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2 SHEETS—SHEET 1.

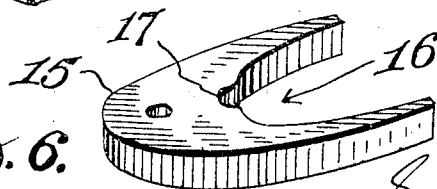


Fig. 6.

Witnesses:

Joe. P. Mahler
E. M. Ricketts

Inventor

Smith Henry

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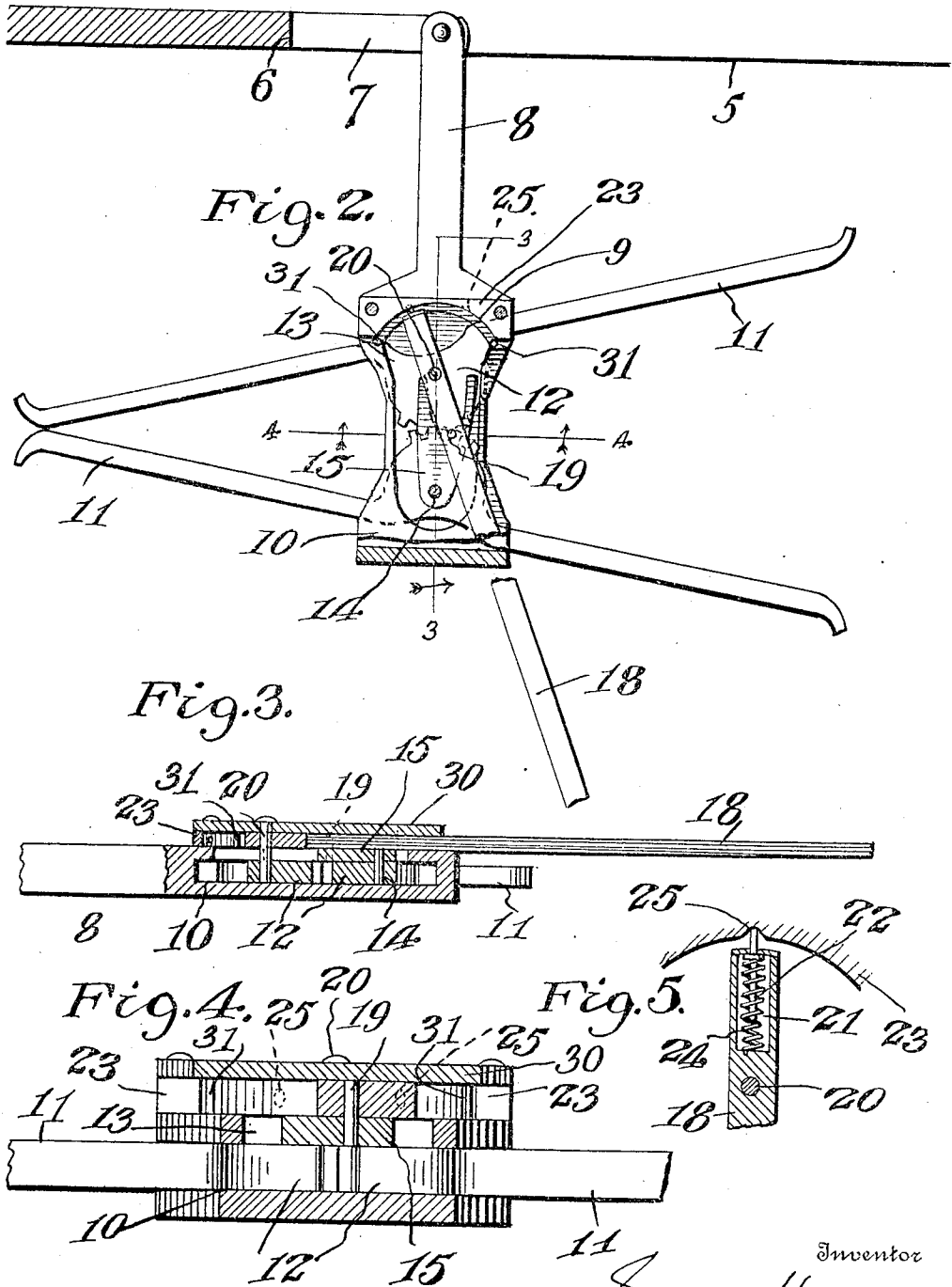
Watson & Coleman

Attorney

S. HENRY.
MAIL DELIVERY APPARATUS.
APPLICATION FILED OCT. 25, 1909.

943,934.

