

B. F. NICOLL.
MAIL BAG DELIVERY MECHANISM.
APPLICATION FILED OCT. 20, 1911.

1,027,883.

Patented May 28, 1912.

2 SHEETS—SHEET 1.

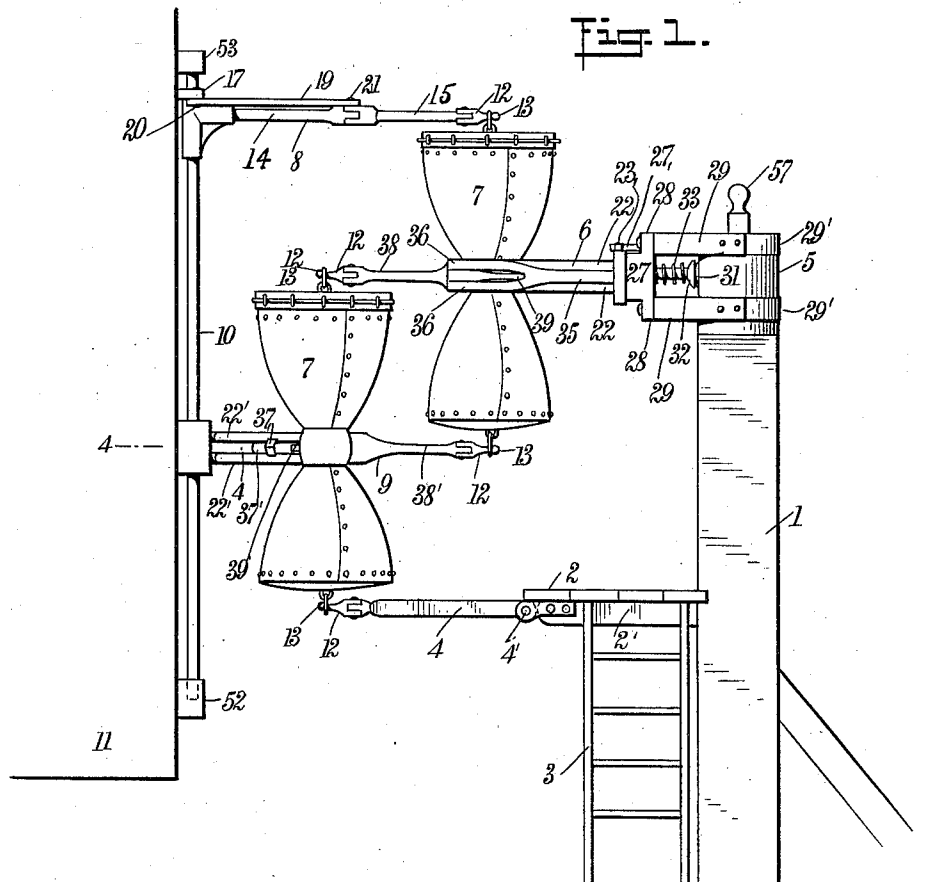
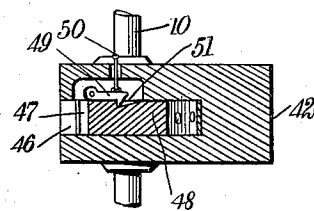
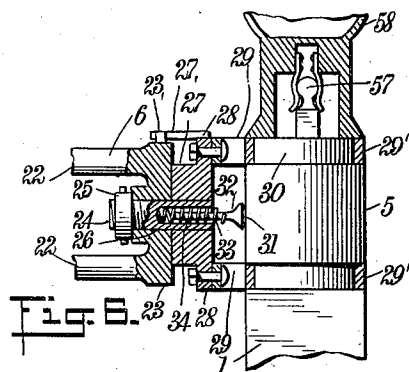


Fig. 5.



