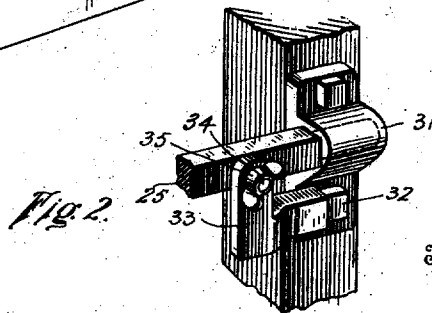
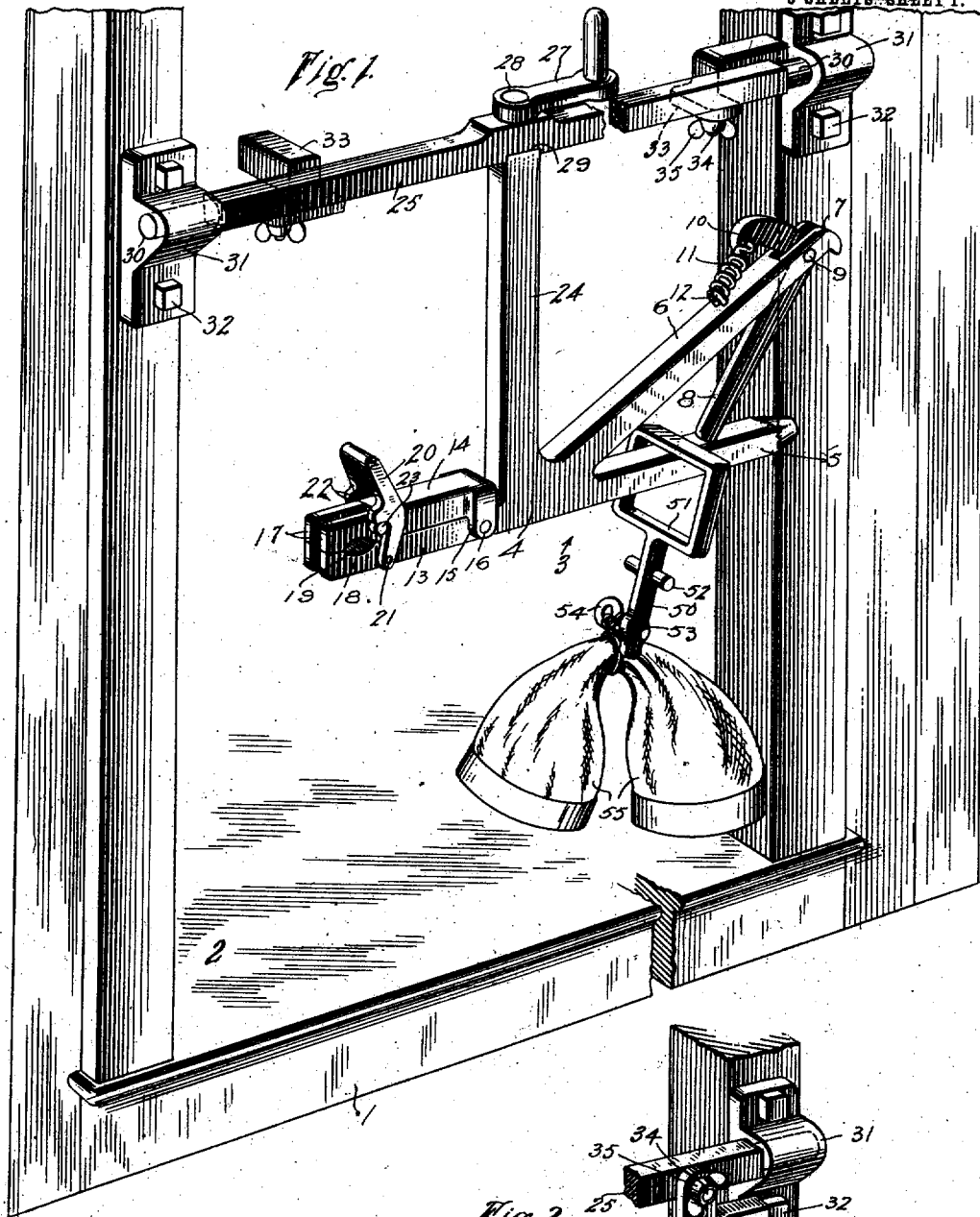


W. S. JAMES.
MAIL BAG DELIVERY AND CATCHING APPARATUS.
APPLICATION FILED FEB. 25, 1910.

973,510.