Patented Dec. 21, 1909.
2 SHEETS—SHEET 2.



Witnesses:—

Joe. P. Mahler
E. M. Picketts

By

Inventor
Smith Henry
Watson E. Coleman
Attorney

UNITED STATES PATENT OFFICE.

SMITH HENRY, OF LILESVILLE, NORTH CAROLINA.

MAIL-DELIVERY APPARATUS.

943,934.

Specification of Letters Patent.

Patented Dec. 21, 1909.

Application filed October 25, 1909. Serial No. 524,460.

To all whom it may concern:

Be it known that I, SMITH HENRY, a citizen of the United States, residing at Lilesville, in the county of Anson and State of North Carolina, have invented certain new and useful Improvements in Mail-Delivery Apparatus, of which the following is a specification, reference being had to the accompanying drawings.

This invention has relation to certain new and useful improvements in mail bag catchers and deliverers of that character wherein bag holding arms or similar devices are carried by the car and are adapted to deliver a bag at a station and simultaneously receive a bag from a stationary post or other holding device arranged adjacent to the car track.

Another object is to provide new and novel means for operating the bag holding arms or bars to release and receive the mail bags.

A further object is to provide a very simple device of this character which is constructed of very few parts and is absolutely positive in its operation, means being provided to retain the bag carrying arms in their closed position to prevent the accidental release of the bag.

With these and other objects in view, the invention consists of the novel construction, combination and arrangement of parts hereinafter fully described and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of a mail pouch catching and delivering mechanism constructed in accordance with the present invention; Fig. 2 is a top plan view with the cover plate removed; Fig. 3 is a section taken on the line 3—3 of Fig. 2; Fig. 4 is a section taken on the line 4—4 of Fig. 2; Fig. 5 is a detail section of the end of the operating lever, showing means for holding the same in its adjusted position; Fig. 6 is a detail perspective view of the arm actuating block.

Referring to the drawings 5 indicates a car having a doorway 6. To one side of the doorway a bracket 7 is secured upon the outer end of which the arm 8 is pivoted for transverse movement in the car door. The outer end of this arm is enlarged as shown at 9 and is horizontally slotted to provide a housing 10. The bag or pouch holding bars 11 are centrally pivoted within this housing and extend from the opposite sides thereof. Each of the arms is formed with a central

rack segment 12, the teeth of which mesh with each other when the arms are transversely moved to release the bag, as will hereinafter appear. The upper portion of the housing 10 is centrally cut away as shown at 13.

Secured upon the pivot pin 14 of one of the arms 11 there is a block 15 which as clearly shown in Fig 6 is bifurcated at its inner end as at 16. The center of this bifurcated end of the block is notched as at 17. This notch receives a depending pin 19 carried by an operating lever 18. The operating lever is disposed upon and movable over the casing 10, and has its inner end loosely pivoted upon the pin 20 on which also is pivoted the other of the arms 11 within the housing. The inner extremity of the operating arm 18 is provided with a longitudinal socket 21 in which a bolt 22 is disposed and has its outer end engaged with the inner concave edge of a spacing block 23. This bolt is normally held in yielding engagement with the spacing block by means of the spring 24 coiled about the same and disposed within the socket. As shown in Fig. 2, when the arms are closed to secure the pouch between the same, the end of this bolt is disposed in a shallow notch or socket 25 in the spacing block and is therefore adapted to retain the operating lever 18 in position and prevent the accidental separation of the holding arms.

Arranged adjacent to the car track is a post or standard 26. Secured to the upper end of this post there is the outwardly extending arms 27 each of which has its extremity laterally turned as shown at 27'. Also secured to the post at a lower point is a second arm 28 in the outer end of which the resilient pouch holding member 29 is secured. This member is formed from heavy resilient wire and is bowed in opposite directions and has its extremities outwardly curved. It will be noted that the lateral extremity 27' of each of the arms is disposed in the direction opposite to the lower pouch holder. This mail arm has its lateral extremity extending in the same direction as the train is moving and the arms 27 and the pouch holder would preferably be so mounted on the post 26 that they could be swung to opposite sides thereof.

