

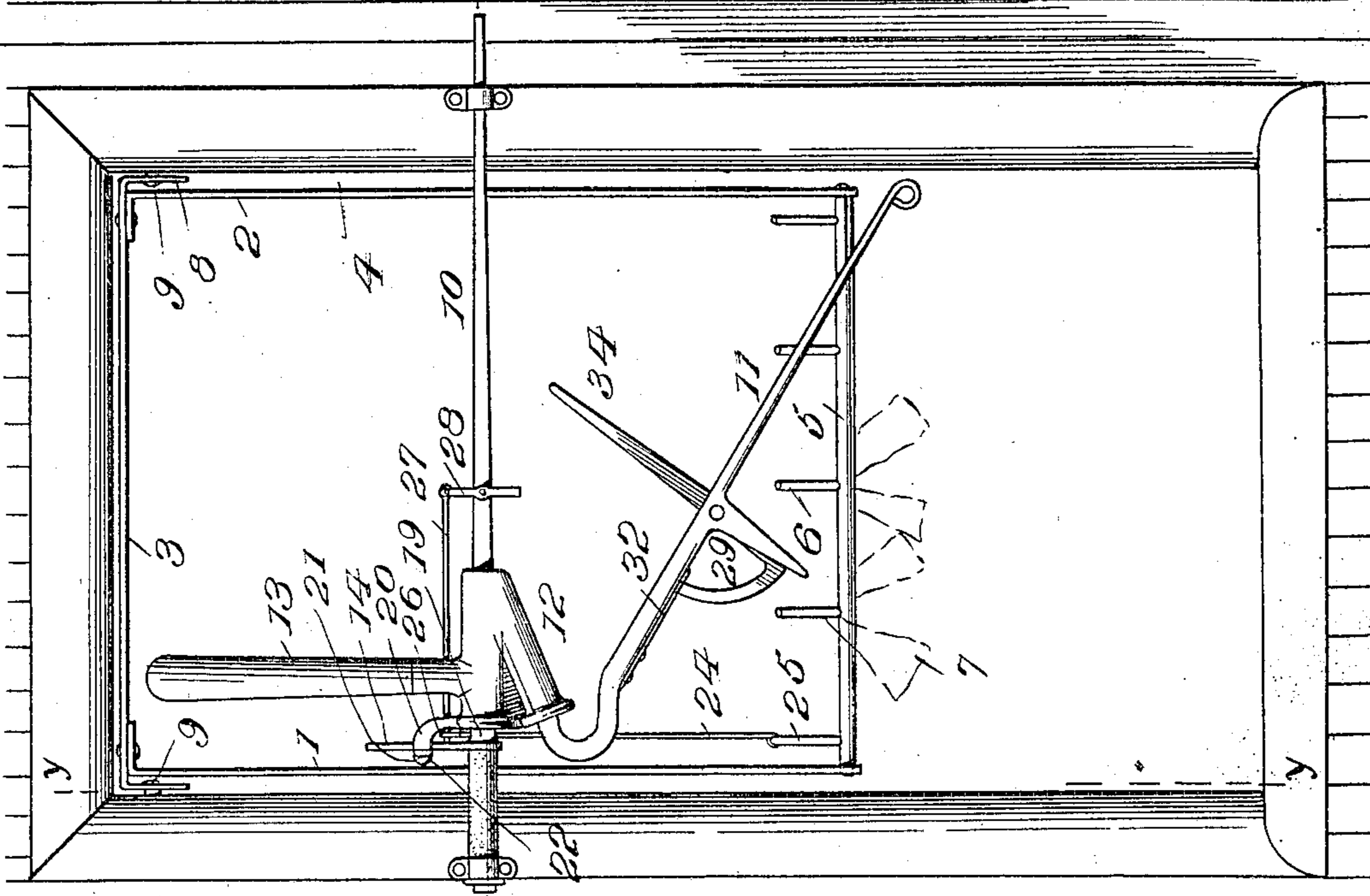