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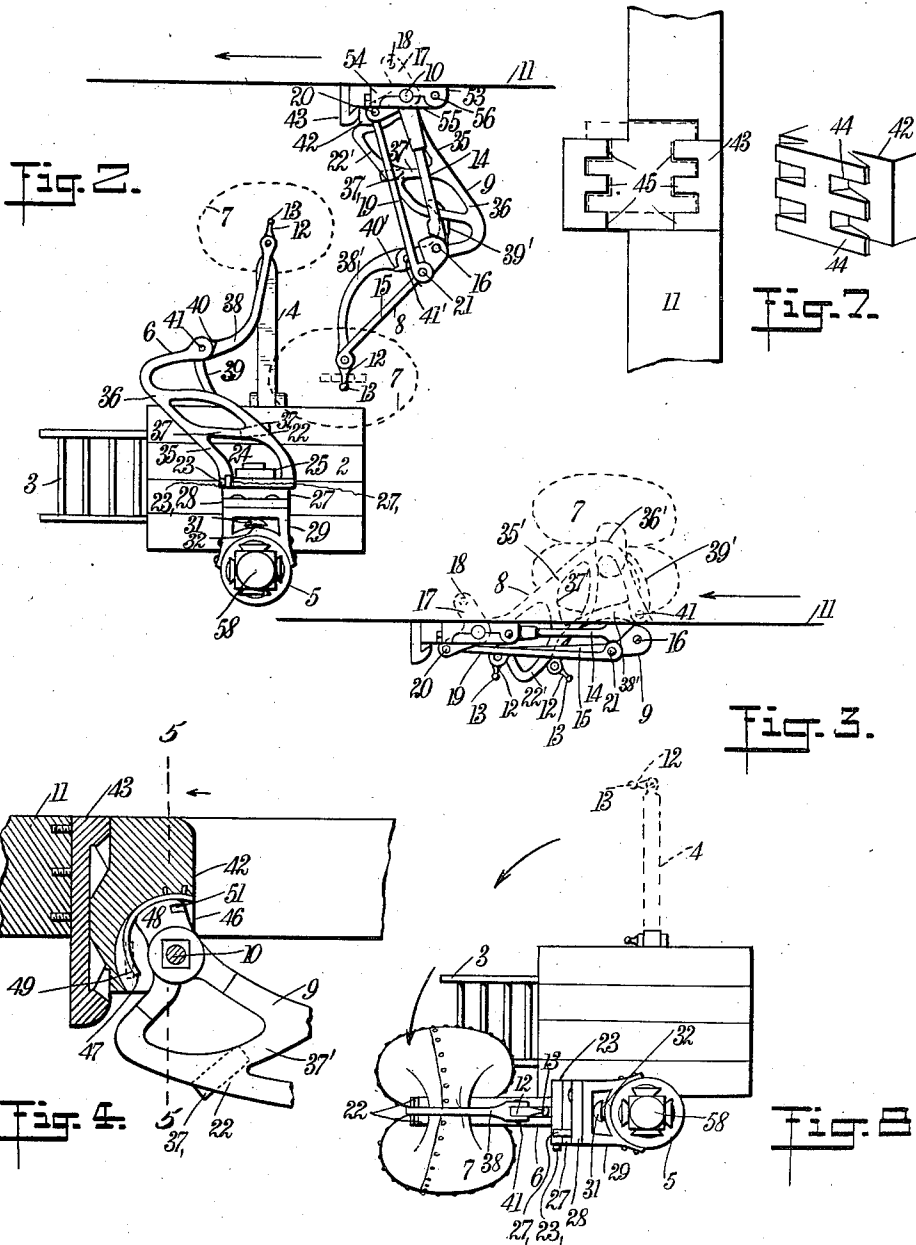
ATTORNEYS

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2 SHEETS-SHEET 2.



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UNITED STATES PATENT OFFICE.

BENJAMIN FRANKLIN NICOLL, OF NEW ORLEANS, LOUISIANA, ASSIGNOR OF FIFTEEN ONE-HUNDREDTHS TO JOSEPH T. SULLIVAN, OF NEW ORLEANS, LOUISIANA.

MAIL-BAG-DELIVERY MECHANISM.

1,027,883.

Specification of Letters Patent.

Patented May 28, 1912.