The upper open portion of the housing 10 is covered by a suitable cover plate 30 and

is adapted to protect the rack segments against the introduction of foreign matter and thus insure the positive operation of the device.

5 Secured in the housing 10 and extending above the same to the underside of the cover plate 30 are the stop pins 31. These pins are disposed upon either side of the pivot pin 20 of the arm 11 and are adapted to en-
10 gage with the end of the operating lever to limit its pivotal movement.

In the operation of the device, the bars 11 receive between their rear ends the mail pouch or bag which is to be delivered at the
15 station, the forward ends of the bars being open to their fullest extent. As the train approaches the post 26, the outer end of the operating lever 18 engages with the post, and the lever is moved to the position shown
20 in Fig. 2 and the rear ends of the arms and the bars open while the forward ends thereof are closed. This movement of the lever closes the bars upon the pouch or bag which has been placed upon the end of the arms
25 27, and as the train moves in the direction of the arrow shown in Fig. 1, the bag will be drawn from the arms and securely held between the forward ends of the bars, at the same time the pouch which is held be-
30 tween the rear ends of the bars 11 strikes between the ends of the resilient pouch holder 29 secured to the outer end of the arm 28, and as the ends of the arm open the bag will be securely held between the bowed por-
35 tions of the holder until removed by the station agent or other person with the proper authority.

From the foregoing it will be seen that the operation of the device is extremely sim-
40 ple, and its actuation is very positive owing to the coöperation of the bars 11 to simultaneously open and close their respective corresponding ends upon the engagement of the operating lever with the stationary post 26.
45 The engagement of the lever with the post moves the bolt 22 out of the recess 25 and places the coil spring under tension. When the position of the bars has been reversed, the lever 18 will be disposed on the opposite
50 side of its pivotal center as shown in Fig. 2 and the bolt will engage in another notch 25 provided in the spacing block 23.

While I have shown and described what I believe to be the preferred embodiment of
55 my invention, it will be obvious that numerous minor modifications may be resorted to without departing from the essential features or sacrificing any of the advantages of the invention, and I reserve the right to
60 make such changes as may fairly fall within the scope of the claims.

Having thus described the invention, what is claimed is:

65 1. In a device of the character described, the combination with a car having a door-

way, of an outwardly extending arm piv-
otally mounted within the doorway and transversely movable therein, a housing on
the outer end of said arm, bars centrally
pivoted in said housing extending parallel
70 to the car, means disposed within said housing adapted to transversely move the bars on their pivotal center to engage the corre-
sponding ends thereof, and an operative lever
75 adapted to engage with a stationary post in juxtaposition to the car track to operate said means.

2. In a device of the character described, the combination with a car having a door-
way, of a bracket secured in said doorway, an arm pivoted on said bracket for trans-
verse swinging movement in said doorway,
80 said arm having an enlarged outer end provided with a horizontal opening therein, a pair of bars centrally pivoted in said open-
85 ing and extending horizontally from the opposite sides of said arm, a rack segment integrally formed with the pivoted center of said bars, a lever pivoted on said arm, means
carried by said arm, operable by said lever,
90 adapted to move the rack segments and open and close the corresponding ends of said bars, and means for limiting the pivotal movement of said lever.

3. In a device of the class described, the
95 combination with a car having a doorway, of a bracket secured to one side of said door-
way, a transversely movable arm pivoted on said bracket, the outer end of said arm be-
100 ing slotted to provide a housing, pouch delivering and receiving bars pivoted in said housing, each of said bars having a central rack segment integrally formed therewith,
an inwardly extending block rigidly secured
105 upon the pivot of one of said bars and having a bifurcated inner end, an operating lever loosely pivoted upon the pivot of the
other of said bars, means carried by said
lever engaging with said block adapted to
110 move the bars in opposite transverse directions to engage their corresponding ends, and means for limiting the pivotal movement of said lever.

