

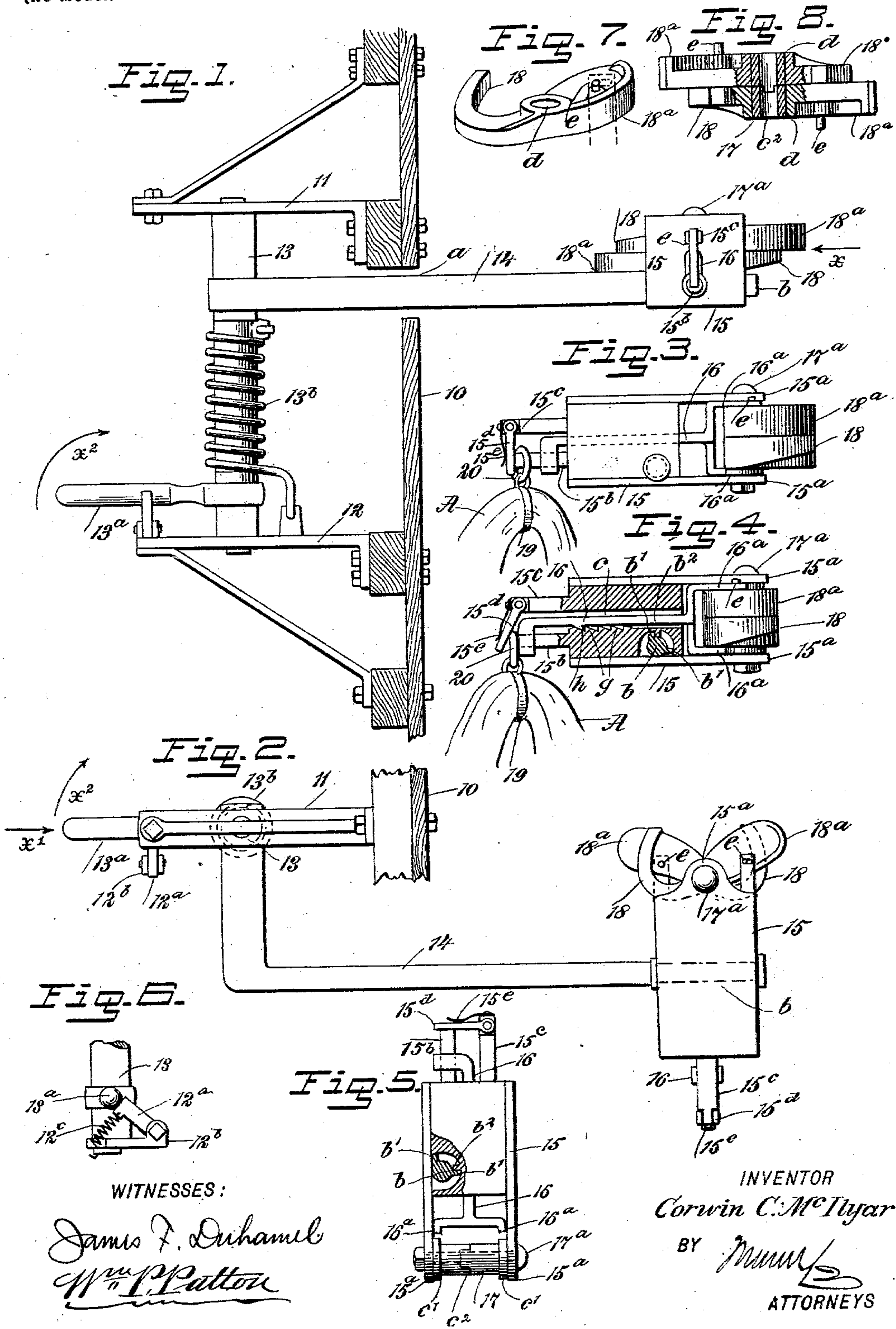
No. 704,904.

Patented July 15, 1902.

