

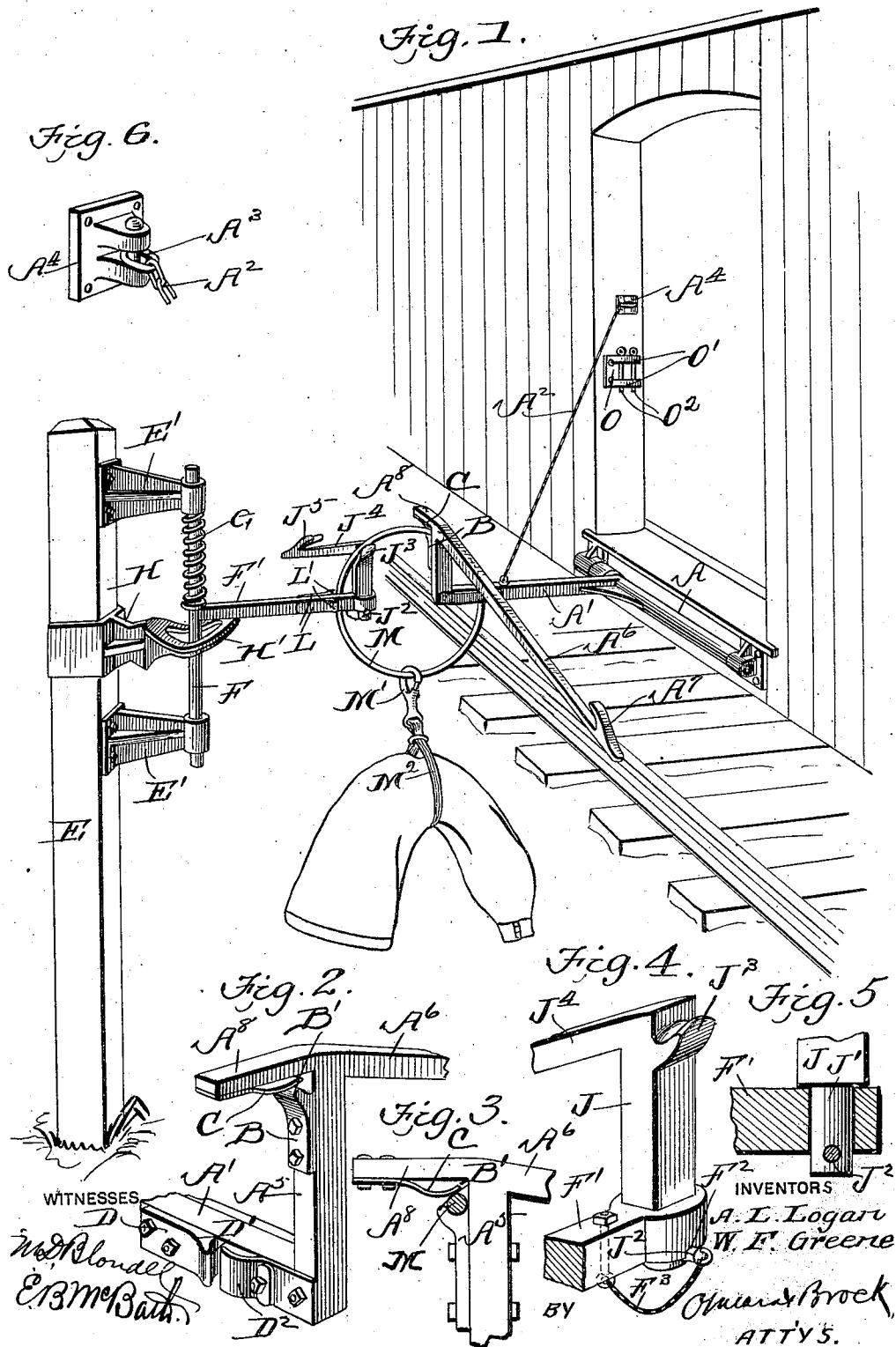
No. 844,527.

PATENTED FEB. 19, 1907.

A. L. LOGAN & W. F. GREENE.
MAIL BAG CATCHER AND DELIVERER.

APPLICATION FILED DEC. 5, 1905.