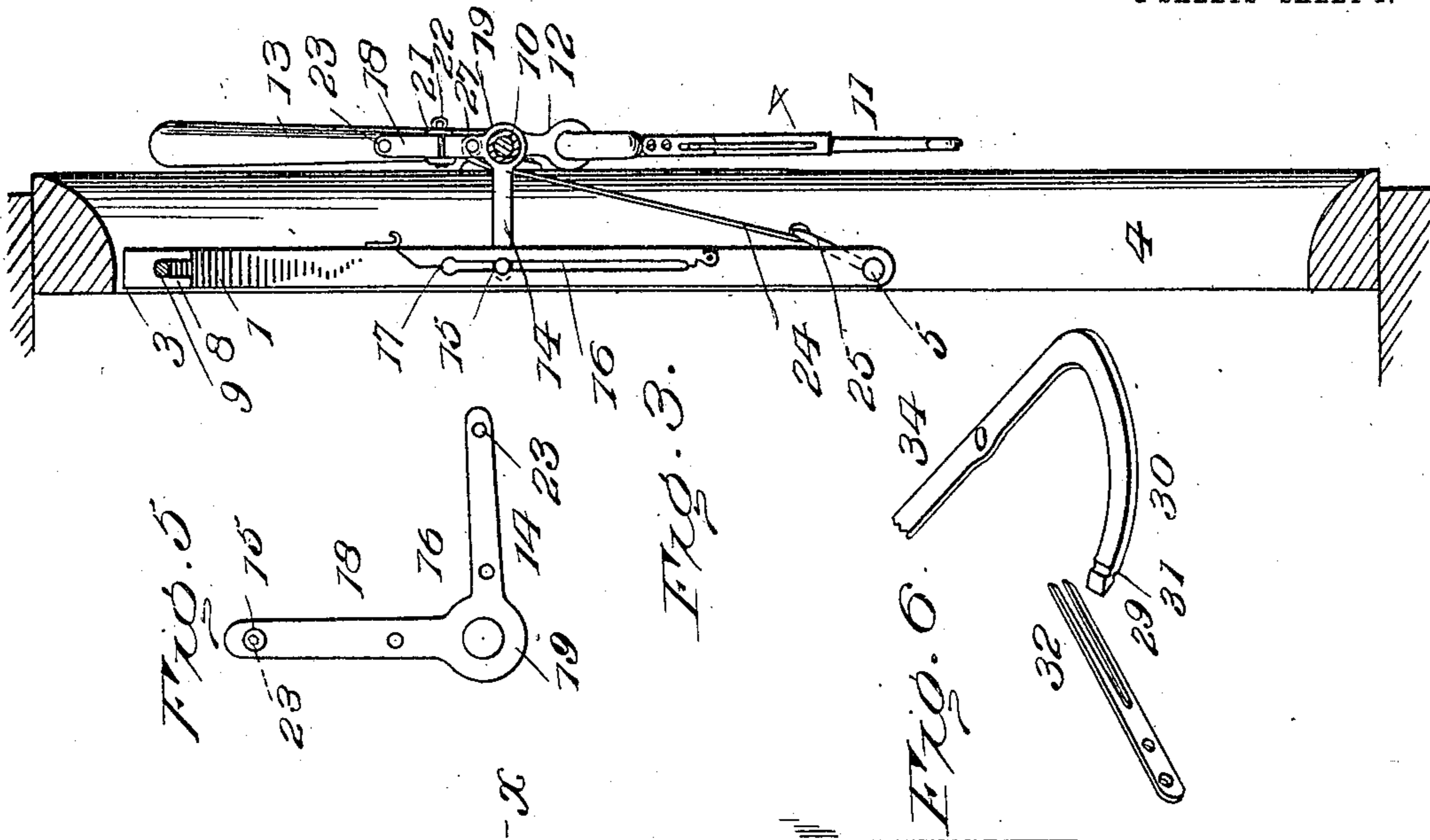
No. 837,380.