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To all whom it may concern:

Be it known that I, BENJAMIN F. NICOLL, a citizen of the United States, and a resident of New Orleans, in the parish of Orleans and State of Louisiana, have invented a new and Improved Mail-Bag-Delivery Mechanism, of which the following is a full, clear, and exact description.

My invention is an improvement in automatic means for handling mail bags, and its object is to facilitate the delivering of mail with speed and despatch to and from trains running at a high rate of speed past stations where no stop is scheduled, and posts and other points along the line of route.

In brief, my invention comprises a number of automatic hooks suitably mounted on the side of the mail car, and upon suitable fixed supports beside the track, the hooks being adjustable, so that they can be swung into position to hold the mail bags in the manner required to receive and deliver the same whenever a train passes. The hooks mounted upon the side of the mail car support a bag which is to be taken off, and at the same time are shaped to receive a bag at the station which is to be taken up and forwarded; and the hook mounted on the support at the station beside the track is also designed to serve the purpose of receiving and delivering at one and the same time, whenever both operations are necessary. The hook at the station or other fixed point along the route is preferably made reversible by being connected to its support in a peculiar way; while the arrangement of hooks on the mail car is preferably duplicated to enable the mail to be received and delivered automatically when the car is traveling in either direction. Further, the manner of mounting the hook at the station or other fixed point is so combined with means for holding it in proper position to keep the mail bag which it carries in line with a hook carried upon the side of the passing mail car, that the moment the mail bag which the station hook carries is taken from it, the station hook will swing to inoperative position, whether or not a mail bag is delivered to it from the train in passing. The hooks on the car are also mounted in this way, so as to give the same result.

Reference is to be had to the accompanying drawings forming a part of this specification, in which the same characters of ref-

erence indicate the same parts in all the views.

Figure 1 is a front elevation of my improved automatic mail-delivering mechanism viewed from the direction in which the train is going; Fig. 2 is a top plan thereof; Fig. 3 is a top plan of the side of the car, showing automatic hooks carried thereby swung to their inner positions after taking up a mail bag at the station; Fig. 4 is a horizontal section taken through the line 4-4 of Fig. 1; Fig. 5 is a vertical section taken on the line 5-5 of Fig. 4; Fig. 6 is a vertical section taken through the joint which connects the automatic receiving hook at the station or other point to its fixed support; Fig. 7 are detailed views, showing the mounting device by which the receiving hook on the side of the car is secured in place; and Fig. 8 is a top plan of the supporting post at the station, showing the receiving hook after the same has taken a mail bag from a passing train and dropped to inoperative position.

On the drawings the numeral 1 represents a post or any other suitable form of support beside which is a platform 2, which can be mounted by means of a ladder 3. This platform 2 has an arm 4 projecting therefrom toward the rails, which arm is pivotally connected adjacent its inner end to the platform 2, as shown at 4', the inner extremity projecting beyond the pivot and engaging the extremity of one of the joists 2' of the platform 2, with sufficient tightness to remain in horizontal position when swung outward and upward. This arm does not support the weight of the mail bag, and any strain thereon will be in a transverse horizontal direction. Consequently, nothing more than frictional engagement between the inner extremity of the arm 4 in the adjacent end of the joists 2' is needed.

At the top of the post 1 is a head 5, to which is pivotally connected a hook 6, the function of which is both to support the mail bag which is to be delivered to the train, and to receive the mail bag which is to be taken from the train at the point where the hook 6 is located. The mail bags are shown at 7 (see Fig. 1), these mail bags being constricted intermediate their ends, the bag 7 to the left being supported in upright position by means of the hook 6, and being attached at its lower end to the arm

4, to prevent it from swinging laterally; and the bag 7 on the mail car of the train being shown as held in position to be delivered by means of two hooks 8 and 9 projecting from the side of the mail car. These two hooks 8 and 9 are fixed to a rotatable rod 10 mounted upon the outside of the mail car adjacent one side of the door-frame, the car itself being diagrammatically indicated at 11.