C. C. McILYAR.  
MAIL BAG CATCHER.

(Application filed Sept. 24, 1901.)

(No Model.)





# UNITED STATES PATENT OFFICE.

CORWIN C. MCILYAR, OF CAMBRIDGE, OHIO.

## MAIL-BAG CATCHER.

SPECIFICATION forming part of Letters Patent No. 704,904, dated July 15, 1902.

Application filed September 24, 1901. Serial No. 76,414. (No model.)

*To all whom it may concern:*

Be it known that I, CORWIN C. MCILYAR, a citizen of the United States, and a resident of Cambridge, in the county of Guernsey and State of Ohio, have invented a new and Improved Mail-Bag Catcher and Deliverer, of which the following is a full, clear, and exact description.

This invention relates to means for receiving and delivering mail-bags to and from cars moving on a railroad.

The object of my invention is to provide a simple device of the character indicated which embodies novel details of construction, which render the same very convenient and reliable in use, and which is adapted to simultaneously receive and deliver mail bags or pouches while a mail-car is in motion.

The invention consists in the novel construction and combination of parts, as hereinafter described, and defined in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side view of the improvement applied upon a car-body shown partially. Fig. 2 is a plan view of the same. Fig. 3 is an end view of the catcher-head seen in direction of the arrow  $x$  in Fig. 1. Fig. 4 is a partly-sectional end view of parts shown in Fig. 3, said details being differently adjusted. Fig. 5 is an end view of parts shown in Fig. 4, the catcher-arms being removed and other details shown broken and in section. Fig. 6 is a fragmentary detail view of parts seen in the direction of the arrow  $x'$  in Fig. 2. Fig. 7 is a perspective view of a novel catcher-jaw employed, and Fig. 8 is a partly-sectional front edge view of the duplicate catcher-jaws and means to move them.

The improvement is to be supported upon the inside of the side wall of a mail-car and adjacent to a door opening therein.

In the drawings, 10 indicates a side wall of a mail-car whereon the novel catcher device is supported for use as follows:

Two braced bracket-arms 11 12 are affixed at a proper distance apart in the same vertical plane on the inner surface of the car side wall 10, these bracket-arms having a suitable

elevation above the car-floor (not shown) to facilitate the operation of the working parts of the catcher.

A rock-shaft 13 is journaled by its ends vertically between the horizontal bracket-arms 11 12, and upon said shaft intermediate its ends the bent catcher-arm 14 is secured by one end and projects at right angles therefrom or in a level position, and said arm is of such length that it may extend through an opening  $a$  in the side wall 10 and outwardly therefrom, as shown in Fig. 1. Upon the free end of the catcher-arm 14 a catcher-head 15 is held to rock transversely by its loose engagement with a journal-pin  $b$ , formed on the end of the arm, which adapts the head to assume the pendent position shown in Fig. 5 when the catcher device is not in service.

As shown in Figs. 4 and 5, the journal-pin  $b$  has two projections  $b'$  formed on it that are distant ninety degrees from each other, and from the block or head 15 a lug  $b^2$  projects, which may have contact with either projection  $b'$ .

It will be seen that the projections  $b'$  and lug  $b^2$  define the degree of rocking movement had by the block 15, so that it will be arrested when it is in a level position, as shown in Fig. 4, and in like manner be checked when in pendent adjustment, as represented in Fig. 5. The catcher-head 15 is in the form of an oblong block having a longitudinal passage  $c$  therein to loosely receive the slide-bar 16, which is forked at one end, affording two spaced parallel limbs  $16^a$ .

At the upper and lower sides of the block 15 two similar ears  $15^a$  project therefrom at the same end of the block, and on said ears two similar tubular journal-sections project toward each other, having their meeting ends  $c^2$  interlocked, as shown in Fig. 5, said sections together forming the cylindrical journal 17, which may be integral with the ears  $15^a$  or be secured thereon.

Through the perforation in the journal 17 a bolt  $17^a$  is inserted and secured, which binds the two portions of the journal together.