Patented Oct. 25, 1910.

3 SHEETS-SHEET 1.



Witnesses
J. S. Freeman.
[Signature]

By

C. L. Parker, Attorney

Inventor

W. S. James,

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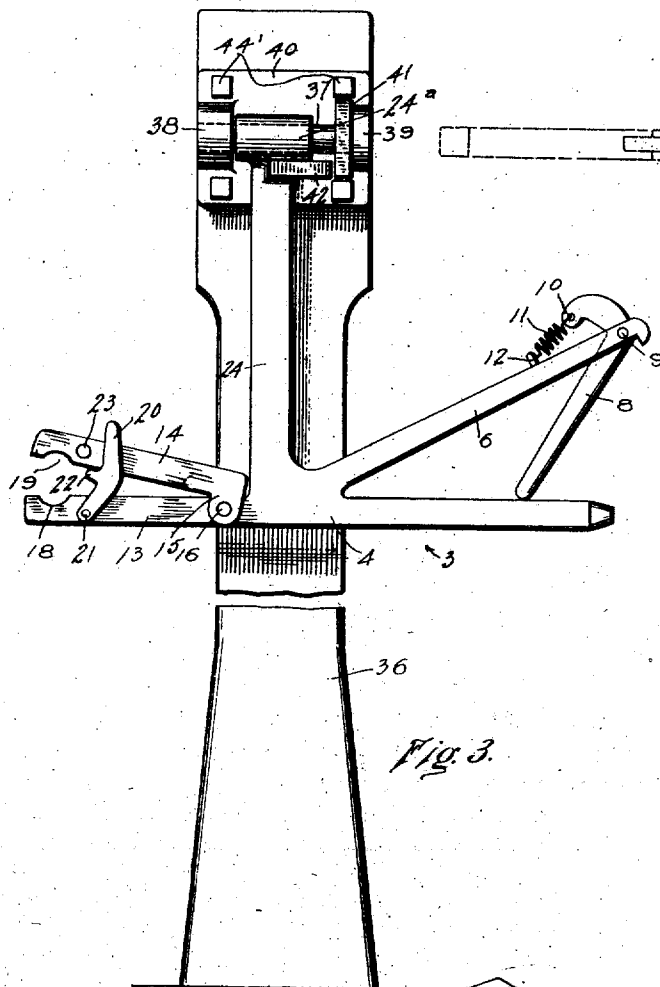


Fig. 3.

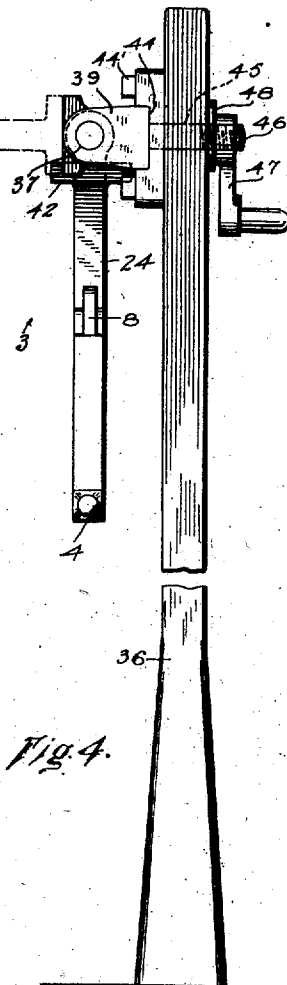


Fig. 4.

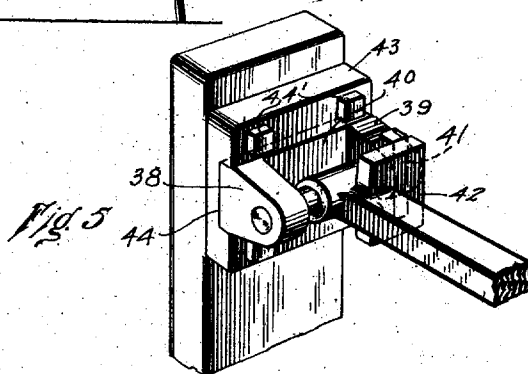


Fig. 5.