2 SHEETS—SHEET 1.



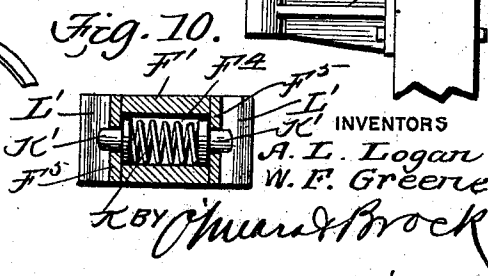
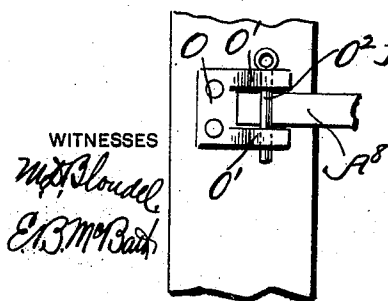
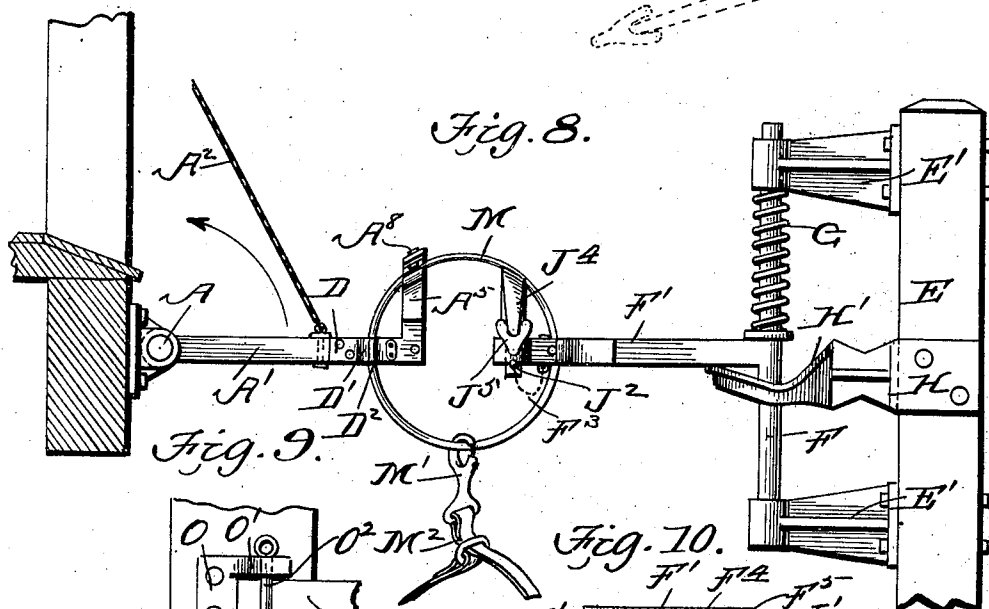
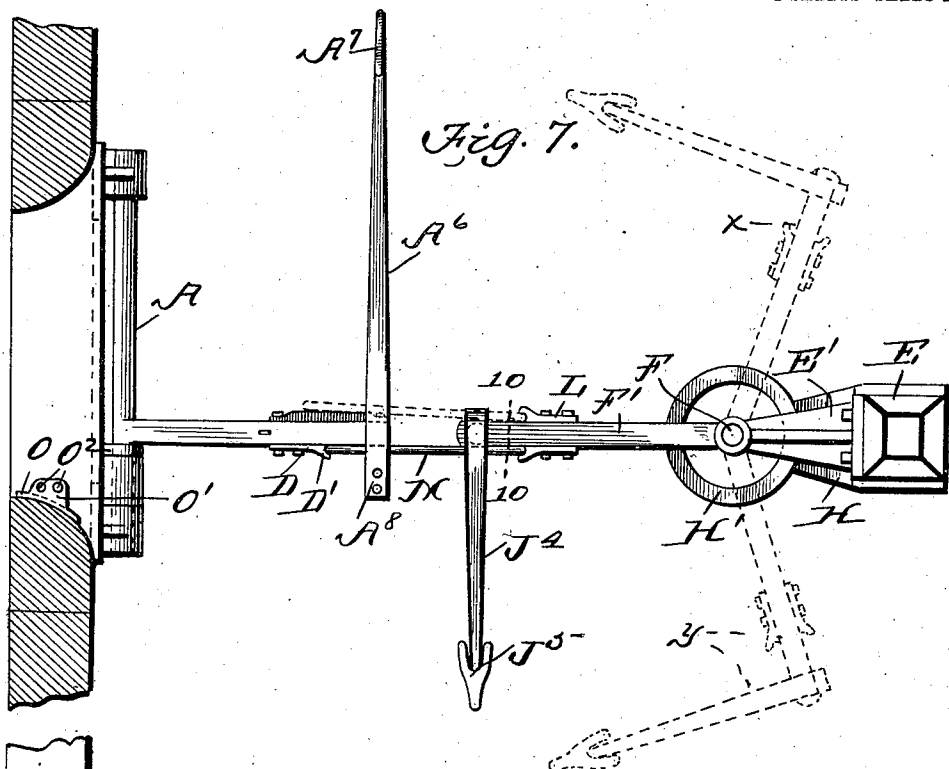
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2 SHEETS—SHEET 2.