PATENTED DEC. 4, 1906.

N. K. BOWMAN.
MAIL BAG DELIVERER.

APPLICATION FILED MAR. 9, 1906.

2 SHEETS—SHEET 1.



Inventor

Witnesses

W. M. Munn
W. K. Woodson

Fig. 1.

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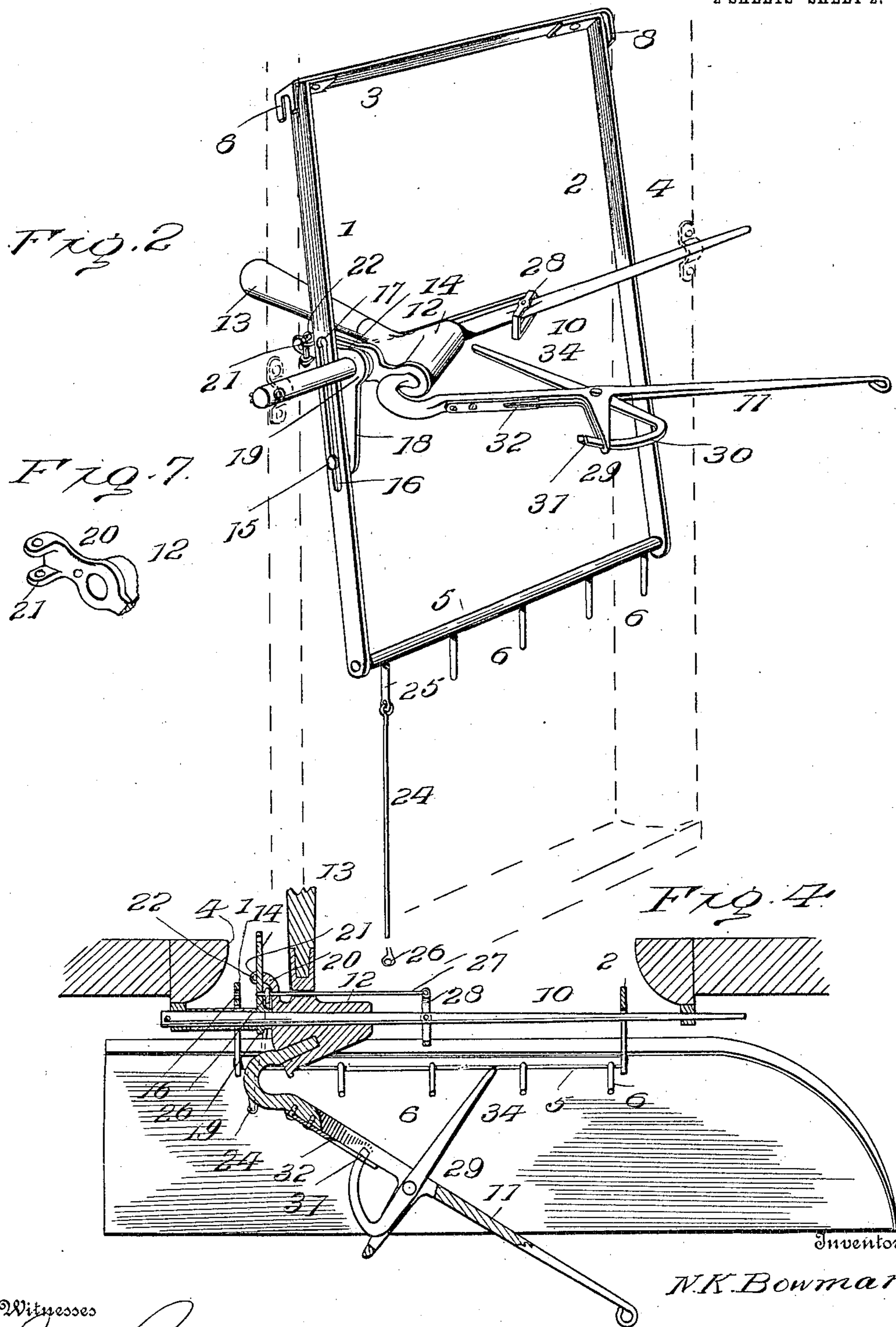
W. H. Racy, Attorneys

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2 SHEETS—SHEET 2.



Witnesses
W. H. Woodson

By *W. H. Woodson* Attorney
N. K. Bowman Inventor

UNITED STATES PATENT OFFICE.

NEWTON K. BOWMAN, OF NORTH LAWRENCE, OHIO.

MAIL-BAG DELIVERER.

No. 837,380.

Specification of Letters Patent.

Patented Dec. 4, 1906.

Application filed March 9, 1906. Serial No. 305,114.

To all whom it may concern:

Be it known that I, NEWTON K. BOWMAN, a citizen of the United States, residing at North Lawrence, in the county of Stark and State of Ohio, have invented certain new and useful Improvements in Mail-Bag Deliverers, of which the following is a specification.

Along certain lines of railway where the mail-service is heavy and a number of mail-sacks are required to be delivered at one or more stations from a fast-moving train the mechanical appliances generally provided for this purpose are not adequate.