Two catcher-jaws of peculiar form are provided for the improved bag-catcher, and, as represented clearly in Fig. 7, each jaw consists of a hook member 18 and a buffer-limb  $18^a$ , both extended from a hollow hub  $d$ . The



two catcher-jaws are loosely mounted upon the journal-sleeve 17 one over the other and spaced from the ears 15<sup>a</sup> by the collars *c*'. The catcher-jaws are so arranged that the hook member 18 on one jaw will loosely contact with a buffer-limb 18<sup>a</sup>, that may be above or below it. As shown in Fig. 2, the hook member of one jaw is disposed over the buffer-limb of the other jaw at the left side of said view, and the positions of said parts are shown reversed at the right side of the same.

The limbs 16<sup>a</sup> of the slide-bar 16 are loosely secured at their outer ends upon the buffer-limbs 18<sup>a</sup>, there being a transverse slot in each limb near its extremity, which is engaged by a pivot-stud *e*, screwed into a respective buffer-limb. The opposite end of the slide-bar 16 is bent down to afford a guide-piece thereon having an opening to receive loosely the body of a carrier-arm 15<sup>b</sup>, that projects from the head-block 15 directly below the slide-bar. Above the slide-bar 16 a keeper-arm 15<sup>c</sup> is projected from the head-block 15, and upon the outer end of the keeper-arm a detent-finger 15<sup>d</sup> is pivoted by one end, so that the lower end thereof may have loose contact with the end of the carrier-arm 15<sup>b</sup>. A spring 15<sup>e</sup> is secured upon the keeper-arm 15<sup>c</sup> and presses the detent-finger against the arm 15<sup>b</sup>, as shown in Fig. 3.

The construction and arrangement of parts are such that the buffer-limbs 18<sup>a</sup> will receive forward adjustment and the hook members 18 be spread apart a maximum degree when the slide-bar 16 is moved forward a proper distance, as represented in Figs. 2 and 3.

A series of ratchet-teeth *g* are formed in the bottom wall of the passage *c*, and a tooth *h*, that extends from the slide-bar 16, may engage with any of said teeth *g*.

Upon the rock-shaft 13 a handle-lever 13<sup>a</sup> is secured so as to project laterally therefrom, and upon the body of said shaft the torsion-spring 13<sup>b</sup> is mounted, having one end thereof connected with a projection on the shaft and its opposite end engaged with another projection on the bracket-arm 12, as shown in Fig. 1. The twist of the coiled spring 13<sup>b</sup> is in a direction which will cause said spring to be wrapped more closely upon the shaft 13 when the handle-lever 13<sup>a</sup> is rocked in the direction of the curved arrow  $\alpha^2$  in Fig. 1, which movement of the lever will swing the catcher-arm 14 outward at right angles to the side wall 10 of the car.

Upon the bracket-arm 12 a detent-dog 12<sup>a</sup> is supported by its pivotal engagement at one end thereof with a projection 12<sup>b</sup> on said bracket-arm, and a spring 12<sup>c</sup> is secured by its ends respectively upon the bracket-arm and the free end of the dog.

When the bag-catcher is not in service, the catcher-arm 14 is disposed at the side of the car, either within the car or exterior thereof, as may be preferred, the disposal of parts as shown in Fig. 1 adapting the device for a complete housing of the catcher-arm head-

block and jaws thereon within the car-body. To retain the catcher-arm 14 in the outward or extended position, the detent-dog 12<sup>a</sup> is engaged by its upper end with the handle-lever 13<sup>a</sup> and holds it against stress of the spring 13<sup>b</sup>, which will instantly throw the catcher-arm inwardly when the dog is released from the handle-lever.

To adapt the improvement for delivery of a mail-bag, such as A, at a proper locality on the railroad, a clasp 19, having a ring 20 thereon, is connected with the mail-bag, and said ring is mounted upon the carrier-arm 15<sup>b</sup>, and subsequently the detent-finger 15<sup>d</sup> is permitted to engage with the end of the carrier-arm, being pressed thereon by the spring 15<sup>e</sup>.