WITNESSES

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UNITED STATES PATENT OFFICE.

ALTON L. LOGAN AND WILLIAM F. GREENE, OF WASHINGTON, INDIANA.

MAIL-BAG CATCHER AND DELIVERER.

No. 844,527.

Specification of Letters Patent.

Patented Feb. 19, 1907.

Application filed December 5, 1905. Serial No. 290,450.

To all whom it may concern:

Be it known that we, ALTON L. LOGAN and WILLIAM F. GREENE, citizens of the United States, residing at Washington, in the county of Daviess and State of Indiana, have invented a new and useful Improvement in Mail-Bag Catcher and Deliverer, of which the following is a specification.

This invention relates to a device for delivering and receiving sacks of mail at stations at which no stop is made by the mail-train.

The object of the invention is to provide a mail deliverer and catching device by means of which mail-sacks can be simultaneously exchanged, one being delivered to the station from the train and one being received by the train, the receipt and delivery of the sacks being accomplished substantially by one device.

The invention consists of the novel features of construction hereinafter fully set forth, pointed out in the claims, and shown in the accompanying drawings, in which—

Figure 1 is a perspective view of our device, showing the delivery of one sack. Fig. 2 is a detail perspective view illustrating the construction of a portion of the delivery-arm carried by a mail-car. Fig. 3 is a detail side elevation of a portion of said arm, a ring adapted to support the mail-sack being shown in cross-section. Fig. 4 is a detail perspective view of a portion of the station receiving-arm. Fig. 5 is a detail view of a portion of said arm, the horizontal portion being in section. Fig. 6 is a detail perspective view of a casting carried by the car-door. Fig. 7 is a detail plan view of the device, the station receiving-arm being shown in two positions in dotted lines. Fig. 8 is a detail vertical elevation, a portion of the car floor and sill being in section, the said view illustrating the delivery of a ring from the station-arm to the car. Fig. 9 is a detail view of a casting carried by the car-door with locking-bolt to hold the delivery-arm in an inoperative position. Fig. 10 is a section on the line 10 10 of Fig. 7.

In these drawings, A represents a bar rotatably journaled upon a side of the car parallel thereto and adjacent a doorway. The bar A has an outwardly-extending arm A' at right angles to the bar, which for convenience will be termed the "delivery-arm." When in use, this arm is held in a horizontal position by a chain A², the upper link of

which is in engagement with a bolt A³, carried by a casting A⁴, secured to the frame of the car-door. At the outer end of the arm A' is an upwardly-extended standard A⁵, from the upper end of which projects a forwardly and downwardly extending receiving-arm A⁶, terminating at its free end in a spear-head A⁷. The standard A⁵ also carries a rearwardly-extending arm A⁸, inclined slightly downward and much shorter than the receiving-arm A⁶. Upon the rear face of the standard A⁵ is secured a plate B, which at its upper end terminates in a nose B', extending rearwardly and spaced from the standard A⁵. The under face of the arm A⁸ has a leaf-spring C secured thereto, the free end of the spring being slightly curved and resting upon the nose B'. Upon the rear sides of the standard A' is secured a plate D, provided with a nose D', and in advance of said plate is secured a spring D², the free end portion of which is curved and which extends toward the nose D'. The parts above described are carried by the mail-car and are duplicated upon opposite sides of the car, being made right and left handed for that purpose, as will be clearly understood. While the object of these parts is to receive a mail-sack from the station as well as to deliver one, it will avoid confusion to refer throughout to the parts A', A⁵, and A⁸ under the general term of the "delivery-arm," and to refer to the coacting parts located at the station as the "receiving-arms."