This invention provides an attachment which may be used in connection with an ordinary catcher to admit of a number of mail-bags being delivered from the car at one time, said attachment being thrown into position when projecting the catcher, so that mail may be delivered and taken up at practically one and the same time.

The invention consists of a swinging frame provided with a rock-shaft having suspending means for supporting the mail-sacks, connecting means between the swinging frame and the catcher to admit of both being thrown into operative position at the same time, means for holding the rock-shaft in a given position to support the mail-bags until tripped, means to admit of reversing the delivery attachment so it may be readily adapted for either side of the car, and attaching means providing for ready removal of the deliverer when not required for immediate use or when it becomes necessary to change the same from one side of the car to the other, said means also enabling the device to be easily and quickly placed in position without the use of tools of any kind.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and accompanying drawings.

While the invention may be adapted to different forms and conditions by changes in the structure and minor details without departing from the spirit or essential features thereof, still the preferred embodiment is shown in the accompanying drawings, in which—

Figure 1 is a side view of the portion of a mail-car provided with a catcher and deliverer embodying the invention, said parts be-

ing shown in a pendent position and supplied with mail-sacks in readiness to be delivered. Fig. 2 is a perspective view of the parts shown in Fig. 1, illustrating their relative arrangement when projected into operative position to effect delivery of the mail-sacks when tripped. Fig. 3 is a section on the line *yy* of Fig. 1 looking to the right. Fig. 4 is a horizontal section on the line *xx* of Fig. 1, showing the catcher and deliverer projected into operative position. Fig. 5 is a detail view of the connection between the catcher and deliverer and comprising the hub and angularly-disposed arms. Fig. 6 is a detail perspective view of the supporting-arm of the deliverer pivoted to the catcher-arm and the spring actuating therewith. Fig. 7 is a detail perspective view of a portion of the catcher-head, showing more clearly the arm projected therefrom and having spaced ears at its free end to receive between them an arm of the connection shown in Fig. 5.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The attachment appears as a frame and comprises side bars 1 and 2 and an upper horizontal bar 3. This frame is suspended in the upper portion of the door-opening 4, so as to be swung outward from the side of the car a sufficient distance to effect safe delivery of the mail-sacks. A rock-shaft 5 is mounted in the lower ends of the side bars 1 and 2 and is provided at intervals in its length with suspending means 6, which are adapted to support the several mail-sacks 7 to be delivered, which preferably consist of pins projected outward from the rock-shaft and in operative position normally inclining upwardly, so as to prevent displacement of the mail-sacks when suspended therefrom. The frame of the deliverer is detachably connected with the casement or jambs of the door-opening in a manner to admit of its easy and ready detachment when not required for immediate use or to admit of its removal to be changed to the opposite side of the car on single-line roads. Pendent portions 8 are provided at the upper corners of the frame and are notched to receive headed pivot-supports 9, applied to the upper portions of the door-jambs. The pendent portions 8 are spaced from the side bars and preferably consist of integral parts of the horizontal bar 3, the op-

posite ends of which are bent to provide the parts 8. The upper ends of the side bars 1 and 2 are bent inwardly and are riveted, bolted, or otherwise secured to opposite ends of the horizontal bar 3. When the frame of the deliverer is in position, it is prevented from vertical displacement by reason of the horizontal bar 3 being arranged close to the lintel or upper cross-piece forming the door-opening. When it is required to either remove or place the deliverer-frame in position, it is turned into approximately a horizontal position, thereby admitting of the slotted pendent portions 8 being slipped from or upon the headed pivot-supports 9, as will be readily comprehended.