When the bag A is hung on the end of the carrier-arm 15<sup>b</sup>, its weight will cause the catcher head-block and jaws 18 18<sup>a</sup> to rock into a level position, the engagement of the lug *b*<sup>2</sup> with one projection *b*<sup>1</sup> on the journal-pin *b* of the catcher-arm 14 serving to arrest the block when it becomes horizontal, and thus give to the jaws 18 18<sup>a</sup> correct positions for the reception of a mail-bag.

Assuming that the mail-car having the improved bag catcher and deliverer is approaching a station where mail is to be dropped and received and that there is a mail-bag A hung on the carrier-arm 15<sup>b</sup>, the jaws 18 18<sup>a</sup> being spread apart, as indicated in Fig. 2, and the catcher-arm 14 swung out from the car, as shown in Figs. 1 and 2, it will be seen that if the buffer-limbs 18<sup>a</sup> are struck by a mail-bag hanging from a support at the side of the railroad-track, as usual, the operation of the device will be as follows: The impact of the mail-bag and its contents upon the buffer-limbs 18<sup>a</sup> will spread them farther than they diverge in normal adjustment, and this will rock the hook members 18 toward the mail-bag that has impinged upon the buffer-limbs. The closing movement of the hook members 18 will cause them to clasp the mail-bag, and as the force of impact sustained by the buffer-limbs 18<sup>a</sup> is transmitted to the slide-bar 16 the latter will recede and ride over the ratchet-teeth *g*, and when the bag is firmly clasped this adjustment of the hook members 18 will be maintained by engagement of the tooth *h* between two ratchet-teeth *g*, and therefore prevents the release of the gripped bag until the slide-bar 16 is raised sufficiently to release the tooth *h* from the teeth *g*. Simultaneously with the grasping of the mail-bag by the hook members 18 the consequent rearward movement of the slide-bar 16 will push the ring 20 off of the carrier-arm 15<sup>b</sup> and drop the bag A. The force of the impact of the mail-bag is further taken up by the torsion-spring 13<sup>b</sup>, which allows the catcher-arm 14 to move back, releasing the detent-dog 12<sup>a</sup> from the handle-lever. After the mail-bag has been caught and dropped the release of the handle-lever 13<sup>a</sup>, as above described, will return the catcher-arm 14 to the side of the car or into



it, as the arrangement may be, this being effected by the tension of the torsion-spring 13<sup>b</sup>, and as there is no extra weight on the carrier-arm 15<sup>b</sup> the weight of the jaws 18 18<sup>a</sup> will  
 5 cause the head-block 15 to assume a pendent position, so that the entire device is compactly disposed ready for reuse as occasion may require.

Having thus described my invention, I  
 10 claim as new and desire to secure by Letters Patent—

1. A bag-catcher, comprising a rockably-supported catcher-arm, and catcher-jaws supported and pivoted so as to open and close on  
 15 an end of the arm, each jaw having a buffer-limb and a hook member.

2. A bag-catcher, comprising a rockably-supported catcher-arm, a head-block on one end of the catcher-arm, two jaws held to rock  
 20 on each other, each jaw having a buffer-limb and a hook member, and means to hold the hook members closed upon a mail-bag.

3. A bag-catcher, comprising a supported rock-shaft, spring-pressed to rock in one direction, a catcher-arm extended from the rock-shaft, a handle-lever on said shaft, a head-block on the free end of the catcher-arm, a slide-bar working through the head-block, two jaws held to rock on the head-  
 30 block and adapted to slide the bar when they are rocked, each jaw comprising a buffer-limb and a hook member, and a device on the block and slide-bar adapted to detachably hold said bar retracted when moved by the  
 35 jaws.