At the place where the mail is to be exchanged a post E is erected, and to this post are secured in vertical alinement brackets E', in which brackets is vertically journaled a rotatable rod F, which intermediate its ends carries a horizontal extending arm F'. A coil-spring G is placed upon the upper portion of the rod F, and the upper end of the spring bears upon the journal portion of the upper bracket E', while the lower end of the spring bears upon the arm F', a tendency of the spring being to force the rod downwardly, and thus throw the arm F' into a lower horizontal plane.

In order to lock the arm in the proper plane and at the proper angle to the track, we secure to the post E a bracket H, which carries an arm H', centrally cut out and bent transversely or parallel to the front face of the post E. The extreme outer tip of the arm H' is therefore in a higher horizontal plane than its sides at points diametrically

opposite the center of the cut-out portion, and the rod F extends centrally through this cut-out portion of the plate H'. The arm F' is slightly enlarged and perforated adjacent its outer end, and a standard J has its lower end reduced and rounded, as shown at J' in Fig. 5, the said end being journaled in the perforation of the arm F'. To lock the standard J against rotation upon the arm F', the arm is notched, as shown at F², upon each side, and the portion J' is perforated in alignment with said notches. A locking-pin J² is adapted to pass through the perforation of the portion J' and to rest in the notches F², thereby locking the standard J against rotation upon the arm F'. To prevent loss, the locking-pin J² is secured to the arm F' by a suitable chain F³. The standard J carries upon its forward face an upwardly and outwardly extending lip J³, and extending rearwardly the standard J carries a downwardly-inclined receiving-arm J⁴, which is provided at its free end with a double prong J⁵, the prongs extending back over the arm. The arm F' is recessed, as shown at F⁴ in Fig. 10, preferably by cutting the arm out transversely and placing perforated plates F⁵ over the cut-out portion, and in the recess thus formed is transversely arranged a coil-spring K, the ends of which bear upon the heads of pins K', which pins project outwardly through the perforations in the plates F⁵. Upon each side of the plate F and adjacent the said pins K' are secured plates L, provided with laterally-extending lips L', spaced from the sides of the arm F'. In use both the delivery-arm and the receiving-arm are thrown into a horizontal position and in approximately the same horizontal plane, though it will be noted that the highest point of the receiving-arm A⁶, carried by the delivery-arm A' and standard A⁵, is slightly higher than any part of the lip J³ of the receiving-arm.

In operation the sacks of mail are received and delivered in the following manner: A ring M is employed of such a diameter that it can be in engagement at the same time with both the delivery-arm carried by the car and the receiving-arm carried by the post E. The mail-sack is secured to this ring by means of a strap M², passed around the sack, and a snap-hook M'. In order to deliver a sack from the car to the receiving-arm at the station, the ring M is slipped into the seat formed by the nose B' of the plate B, the standard A⁵, and the arm A⁸, where it is held against accidental disengagement with the spring C', which will bear upon the ring, as shown in Fig. 3. At a second point the ring is also held between the nose D' of the plate D and the spring D². The sack of mail is then connected to the ring by means of the snap-hook M' and the strap M² and the arm A' lowered into the horizontal position.

