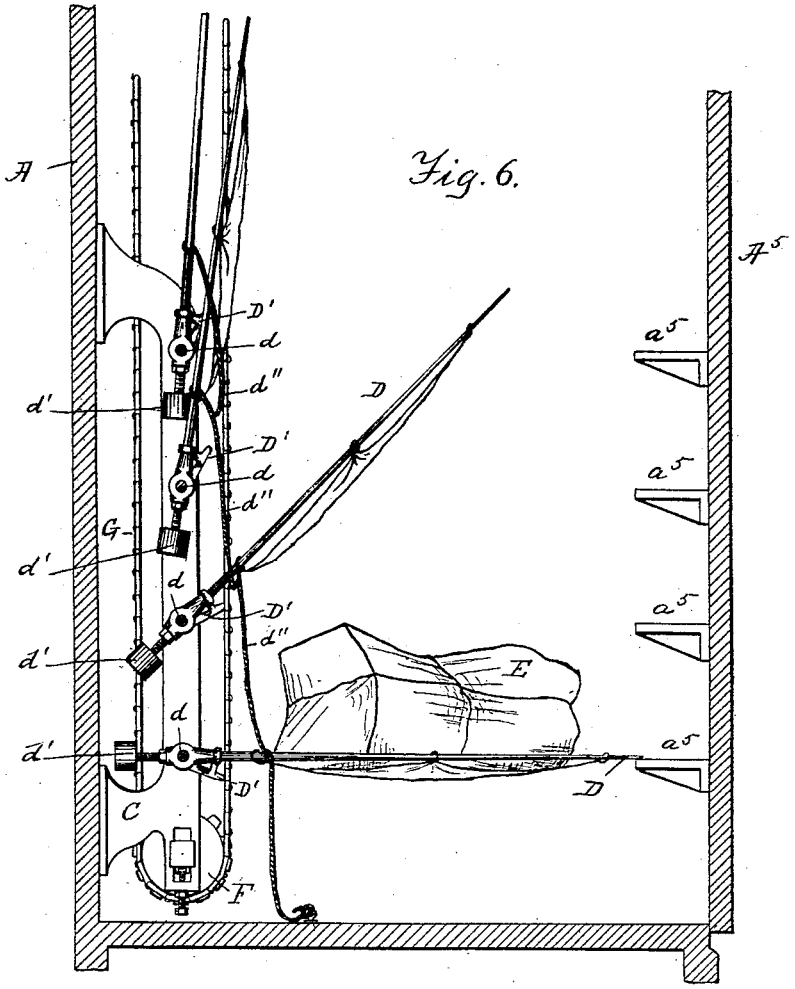
Fig. 6.



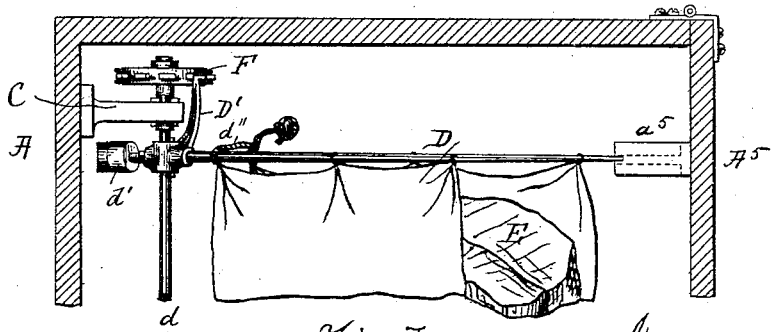


Fig. 7.

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UNITED STATES PATENT OFFICE.

ROBERT F. ANDERSSON, OF LYNN, MASSACHUSETTS.

PACKAGE-REGISTERING DEVICE.

SPECIFICATION forming part of Letters Patent No. 494,050, dated March 21, 1893.

Application filed July 19, 1892. Serial No. 440,547. (No model.)

To all whom it may concern:

Be it known that I, ROBERT F. ANDERSSON, a citizen of Sweden and Norway, and a resident of Lynn, in the county of Essex and State of Massachusetts, have invented new and useful Improvements in Package-Delivery Apparatus, of which the following, taken in connection with the accompanying drawings, is a specification.