4. A bag catcher and deliverer, comprising a rockably-supported catcher-arm, a head-block on one end of the catcher-arm, a slide-bar having a forked end and occupying a longitudinal passage in the head-block, two  
 40 lapped catcher-jaws pivoted on the head-block near one end and loosely connected with the fork-limbs of the slide-bar, each jaw consisting of a buffer-limb and a hook member, the hook members closing when the buffer-limbs are pressed apart, and a support for a mail-bag at the opposite end of the head-block, from which support said bag will be removed by pressure of the slide-bar thereon,  
 50 effected when the hook members of the jaws grasp a bag.

5. In a device of the character described, a bracket-supported rock-shaft, a torsion-spring on said shaft adapted when under tension to rock the shaft in one direction, a handle-lever on the rock-shaft, a catcher-arm on the rock-shaft, a bag catcher and delivery device on the free end of said arm, and comprising catcher-jaws for a bag and a support  
 60 for a bag to be delivered, a spring-controlled dog adapted to engage the handle-lever to hold the spring coiled under tension, and the catcher-arm outward, the said dog being arranged to be released by the impact of the  
 65 mail-bag on the catcher-jaws, and means for moving the bag to be delivered from said sup-

port, the said means being also actuated by the impact of the mail-bag on the catcher-jaws.

6. In a mail-bag catcher, a supported rock-shaft, a spring on said shaft adapted to rock the shaft in one direction, means for rocking the shaft and holding the shaft rocked, a catcher-arm, a head-block, two lapped catcher-jaws pivoted on the head-block, a slide-bar  
 70 forked at one end and loosely engaged at the ends of the fork-limbs with the members of the catcher-jaws, the rocking of the jaws to open and close them sliding the bar, a bent end on the slide-bar having an opening there-  
 75 in, a carrier-arm on the head-block adapted to receive and support a mail-bag, and a spring-pressed detent device for temporarily holding the bag engaged with the carrier-arm.  
 85

7. In a device of the character described, the pair of lapped and pivotally-supported catcher-jaws, each jaw consisting of a hollow hub, a convex-edged buffer-limb extended at one side of the hub, and a hook member  
 90 curved laterally and forwardly from said hub at the opposite side from the buffer-limb.

8. In a device of the character described, the catcher device on a head-block, a rockably-supported catcher-arm, said arm having  
 95 a journal-pin on one end whereon the head-block is held to rock.

9. In a device of the character described, the combination with an arm supported to swing outward on a car, a torsion-spring tending to rock the arm inward, means for holding the arm in the outward position against the tension of the spring, and a mail-bag catcher and delivery device carried on the outer end of said arm, the said torsion-spring being arranged to permit the arm to move back under the force of the impact of the mail-bag, thereby releasing the holding means, and allowing the spring to move the arm inward.

10. In a device of the character described, a rockably-supported catcher-arm mounted to swing outward on a car, a mail-bag catcher and delivery device carried on the outer end of said arm and comprising catcher-jaws, a support for a bag to be delivered and a sliding  
 115 device actuated by the movement of the catcher-jaws for moving the bag from said support when the catcher-jaws grasp a bag.

11. In a mail-bag catcher, a bracket-supported rock-shaft, a torsion-spring on said shaft, adapted to rock the shaft in one direction, a handle-lever on the rock-shaft, a dog adapted to engage the lever and hold the spring coiled under tension, a catcher-arm on the rock-shaft and a bag-catcher device on  
 125 the free end of said arm and comprising catcher-jaws pivoted to open and close and each having a buffer-limb and a hook member.

12. In a device of the character described, the combination with an arm supported to swing outward on a car, a mail-bag catcher



and delivery device carried on the outer end of  
said arm, and comprising a support for a mail-  
bag, pivoted catcher-jaws, a slide-bar con-  
nected with the catcher-jaws and adapted to  
5 move the bag from said support when the  
catcher-jaws grasp a bag, and a torsion-spring  
tending to swing the arm inward.

In testimony whereof I have signed my  
name to this specification in the presence of  
two subscribing witnesses.

CORWIN C. MCILYAR.

Witnesses:

THOMAS J. NORRIS,  
GEO. GASKILL.