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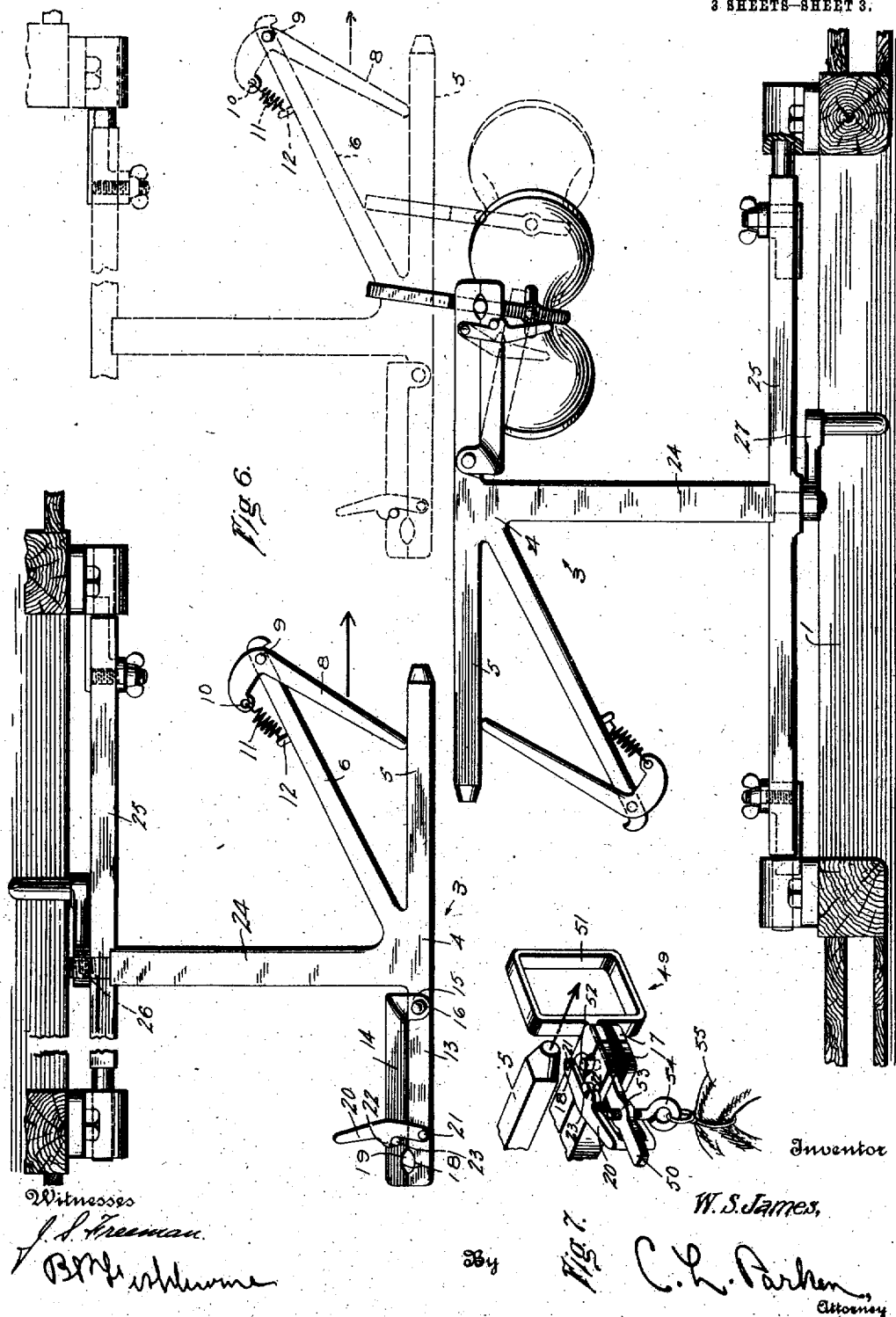
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3 SHEETS—SHEET 3.



UNITED STATES PATENT OFFICE.

WILLIAM S. JAMES, OF ALTOONA, PENNSYLVANIA.

MAIL-BAG DELIVERY AND CATCHING APPARATUS.

973,510.

Specification of Letters Patent.

Patented Oct. 25, 1910.

Application filed February 25, 1910. Serial No. 545,840.

To all whom it may concern:

Be it known that I, WILLIAM S. JAMES, citizen of the United States, residing at Altoona, in the county of Blair and State of Pennsylvania, have invented certain new and useful Improvements in Mail-Bag Delivery and Catching Apparatus, of which the following is a specification.

My invention relates to apparatuses for catching and delivering mail-bags or the like.

An important object of this invention is the provision of a device of the above character, capable of catching a mail-bag without injury to itself or said mail-bag.