The catcher may be of any construction and, as shown, comprises the supporting-bar 10, arm 11, head 12, and handle 13. A connection is provided between the catcher and the deliverer-frame, whereby upon projecting the catcher into operative position the deliverer is likewise thrown outward to effect safe delivery of the mail-sacks. The connection consists of an arm 14, which is fast at one end to the supporting-bar 10 and is provided at its opposite end with a pin or stud 15, which is adapted to operate in a slot 16 of one of the side bars of the deliverer-frame and which slot is provided in the bar 1 and is enlarged at one end, as shown at 17, to receive the head of the pin or stud 15. Any means may be employed for connecting the arm 14 to the supporting-bar 10; but to provide for adapting the attachment to either side of a mail-car a second arm 18 is in connection with the arm 14 and is arranged approximately at a right angle thereto and is adapted to be secured to the head 12 of the catcher. A hub 19 is formed at the inner ends of the arms 14 and 18 and receives the supporting-bar 10. The connection, consisting of the arms 14 and 18 and the hub 19, is adapted to be turned upon the supporting-bar 10 to admit of either one of the arms 14 or 18 making connection with the deliverer-frame and the other arm with a catcher, with the result that the device may be adapted for either side of the car. An arm 20 projects from the head 12 and is provided at its outer end with spaced ears 21, between which is adapted to be received either the arm 14 or the arm 18, said ears being transversely pierced to receive a cotter-pin 22, by means of which the arm received between the ears is held in place. An opening 23 is provided in the outer end of each of the arms 14 and 18 to receive the pin or stud 15, according to which of the arms is in position to make connection with the deliverer-frame. The hub 19 is mounted both to turn and to slide upon the supporting-bar 10, thereby providing for engagement and disengagement of the arms 14 and 18 with the ears of the arm 20.

The rock-shaft 5 is held in a given position—

that is, with the suspending-pin 6 inclining upwardly by means of a connection 24, loosely joined at one end with an arm 25, projected from the rock-shaft and adapted to make detachable connection at its opposite end with the catcher. The connection 24 preferably consists of a stout wire or rod and has an eye 26 at its upper or free end to receive a lock-bolt 27, slidably mounted with reference to the head 12 and supported in openings formed in the arm 20, the socket or tang to which the handle 13 is fitted, and each of the arms 14 and 18. A trip 28 is pivoted intermediate of its ends to a supporting-bar 10, and the lock-bolt 27 is connected to one end thereof, whereas the opposite end is adapted to be engaged in any manner to effect a release of the connection 24 by withdrawal of the lock-bolt 27 from the eye 26 thereof, thereby permitting the rock-shaft 5 to turn under the weight of the mail-sacks suspended therefrom, so as to discharge the same.

It is contemplated to dispose the trip 28 so that it may be operated directly or indirectly by means of the mail-matter taken up by the catcher. As shown, a deliverer 29 is pivoted at a point between its ends to the catcher-arm 11, and its inner end portion is adapted to extend into the path of the sack containing the mail to be taken up by the catcher so as to be struck thereby, and this deliverer is so arranged as to come in contact with the trip 28 and actuate the same, whereby delivery of the mail suspended from the rock-shaft is effected. The outer portion of the deliverer 29 is formed with a curved supporting-arm 30, whose end is oppositely beveled and notched, as shown at 31, to be engaged by retaining-springs 32, so as to hold the deliverer in normal position against casual displacement. The tapered end of the supporting-arm 30 is adapted to enter a notch formed in the catcher-arm 11, so as to materially assist in sustaining the weight of the mail-matter suspended therefrom. A stripper 34 projects outward from the catcher-arm 11 and effects delivery of the mail-matter suspended from the arm 30 when the deliverer 29 is actuated by the mail taken up by the catcher.

When the deliverer attachment is in position and hangs in the door-opening and receives the mail to be delivered at a station, it presents the appearance about as shown in Fig. 1. As the car approaches the station the clerk grasps the handle 13 and operates the same to project the catcher into horizontal position, and this operation at the same time swings the lower portion of the supplemental deliverer outward away from the side of the car, as shown most clearly in Fig. 2. As the catcher receives the mail to be taken up by the train the trip 28 is actuated, with the result that the lock-bolt 27 is withdrawn from engagement with the connection 24,

thereby liberating the rock-shaft 5, which turns under the weight of the mail suspended therefrom and permits said mail to be discharged. When one or two sacks only are to be delivered, it is to be understood that the supplemental or auxiliary deliverer is not required, as the ordinary deliverer 29 is sufficient for the purpose; but when a number of sacks are to be delivered the attachment is coupled to the catcher and is brought into operation in the manner stated. It is to be understood, furthermore, that the deliverer 29 may be entirely dispensed with and the swinging deliverer used solely for the purpose of effecting discharge of one or more mail-sacks from the moving train.

In order to admit of the swinging deliverer entering the car at its lower end to receive the mail-matter, it may be so constructed as to be readily disconnected from the connection joining it to the catcher, and for this purpose a portion of the slotted bar is hinged, as indicated in Fig. 3, the hinged part being secured at its free end by means of a suitable catch.