This invention relates to improvements in package delivery devices for the purpose of depositing packages, &c., in a receptacle and automatically giving to the owner or depositor, a printed check or recept for each package.

This device is particularly useful for laundries as it saves the labor of a clerk in giving checks or receipts for the laundry. It is however equally well adapted for package delivery of any kind, where it is desirable to obtain a check or receipt for the article deposited.

The invention is carried out as follows, reference being had to the accompanying drawings, wherein—

Figure 1 represents a longitudinal section of the improved package delivery device. Fig. 2 represents a section on the line 2—2 shown in Fig. 1. Fig. 3 represents a detail side view of a portion of the mechanism. Fig. 4 represents a plan view of the same. Fig. 5 represents a detail front view of the strip feeding mechanism. Fig. 6 represents a detail sectional view of the lower part of the box and its pivoted shelves; and Fig. 7 represents a detail sectional plan view of Fig. 6.

Similar letters refer to similar parts wherever they occur on the different parts of the drawings.

A represents a suitable box or receptacle in which the packages are to be deposited. The box A has on its front an opening A′ which is normally closed by means of a hinged door A″ to the inside of which is attached, a chute or conveyer A^3 as shown in the drawings.

A^4 is an opening at the rear of the box A which is normally closed by means of a hinged or sliding door A^5 as shown in Fig. 1.

In Fig. 1, I have shown the box A as located inside of the wall B of a building with the mouth A′ projecting through such wall, and with the cover A″ outside of said wall as shown in said Fig. 1, but this is not essential as said box may be located outside of, or free from walls or buildings as may be desired according to location and circumstances.

Inside of the box A are secured a pair of brackets C, C, in which are journaled at *d*, *d*, *d*, one above the other, a series of package supporting shelves D, D, each such shelf being preferably composed of metal side frames united by means of a flexible sheet or netting but this is not important as such shelves may be made of any other suitable material or construction without departing from the essence of my invention. Each shelf D is weighted by means of a balance weight *d*′ so as to hold it in a vertical or nearly so position when not depressed by the weight of a package. Each shelf is loosely connected to the one above it by means of a slack cord *d*″ so as to cause the next shelf above the one depressed by a package to be automatically swung to an inclined position (Fig. 1) ready to receive a package and so on until all the shelves are loaded.

a^5, a^5, in Fig. 1 represent projections on the inside of the door A^5 adapted to serve as supports for the outer ends of the shelves when loaded as shown.

E, E′, represent packages introduced in the box or receptacle A as shown in Figs. 1 and 2.

To a spindle attached in a suitable manner to the lower end of one of the brackets C is journaled a sprocket wheel F that carries an endless chain G over a similar sprocket wheel F′ arranged to rotate freely upon a pin *f* secured within the upper end of the box A as shown. Each shelf D has a side projection D′ adapted to engage the chain G whenever a shelf is swung to a horizontal position by the weight of a package thus imparting a slight intermittent motion to said chain and its sprocket wheels whenever a package is deposited upon one of the shelves. This intermittent motion of the said chain is for the purpose of actuating the automatic device for feeding and cutting off from a reel a duly stamped, marked or numbered slip, ticket, or receipt for the package deposited.

The automatic mechanism for causing a ticket to be fed from a reel and cut-off from the latter whenever a package depresses one of the shelves D, is constructed as follows: To the upper sprocket wheel F′ is attached a

ratchet wheel F'' which partakes of the intermittent rotary motion of the said sprocket wheel whenever a package is deposited in the box A. Above the main box A is a case H which contains the reel and cutting off mechanism.

I is the reel having its spindle loosely journaled or supported in suitable bearings; *i* is the strip wound on such reel which strip is consecutively numbered in the form of tickets, one of which is to be automatically cut off from the strip and fed out through an opening in the front of the box H as shown in Figs. 1, 3, and 4.

K and K' (the latter shown in dotted lines in Fig. 3) are feed rollers between which the strip *i* is fed from the reel to and through the delivery opening *h*.

k' is the spindle to which the lower feed roller K' is secured and on such spindle is loosely journaled a spur gear L provided with a pawl *l* adapted to engage with a ratchet wheel *k''* secured to the spindle *k'* as shown in Figs. 3 and 4.