A further object of my invention is to provide means for simultaneously transferring mail-bags from moving trains, or from a moving train to a station.

A further object of the invention is to provide a delivery device which is capable of holding the mail pouch in such a manner as to positively prevent accidental displacement of the same, said device being readily releasable when the proper means engage the mail-bag for removing the same.

A further object of my invention is to provide a mail-bag crane which is adapted to be arranged in a horizontal position when delivering or catching the mail bag, and which will automatically drop to a vertical position after performing its duty.

A further object of my invention is to provide a device of the above character, which is simple in construction, strong, durable, positive in its operation, and not liable to derangements.

My invention consists generally in the arrangement and combination of parts to be hereinafter described.

In the accompanying drawings forming a part of this specification, and in which like numerals are employed to designate like parts throughout the same, Figure 1 is a side elevation of the device attached to a car, parts being broken away. Fig. 2 is a fragmentary detail view of parts shown in Fig. 1. Fig. 3 is a side elevation of the device applied to a stationary support. Fig. 4 is an end view of the same taken at right angles to Fig. 3. Fig. 5 is a detail view showing the manner of securing the crane to the stationary support. Fig. 6 is a top plan view of twin cranes secured to cars.

Fig. 7 is a detail view of the delivery end of the crane and showing the device secured to a mail bag associated therewith.

In the drawings, reference being had to Figs. 1, 2, 6 and 7, the numeral 1 designates as a whole, a baggage car having a suitable door 2.

The numeral 3 designates as a whole, a mail-bag catching and delivering crane. This crane comprises a body portion 4, which has formed upon one side thereof and at substantially right angles thereto a catching fork 5. Formed upon the body portion 4 is an arm 6, which extends in the same direction as the fork 5 and is arranged at an angle to the same. The arm 6 extends preferably slightly beyond the fork 5 and is bifurcated as at 7 for the reception of an angular pawl 8, which is pivotally secured to the arm 6 as shown at 9. One end of the pawl 8 is arranged between the fork 5 and the arm 6 as shown, and said end is capable of engaging the fork 5. The opposite end of the pawl 8 is apertured as at 10 for connection with a retractile coil spring 11, which has its other end fixedly secured to the arm 6 as shown at 12. The body portion 4 is further provided upon one side thereof with an arm 13, which extends in an opposite direction to the fork 5 and forms therewith a straight angle. The arm 13 and its associated members form a delivery device. The arm 13 forms the stationary jaw for the delivery device, and upon said arm 13 is pivotally mounted a movable jaw 14, which has its inner end provided with spaced ears 15, which straddle the arm 13 and are pivotally connected to the same by means of a bolt 16. The stationary and movable jaws 13 and 14 have their outer ends grooved or bifurcated to form spaced strips 17, the openings between the strips 17 of the jaws 13 and 14 being in alinement with each other. The jaws 13 and 14 are provided upon their inner edges with cut out portions 18, which coöperate together to form a substantially elliptical opening 19 as shown. A yoke 20 straddles the movable jaw 14 inwardly of the opening 19 and is pivotally mounted upon the jaw 13 as shown at 21. This yoke is provided with ears 22, which are adapted to engage projections 23, which in turn are rigidly mounted upon opposite sides of the jaw 14. The body

portion 4 has formed thereon or is extended to form a supporting arm 24, which is rigidly connected to a horizontal rod 25 in a manner to be described. The free end of the supporting arm 24 is reduced and screw threaded as at 26, which reduced portion 26 extends through a suitable opening formed centrally upon the horizontal rod 25 and is engaged by a clamping crank 27 provided with a suitable internally screw threaded opening 28. The horizontal rod 25 is preferably provided with a recess 29 for the reception of a portion of the supporting arm 24 as shown, and since the arm 24 is preferably square in cross-section or other than round it is obvious that the same cannot turn upon the rod 25. By this construction it is to be understood that the crane may be readily removed from the rod 25 or reversed when desired and again clamped to the rod 25 in its new position.