Having thus described the invention, what is claimed as new is—

1. A deliverer for mail-matter consisting of a frame adapted to be suspended in the door-opening of a mail-car and adapted to be swung outward therefrom at its lower end, and means for holding the mail-matter to be delivered in suspension and mounted in the lower end of said frame so as to turn, other means for holding said mail-supporting means in a given position, and a trip adapted to be actuated to effect delivery of the mail at the proper time.

2. In means for receiving and discharging mail-matter, the combination of a catcher, a deliverer independent of the catcher having a movable part, connecting means between the catcher and deliverer to cause both to move together, other means between the catcher and movable part of the deliverer, and a trip to effect release of the movable part of the deliverer to cause a discharge of the mail therefrom.

3. In means for receiving and discharging mail, the combination of a catcher, a swinging deliverer provided with a movable support for the mail, connecting means between the catcher and deliverer, other means between the catcher and the movable support of the deliverer to hold the same in operative position, and a trip adapted to effect release of the movable part of the deliverer to permit automatic discharge of the mail.

4. In combination, a catcher, a deliverer, a connection mounted upon the catcher and reversible thereon, and means for securing the said connection to the catcher and to the deliverer in either of its extreme positions.

5. In combination, a catcher, a deliverer, both detachable and reversible, a connection

mounted upon the catcher and reversible therewith and having an independent reversible adjustment, means for securing the connection and catcher in either relative position, and other means for securing said connection and deliverer in either adjustment of the parts.

6. In combination, a catcher, a deliverer, a reversible connection comprising angularly-disposed arms, means for connecting either one of said arms to the deliverer, and other means for connecting the other arm to the catcher.

7. In combination, a catcher, a deliverer, angularly-disposed arms mounted axially with the catcher, means for connecting one of said arms to the deliverer, and means for connecting the other arm to the catcher.

8. In combination, a catcher provided with an offstanding arm, a deliverer, angularly-disposed arms mounted axially with the catcher, means for connecting one of said arms to the deliverer, and means for connecting the other arm to the offstanding arm of the catcher.

9. In combination, a catcher having an arm provided with spaced ears, a deliverer, angularly-disposed arms mounted axially with the catcher, means connecting one of said arms to the deliverer, and independent means connecting the other arm between the spaced ears of the arm projecting from said catcher.

10. In combination, a catcher, a deliverer supported by and movable with said catcher, an auxiliary deliverer, and connecting means between the catcher and auxiliary deliverer to admit of throwing the latter into or out of operation as may be required.

11. In combination, a catcher, an auxiliary deliverer provided with a movable supporting means for the mail, connecting means between the catcher and auxiliary deliverer, other connecting means between the movable support of the auxiliary deliverer and the catcher, a trip for effecting release of the movable mail-supporting means, and an independent catcher adapted to operate the trip to effect release of the mail-supporting means of the auxiliary deliverer.

12. A deliverer for mail-matter comprising a frame having pendent portions at or near its upper end formed with slots to make detachable connection with pins at opposite sides of the door-opening.

13. A deliverer for mail-matter comprising a frame having pendent portions at or near its upper end spaced from the side bars thereof and having slots or notches formed therein and opening downward and adapted to make detachable connection with pins applied to the jambs of the door-opening.

14. A deliverer of the character set forth comprising a frame embodying side bars and an upper horizontal bar, the latter having its

end portions projected beyond the side bars and bent downward approximately at a right angle and formed with notches or open-ended slots in their lower ends to cooperate with
5 pins applied to the jambs of the door-opening.

15. In combination with a mail-catcher, of a deliverer pivoted thereto and having an off-standing supporting-arm, the extremity of
10 which is adapted to be supported by means of the catcher.

16. In combination, a mail-catcher, a deliverer pivoted thereto and having an off-standing arm for supporting the bag to be de-
15 livered, and a spring attached to the catcher and adapted to engage with the supporting-

arm of the deliverer and prevent casual displacement thereof.

17. In combination, a mail-catcher, a deliverer pivoted thereto and having an off-
20 standing supporting-arm adapted to enter a recess or opening in the catcher to be supported thereby, and a spring attached to the catcher and adapted to engage with the sup-
25 porting-arm to prevent casual displacement of the deliverer.

In testimony whereof I affix my signature in presence of two witnesses.

NEWTON K. BOWMAN. [L. s.]

Witnesses:

PAULA A. TEMPLE,
JOHN POLLOCK.