M is a reciprocating rack bar having teeth meshing in the teeth of the gear L; said rack is arranged between guides m^3 composed of wheels or other devices so that the rack bar can move up and down with the least frictional resistance. The normal position of the rack bar is shown in Figs. 1, 2 and 3 and it assumes this position by gravity. The lower end of the rack bar is provided with an antifriction roller *m* resting on a lever N carried by a rock shaft *n* which is provided with a segmental ratchet *n'*. The lever N serves to raise the rack bar as will hereinafter appear, to cause a projection *m'* on the rack bar to engage a lever P'' for feeding and cutting off a ticket strip, as hereinafter explained. To the shaft *n* is secured a rearwardly extending arm N' provided with an adjustably secured weight N'', as shown in detail in Figs. 1, 3, and 4, for a purpose as will hereinafter be described.

N^3 is a projection on the underside of the arm N terminating preferably in an antifriction roller n^3 adapted to come in contact with a cam projection a^3 on the chute or conveyer A^3 during the opening movement of the door A''.

O is a pawl, pivoted to a stud *o* which may be secured to the sides of the case A, said pawl, having its upper hooked end engaging with the ratchet wheel *n'* and having its lower end engaging with the ratchet wheel F'' as shown in Figs. 1, 3, and 4.

P is a stationary cutter arranged in the box H between the feed rollers K, K' and the opening *h* as shown in Figs. 1, 3, and 4.

P' is a movable cutter secured to a lever P'' which is pivoted at *p* as shown; the rack M has a side projection *m'* which during the upward motion of said rack comes in contact with the rear end of the cutter lever P'' by which the cutter P' is moved downward sufficiently to puncture, perforate, or cut off the strip that has been partially projected out through the opening *h*.

The operation is as follows: Supposing a package E has already been deposited, as shown in Fig. 1 and the door A'' opened to receive another package; during such opening movement of the door the cam a^3 comes in contact with the roller n^3 on the lever projection N^3 causing the weighted lever N' to be raised and locked in such position by the pawl O and ratchet wheel *n'*. As the door is being closed the package E' drops upon the shelf D (which is in position to receive it) and the weight of the package swings the shelf downward and the projection D' is thus caused to engage the chain D for moving the latter a limited distance. The movement of the chain turns the ratchet wheel F sufficiently to cause the pawl O to be tripped by which its upper hooked end is temporarily disengaged from the ratchet wheel *n'* causing the lever N, N', to be liberated and its weighted end to drop by which the rack M is forced upward causing the feed rollers K, K', to feed a portion of the strip *i* out through the opening *h* and as the rack projection *m'* comes against the rear end of the cutter lever P'' the marked strip is cut off between the movable and stationary shears P', P, and the depositor is then enabled to pull out and retain such detached strip, check or ticket as a receipt for the deposited package.

The same operation takes place for every time a package or bundle is deposited in the box A. Whenever the box A is emptied the check numbers corresponding to the respective packages can easily be ascertained by looking on the number on the end of the remaining strip *i*, if for instance this should show for instance 15 it would indicate that the uppermost package in the box belonged to the party holding check number 14 and so on for the packages on the successive shelves in the box or receptacle.

Having thus fully described the nature, construction, and operation of my invention, I wish to secure by Letters Patent and claim—

1. In a package delivery apparatus, a receptacle having a pivoted door and a series of shelves pivoted one above the other and adapted to receive the packages, an endless chain actuated by said shelves, a strip feeding and severing device and connecting and operative mechanism from the endless chain and pivoted door, substantially as and for the purpose set forth.

2. In a package delivery apparatus, a receptacle having a movable door and series of shelves pivoted one above the other and adapted to receive the packages, an endless chain actuated by said shelves, a strip feeding and severing device adapted to be set for operation by the door motion and released by the downward movement of the shelves, substantially as and for the purpose set forth.

3. In a package delivery apparatus, the combination of a receptacle having a series

of shelves pivoted one above the other and adapted to receive the packages, a strip feeding and severing mechanism, and devices operated by the movement of the shelves for actuating the strip feeding and severing mechanism, substantially as described.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 12th day of July, A. D. 1892.

ROBERT F. ANDERSSON.

Witnesses:

ALBAN ANDRÉN,

MARGARET G. MARSHALL.