The horizontal rod 25 is provided with reduced cylindrical ends 30, which are slidably and rotatably mounted within brackets 31, which in turn are rigidly secured to the door jambs by means of bolts 32 or the like. The horizontal rod 25 is made shorter than the space between the brackets 31 as shown, whereby the same is permitted to have a longitudinal movement, for a purpose to be hereinafter apparent. The horizontal rod 25 is provided near its ends with angle brackets 33 which are adjustably secured to the same by means of bolts 34 carrying thumb nuts 35. When the crane 3 is in its operative position the same is substantially horizontally arranged and either of the angle brackets 33 may be employed to retain said crane in its horizontal position. This is accomplished as shown in Fig. 2, by the angle bracket 33 being clamped to the horizontal rod 25 and its free end disposed to engage a portion of the bracket 31. The direction in which the car is traveling will of course determine which angle bracket is to be employed, it being understood that the rod 25 is to move in an opposite direction to the travel of said car when delivering or catching mail bags. The angle bracket not employed is swung inwardly and clamped to the rod 25 so that the same will not engage the bracket 31 near it when the crane swings downwardly after the longitudinal movement of the same. It is thus seen that by the employment of the adjustable brackets 33 either may be used which will permit of the operation of the crane 3 in either direction. It is to be understood that cranes similar to the one hereinabove described may be placed upon two cars which are traveling in opposite directions and from which it is desired to exchange mail bags. This is shown in Fig. 6, wherein twin cranes 3 are arranged upon the baggage cars 1. My crane is particularly advantageous inasmuch

as the same may be used to deliver or catch the mail bag as desired.

Instead of mounting the twin cranes 3 upon two cars above described, one of the cranes may be mounted upon a fixed support 36, which is arranged at a desired location at the side of the track, as shown in Figs. 3, 4 and 5. The construction of the crane 3 is precisely the same when used in connection with the support 36, as the construction of the same hereinabove described in connection with Figs. 1, 2, 6 and 7, except that the rod 25 is dispensed with and the arm 24 provided with a collar 24^a which is preferably cast integral therewith. The collar 24^a is rotatably and slidably mounted upon a pin 37 which is supported by spaced ears 38 and 39, which are connected by a section of material 40. It is to be noted that the ears 38 and 39 are sufficiently spaced apart to permit of the longitudinal movement of the crane 3. The ear 39 is provided with a straight edge 41 adapted for engagement with a section of material 42, which is preferably cast integral with the arm 24 and is arranged adjacent the collar 24^a and at right angles to the arm 24. The section 42 and ear 41 cooperate together for holding the crane 3 in its operative horizontal position, as illustrated in Fig. 5. It is to be understood that when the crane 3 is moved longitudinally that the section 42 will be disengaged from the ear 39 and the crane accordingly permitted to gravitate to a vertical position, as shown in Figs. 3 and 4. The bracket comprising the ears 38 and 39 connected by the section 40 is removably connected to the upright 36 by means of a plate 43 provided with a horizontally arranged recess 44 adapted for the reception of said section 40 as shown. This plate 43 is rigidly connected to the upper end of the upright 36 by means of bolts 44' or the like. The section 40 is provided centrally thereof with a trunnion 45 which passes through suitable openings formed in the plate 43 and support 36, the free end of this trunnion being screw threaded as at 46 for the reception of a clamping crank 47, as shown in Fig. 4. A washer 48 may preferably be disposed between the crank 47 and the upright 36. By the construction above described it is obvious that the crane 3 may be readily removed from the support 36 or reversed upon the same and again suitably clamped in its new position. This will permit of the crane being adjusted to catch or deliver mail bags from trains running in opposite directions.

Special attention is now called to Fig. 7 wherein is illustrated a bracket 49 comprising a section of metal 50 upon one end of which is rigidly secured a skeleton portion 51. The section 50 is provided near its center with trunnions 52 adapted for arrange-

ment within the opening 19, the section 50 being arranged between the sections 17 as shown and extending laterally beyond the same for engagement with the free end of the yoke 20, as illustrated in Fig. 7. The section 50 is further provided as at 53 with an eye-bolt 54 to which may be secured a suitable mail bag 55 by any suitable means as shown.