(Shown in Fig. 1.) As the ring M, thus carried at the outer end of the arm A', approaches the arm F' it is engaged by the arm J⁴ and guided by the said arm to the lip J³ with which the ring becomes engaged, and it is then immediately withdrawn from engagement with the nose B' and lip D'. The receiving-arm is then thrown into the position indicated at x in Fig. 7. At the same time that this operation has taken place a sack supported by a similar ring M has been received by the car. In this last case the ring M was placed in position, a portion of it resting in the lip J³ and a portion of it resting within the lip L' on the proper sides of the arm F', the ring being held in such position by the pin K'. It will be noted from Fig. 7 that the arm A⁶ is of greater length than the arm J⁴, and it has already been stated that the highest point of the arm A⁶ was above the highest point of the lip J³. As the arm A⁶ approaches the post E it will enter the ring M and the ring will ride up upon the said arm and be lifted from the lip J³ and withdrawn from engagement with the lip L' and pin K' and will be carried upon the arm A⁶. It can then be readily removed from the said arm by the mail-clerk, who draws the arm A' inwardly by means of the chain A². In order to lock the arm A' in an upright position when the device is not in use, we place a casting O upon the frame of the car-door below the casting A⁴, and this casting is provided with upper and lower alining lugs O', through which pass bolts O². By lifting up the outermost bolt O² as the arm A' is brought into vertical position the end portion of the arm A⁸ will move in between the lugs O' and rest against the inner bolt O². By dropping the other bolt back into position the arm A⁸ will be securely locked between the lugs O' by the two bolts O², one being on each side of the arm A⁸, and the arm A' will therefore be prevented from swinging either outwardly or inwardly.

It will be obvious that in order for the postmaster at the station to receive mail from trains traveling in opposite directions a means must be provided for reversing portions of the receiving-arms. This is readily accomplished by removing the bolt J² and giving a one-half revolution to the standard J and then again locking the same in position by the bolt J². In Fig. 7 the dotted lines indicated at y show the position into which the receiving device is thrown when a sack has been delivered to it from a train approaching from a direction opposite that of the one referred to in the first description of the operation of the device.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a device of the kind described, a vertically-swinging arm, a vertical standard car-

ried at the end of the arm, a forwardly and downwardly inclined receiving-arm carried by the standard, a rearwardly-extending arm carried by the standard, a plate carried by the rear face of the standard and terminating in a nose, a leaf-spring carried by the last-mentioned arm and engaging the nose, a plate having a nose carried by the first-mentioned arm, and a spring carried by said arm and having a free end in engagement with the nose of the last-mentioned plate.

2. A device of the kind described comprising a swinging arm carried by a car, a standard carried by said arm, lips carried by the arm and standard respectively and adapted to engage different points upon a ring, a receiving-arm carried by the standard, and parallel to the sides of the car, a horizontal swinging arm carried by a post, a standard carried by said horizontal arm, lips carried by the last-mentioned arm and standard respectively, and adapted to engage a ring at two different points, and a receiving-arm carried by the last-mentioned standard, and extending in the opposite direction to the first-mentioned receiving-arm.

3. A device of the kind described comprising a vertically-swinging arm carried by a car, a standard carried at the free end of said arm, a forwardly and downwardly inclined receiving-arm carried by the said standard, a spear-head at the free end of said receiving-arm, an oppositely-extending arm carried by the standard, a plate having a lip carried by the standard, a spring carried by the last-mentioned arm and adapted to coact with the lip, a plate having a lip carried by the

vertically-swinging arm, a spring adapted to coact with said lip, a ring adapted to engage the said lips and springs and a receiving-arm adapted to enter said ring and disengage the same from the lips and springs.

4. The combination with a post, of brackets in vertical alinement, a rod journaled therein, a horizontally-extending arm carried by the rod, a spring bearing downwardly upon said arm and a bracket carried by the post and having an arm centrally cut out and bent to guide the first-mentioned arm, as and for the purpose set forth.

5. A device of the kind described comprising a vertically-swinging arm carried by the car, a standard carried by said arm, a receiving-arm carried by the said standard and parallel to the sides of the car, fixed brackets supported adjacent a track, and in vertical alinement, a rotatable rod journaled in said brackets, an arm extending horizontally from said rod, a rotatable standard carried by said horizontal arm, means for locking the standard against rotation, a receiving-arm carried by said standard and extending in a direction opposite to the first-mentioned receiving-arm, a ring, means for detachably connecting a mail-sack to said ring, means carried by both of the arms and both of the standards for engaging the ring and holding it in position to be engaged by one of the said receiving-arms.

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WILLIAM F. GREENE.

Witnesses:

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