4. In a device of the class described, the
115 combination with a car having a doorway, of an arm pivotally mounted in said door-
way for transverse swinging movement, the outer end of said arm being enlarged and
having a horizontal slot to form a housing,
bars pivoted in said housing centrally of
120 their ends and adapted to be transversely moved in opposite directions to engage their corresponding extremities, the rear ends of
said bars being adapted to hold a pouch
125 between them to be delivered, and the forward ends of said bars being separated to receive a pouch, an operating lever pivoted in said housing adjacent to one end, means
for normally holding the lever to retain the
bars in their adjusted positions, and means
130

adapted to be actuated by said lever to open and close the corresponding ends of said bars.

5. In a device of the class described, the combination with a car having a doorway, of an arm pivotally mounted in said doorway for transverse movement, a housing on the outer end of said arm, bars centrally pivoted in said housing and extending laterally from opposite sides of the arm, the upper portion of said housing having its center cut away, an arcuate rack segment integrally formed with each of said bars at their pivotal points extending inwardly to the center of the housing, a block rigidly secured upon the pivot of one of said bars, an operating lever independently movable upon the pivot of the other of said bars, said block having a bifurcated inner end, a depending pin carried by said lever disposed in the bifurcated end of said block, said pin being adapted to engage with and move said block upon the pivotal movement of the lever, such movement engaging the teeth of the rack segments and moving the bars in reverse transverse direction to open and close their corresponding ends, and means disposed in juxtaposition to the line of movement of the car adapted to receive and deliver a mail pouch from and to the opposite ends of said bars.

6. In a device of the class described, the combination with a car having a doorway, of an arm pivotally mounted in said doorway for transverse swinging movement, laterally extending bars pivotally mounted on the outer end of said arm, engaging arcuate rack segments integrally formed with each of said bars, the corresponding ends of said bars being adapted to receive and hold a pouch between them, the other ends of said bars being reversely positioned, an operating lever loosely disposed upon the pivot pin of one of said bars, means engaged by said lever adapted to move said bars in opposite transverse directions to open and close their opposite ends, and means for normally holding said lever against movement.

7. In a device of the character described, the combination with a car having a doorway, of an arm pivotally mounted in said doorway for transverse swinging movement, bars extending laterally from the opposite sides of said arm, the outer end of said arm being horizontally slotted to receive the bars, said slotted portion having its upper part cut away, a lever pivoted adjacent to its end upon said arm, a cover plate extending over said lever secured to the arm, means actuated by the pivotal movement of said

lever adapted to simultaneously move said bars in opposite transverse directions, and means arranged in juxtaposition to the line of movement of the car adapted to receive and deliver a mail pouch from and to said bars as the lever is moved.

8. In a device of the character described, the combination with a car having a doorway, of an arm pivoted in said doorway for transverse swinging movement, bars centrally pivoted to said arm and extending laterally therefrom, arcuate rack segments integrally formed with said bars at their pivotal points adapted to engage and simultaneously move the bars in opposite transverse directions, an operating lever pivoted on said arm, means engaged by said lever to move said bars, means adapted to yieldingly hold said lever from pivotal movement, and a standard arranged in juxtaposition to the line of movement of said car adapted to be engaged by said lever to operate the same, said standard carrying means adapted to receive and deliver a mail pouch to and from the opposite ends of the bars.

9. In a device of the class described, the combination with a car having a doorway, of an arm pivoted in said doorway for transverse swinging movement, bars extending laterally from the opposite sides of said arm and centrally pivoted thereto, an operating lever pivoted on said arm adjacent to its end, means actuated by the pivotal movement of said lever to simultaneously move the bars in opposite transverse directions, a cover plate disposed over said lever and secured to the arm, a spacing block arranged between the plate and lever, said lever having a socket in its inner end, a spring pressed bolt disposed in said socket, the outer end of said bolt being adapted to engage in notches in said spacing block, the inner edge of said block being concentric to the line of movement of said lever, a standard arranged in juxtaposition to the line of movement of the car, arms extending outwardly from the standard having pouch holding means extending in opposite lateral directions adapted to deliver and receive a pouch to and from the opposite ends of said bars as the outer end of the operating lever is engaged with said post.

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

SMITH HENRY.

Witnesses:

J. S. CLARK,

J. B. BROWN.