

UNITED STATES PATENT OFFICE.

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RAILWAY MAIL CATCHING AND DELIVERY MEANS.

No. 823,535.

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To all whom it may concern:

Be it known that I, JACOB GARNETT JOHNSON, residing at Ivanhoe, in the county of Wythe and State of Virginia, have invented a new and Improved Railway Mail Catching and Delivery Means, of which the following is a specification.

This invention relates to improvements in that class of mail-transferring appliances or means in which the operation of discharging and receiving the mail from and in a mail-car is provided for; and the said invention seeks to provide a simple and effective means adapted to take a mail-bag from a suitable support adjacent the track and at the same time deliver a mail-bag thereon from a rapidly-moving car.

Mechanical means for taking up and delivering mail-bags such as have generally been used in the railway mail service have usually included a standard or other stationary support upon which the mail-bags are suspended and an arm or other device projected from the car adapted to engage with the stationary bag-supporting means in such manner as to slip off a mail-bag and to catch another as the car is in rapid motion. So far as I know, such general means referred to usually require a standard or hanger disposed in a plane above the bottom of the mail-car and catching devices projected from the side door-opening in the car above the bottom to properly coact with the stationary bag-holder. By reason of the catching and delivering means being so disposed great danger to the mail clerk is always present, since when standing in the door-opening or leaning out the mail handler or clerk, by reason of the mail being in a plane above the bottom of the car, is likely to strike the handle or knock him off the car or otherwise injure him.

My invention comprehends generally a means for supporting the mail to catch the mail from the car and to hold the mail to be delivered into the car in a plane sufficiently low (preferably in line with the car-bottom) that danger of striking the mail handler is entirely overcome and a means for taking off the mail from the holder and delivering another bag therefor normally held folded up within the door-opening and adapted to be conveniently lowered in a plane with the car-bottom for engaging with the outside or stationary bag-holder devices.

This invention also embodies an improved construction of supporting member, including a cross-head projected parallel with the track and a swinging mail-bag holder and catcher mounted on the car whose coöperating portions are so formed that they will operate to take up and at the same time deliver mail when the car is going in either direction, and in its more subordinate features my invention consists in certain details of construction and peculiar combination of parts, all of which will be hereinafter described, specifically pointed out in the appended claims, and illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of a portion of a car-body and my improvements in their operative position. Fig. 2 is a view of a portion of a car-body with the swinging catcher and delivering device swung up out of its operative position. Fig. 3 is a perspective view of the stationary bag-holder and the end of the catcher and delivery member that coacts therewith. Fig. 4 is a longitudinal section of the holder with the catcher and delivery member in the position of passing through the bifurcated end thereof. Fig. 5 is a transverse section on the line 5 5 on Fig. 4.

In the practical application of my invention the same comprises a standard 1, which, as shown in the drawings, may be located at one side of the track in proper position to co-operate with the catcher and delivery devices on the car, or it may be projected from a platform; but in either case the end that supports the mail-bags is in a plane substantially with the bottom of the mail-car, the reason for which will presently appear.

The standard 1 has its upper end projected at right angles toward the track with its outer end 10 bifurcated vertically, as at 11, and its two extensions are bifurcated horizontally, as at 13 13, to form a pair of forwardly-extended arms 14 14^a. The upper arms 14 14 have lateral extensions 15 15 disposed parallel with the track and are utilized for pendently supporting the mail-bags to be delivered into the car, as clearly shown in Fig. 1, by reference to which it will be seen the loop or handle members 16 of the bag slip over the arms 15 15 and are firmly held from slipping off by the springs 17 17, secured to the tops of the arms 14 14 and are so arranged to permit of readily pulling off the bags when they

are engaged by the catcher device on the car, presently referred to. The lower arms 14^a 14^a are also each formed with a lateral extension 18 18 of less length than the members 15 15, whereby to provide ample room for hanging the bags in front of them, and the said members 18 18 form the stationary catchers for receiving the mail-bags delivered from the car-body and to provide for a positive engagement of the loop or handle member of the bags. The said catcher members 18 18 are tapered and have a concavity 19 near their base to the more firmly hold the loop or handle of the bag when the same engages therewith.