10 The operation of my device will be readily understood by reference to Figs. 6 and 7. The mail bag 5 is connected to the bracket 49 which is in turn arranged within the jaws 13 and 14 as above described. The yoke 20 by virtue of its engagement with the projections 23 will prevent the movable jaw 14 from being accidentally displaced. The trunnions 52 being arranged within the opening 19 will prevent the bracket 49 from being disengaged from the jaws 13 and 14 until the jaw 14 is swung away from the jaw 13. The mail bag will thus be securely held to the crane 3 until the twin crane 3 is advanced to the position shown in dotted lines. The fork 5 of the twin crane is then inserted within the skeleton portion 51, and upon further movement of said twin crane this skeleton portion is engaged by the junction of the fork 5 and arm 6. This engagement will cause the bracket 49 to be oscillated about the trunnions 52 as an axis whereby the section 50 will engage the yoke 20 and free it from engagement with the projections 23. The jaw 14 will then be free to be swung upon its pivot 16 and the bracket 49 will then be withdrawn from engagement with said jaws 13 and 14. The pull exerted upon the crane when disengaging the bracket 49 from the same causes the entire crane to move longitudinally and thus drop to a vertical position as hereinabove described. After the bracket 49 is arranged upon the fork 5 the spring 11 will hold pawl 8 in engagement with said fork and thus make it impossible for said bracket to be accidentally displaced from the same. It is obvious that I have described the transfer of only one mail bag from one twin crane to another, and it is to be understood that each crane may deliver a mail bag simultaneously to the other, however the operation in this case is the same and need not be described.

It is to be understood that I have shown and described the preferred embodiment of my invention, and changes in details, form, shape and sizes may be resorted to without departing from the spirit of my invention as specified in the appended claims.

Having fully described my invention, I claim:

1. In apparatus of the character described, a support, a delivery device swingingly mounted upon said support, comprising a jaw, a second jaw pivotally connected to said first named jaw, said second jaw

being provided with projections, and a yoke carried by said first named jaw for engagement with said projections.

2. In apparatus of the character described, comprising a support, a crane movably mounted upon said support, comprising a catching fork, a stationary jaw connected to said fork and having its free end bifurcated, a movable jaw having its free end bifurcated associated with said first named jaw, and means for locking said movable jaw in a desired position.

3. In apparatus of the character described, a support, a crane connected to said support, comprising a stationary jaw, a movable jaw, said jaws being bifurcated and provided with oppositely arranged cut-out portions.

4. In apparatus of the character described, a support, a crane, comprising a catching fork, pivotally mounted upon said support and capable of moving longitudinally, and means whereby said crane may be readily reversed upon said support.

5. In apparatus of the character described, a support, a shaft pivotally and longitudinally movably mounted upon the same, a crane adjustably mounted upon said shaft, comprising a catching fork and stationary and movable jaws.

6. In apparatus of the character described, a bracket comprising a skeleton portion provided with a strip secured thereto, said skeleton portion being adapted for the reception of a catching fork, said strip being provided with trunnions, and means for securing said bracket to a mail bag.

7. In apparatus of the character described, a support, a delivery device connected to said support, comprising a jaw, a movable jaw associated with said first named jaw, and means for normally locking said movable jaw in its closed position and for limiting the same in its opening movement.

8. In apparatus of the character described, a support, a delivery device connected to said support, comprising a rigid jaw, a movable jaw connected to said first named jaw, and a yoke movably mounted upon one of said jaws for normally locking the same together.

9. In apparatus of the character described, a support, a delivery device connected to said support, comprising a rigid jaw, a movable jaw pivotally connected to said rigid jaw, and a yoke pivotally connected to said rigid jaw and straddling the movable jaw.

10. In apparatus of the character described, a support, a delivery device connected to said support, comprising a rigid jaw, a movable jaw pivotally connected to said rigid jaw, a yoke pivotally connected to said rigid jaw for controlling the movable

jaw, in combination with means secured to the mail-bag, said means being held by said jaws and adapted to actuate said yoke upon being removed therefrom.

5 11. In apparatus of the character described, cooperating gripping jaws, means for normally holding said jaws in such gripping position, in combination with means
10 by said gripping jaws and to actuate said first named jaws when being removed from said jaws.

12. In apparatus of the character described, a delivery device, a support to
15 which said delivery device is connected, said delivery device comprising cooperating bifurcated jaws, and releasable means for retaining said jaws in a gripping position.

13. In apparatus of the character de-
20 scribed, a support, a delivery device connected to said support, comprising a rigid jaw, a movable jaw pivotally connected to

said rigid jaw, and said jaws being bifurcated.

14. In apparatus of the character de- 25 scribed, a support, a crane connected to said support, comprising a catching fork and cooperating bifurcated gripping jaws, constituting a delivery device.

15. In apparatus of the character de- 30 scribed, a support, a shaft pivotally and slidably mounted upon said support, a mail-bag catching and delivering device adjustably connected to said shaft, and means con-
35 nected to said shaft near each end thereof to releasably hold said catching and delivering device in an approximately horizontal position, when traveling in either direction.

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

WILLIAM S. JAMES.

Witnesses:

P. M. SWANGER,
H. C. MADDEN.