The catcher and delivery device on the car consists of a base member 20 20, having end trunnions 21 21 for engaging with sockets or bearings 22 22 on the inside faces of the door-casing located in the horizontal plane of the car-bottom and so disposed relatively to the door-opening that when the hinged catcher and deliverer is swung up the same will be disposed entirely within the door. The base member 20 is integral with an arm 20^a, projected at right angles from the base, which carries at its upper end a cross-head, the oppositely-projecting members 20^b 20^b of which are tapered and beveled and the upper faces 30 next the arm 20^a of which are formed with transverse seats or grooves 23 to provide for a firm hold or grip of the mail-bag loops or handles as they are received on the said cross-head members 20^b in the manner presently explained. The outer ends of the members 20^b carry flat springs 24 24, that project over the transverse seats 23 on the upper face of the said members, such arrangement of springs and the members 20^b being provided for firmly holding the mail-bags suspended from the said ends when the swinging catcher and discharger is lowered to engage with the stationary catcher. The extreme end of the arm 20^a is arranged to engage a latch-spring 25 on the car that firmly holds the said catcher and deliverer to its elevated position, to which position after it has delivered a mail pouch or bag and taken on a new pouch it is readily lifted by the rod 26, secured thereto, as shown.

The cross-head and the outer end of the arm 20^a are in practice so shaped and the parts are of such correlative proportions that when lowered to the position shown in Fig. 1 (assuming the car to be now traveling in the direction indicated by the arrow, a bag or pouch being suspended on the off end of the stationary catcher) they pass freely between the upper and lower arms 14 14^a of the stationary catcher, and by reason of the bag handle or loop on the near member 20^b of the cross-head hanging in a plane below the upper near arm 14 and the other bag hanging on the off arm 14, with its loop or handle in a plane above the cross-head, it follows that as

the cross-head passes by the stationary catcher means the bag suspended on the near member 20^b will be caught by the near lateral extension 18 and the other bag will be caught on the other or forwardly-projecting member 20^b and drawn off the arm 14, after which by swinging up the cross-head and arm 20^a the mail clerk can readily remove the caught bag or pouch. It is obvious that by reason of the duplex arrangement of the cross-head and the bifurcated portions and lateral extensions on the stationary catcher the same operation of parts occurs when the car travels in the other direction and the mail-bags are properly adjusted on the stationary and swinging supports, and, furthermore, it will also be readily understood without special description or illustration that the stationary catcher may be disposed between two tracks and its head portion duplicated, so as to work with the swinging catchers projected from cars traveling on either track. In every case, however, the stationary catcher-head portions are located in a plane substantially that of the car-bottom, which makes it very easy to adjust the bags thereon and also entirely overcomes danger of accident to the clerks on the car.

Having thus described my invention, what I claim is—

1. A mail catching and delivery means, comprising a supporting member held in horizontal alinement with the bottom of a mail-car body, said supporting member having a horizontally-bifurcated head, and devices at each end of the head for pendently supporting a mail-bag; of a swinging support hingedly secured in the car-door opening to fold down in a plane with the car-bottom and having a cross-head movable through the bifurcated head, said cross-head having means for sustaining the mail-bag, and a projection on the bifurcated head for catching the mail-bag and slipping it off the movable cross-head, as set forth.

2. A mail catching and delivering means, comprising an arm secured to and adapted to be projected from the car, said arm having a horizontally-disposed cross-head, the end members of which are of like construction and provided with means for holding a mail-bag pendently therefrom; a stationary head horizontally bifurcated and provided at each side with a pair of oppositely-disposed upper and lower extensions parallel with the track, the lowermost extensions being of less length than the upper, substantially as shown and for the purposes described.

3. The combination with the stationary post having a head member horizontally bifurcated its length and provided at each end with an upper and a lower longitudinal extension, the upper being above and the lower being below the horizontal opening in the head, means on the upper extended members for

gripping and holding the loop or handle of the mail-bag; of a frame hinged at its lower end in the bottom of the car-doorway and adapted to swing outwardly in the horizontal plane thereof and in the plane of the bifurcation in the stationary head, said frame including a cross-head having like end members, each provided with means for pendently supporting a mail-bag therefrom, said cross-head being arranged to travel through the bifurcation of the stationary head and between its upper and lower longitudinal extensions, as set forth.

4. The combination with an arm for receiving and delivering mail-bags hinged in the bottom of a car-door opening to swing vertically upward in said door-opening and adapted, when lowered, to project laterally

from the car in line with the bottom thereof, said arm having an integral cross-head in the plane thereof, the opposite ends of the cross-head being of like construction; of a support adjacent the track and having a head portion located in the plane of the car-bottom, said head being horizontally bifurcated and provided at each end with an upper and a lower extension projected in the longitudinal direction of the bifurcated head, the lower extension being of less length than the upper ones and provided near their point of connection with the head with transverse seats in the upper face, for the purposes described.

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Witnesses:

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