All of the arms 4, 6, 8 and 9 have projections 12 pivotally secured to their outer ends, these projections terminating in knobs 13. Over these projections are slipped rings in the ends of the mail bags, to hold the same in upright position. When the bag supported by the post is caught by the hook 9, on the train, the pivotal projections 12 swing through a sufficient arc to release the bag, and the same is true of the bag 7 shown at the right on Fig. 1, on account of the projections 12 carried by the hooks on the side of the car. As a result, the bags 7 are easily pulled off the hooks which support them, and delivered to or from the train without being torn or otherwise damaged in the course of the operation.

The upper hook 8 carried by the car comprises a pair of sections 14 and 15, pivotally connected together at 16. The inner end of the section 14 is rigidly secured to the rod 10, so as to swing when the rod 10 turns; and 17 is a bell-crank lever which is loosely mounted on the rod 10 and secured at its inner end 18 to some fixed point on the side of the car. 19 is a link connecting the other end 20 of this bell-crank lever to the section 15 at a point just outward of the pivot 16, the point of pivotal connection being shown at 21.

The supporting and receiving hook 6 mounted upon the post 1 comprises a pair of parallel shanks 22, connected at their inner ends by a transverse base 23. This base 23 is perforated, as shown at 26, to receive the end of a spindle 24, and is secured on the same by means of a nut 25 engaging the threads on the end of the spindle 24, for this purpose. The spindle 24 is rigidly secured to a plate 27 having extensions 28 at the top and bottom which are bolted or riveted to projections or brackets 29, these projections or brackets having secured thereto rings 29' which fit upon reduced portions 30 of the head 5. These rings 29' can rotate freely around the head 5, and as a result the hook 6 is permitted to swing in a horizontal plane to some extent around the post 1 as a center.

The head 5 is provided with a number of curved projections 31, which engage the recessed end of a plunger 32, this plunger being surrounded by a coiled spring 33, which, together with the plunger, is mounted in a bore 34 in the spindle 24. The function of

this plunger 32 having the recessed end which engages the knobs or projections 31, is to hold the hook 6 in a certain horizontal position, so as to prevent the same from swinging loosely around the post 1. The spring 33, however, is not intended to be strong enough to hold the hook 6 with any great degree of rigidity. In fact, a slight push in either direction will be sufficient to cause the end of the plunger 32 to snap off the projection 31 and release the hook.

As will appear from an inspection of Fig. 2, the parallel shanks 22 of the hooks 6 are secured to one side of the base 23; and to the other side of said base is secured a shank 35. This shank 35 is substantially parallel with the arms 22, and it is forked adjacent its outer end, as shown at 36 on Fig. 1. The shank 35 is connected adjacent the base of the yoke 36 to the two shanks 22 by means of a forked transverse member 37, seen in top plan of Fig. 2. In the fork of the transverse member 37, and between the shanks 22, is placed a V-shaped spring. This V-shaped spring is shown at 37, on Figs. 1, 2 and 4, mounted in a similar position in the hooks 6 and 9, the hook 9 being substantially the same in construction as the hook 6; and the purpose of this V-shaped hook in the forked end of the transverse member 37 will appear later.

38 is a bent arm pivotally mounted in the end of the hook 6 upon a pivot 41, and having an inner extension 39. The hook 6 is bent over at its outer end to form an elbow or pocket, as shown in Fig. 2, this elbow or pocket serving to receive and hold the lower mail bag 7, shown in dotted lines on this figure. Normally, the pocket is closed by the extension 39, but when the arm 38, which is pivoted at 41 to the end of the hook 6, is revolved in a clockwise direction, the extension 39 moves between the forked ends 36 of the shank 35 and allows the middle of the mail bag to enter this pocket. When the mail bag has entered it the arm 38 folds over it and passes between the shanks 22, where it is caught and locked by the V-shaped spring in the yoked end of the transverse member 37.

It will be observed from an inspection of Fig. 2, that the arm 38 can revolve in the same direction as the hands of a clock, but it is prevented from revolving in the opposite direction by means of a shoulder 40 on the end of the section 36 of the hook 6, engaging a corresponding shoulder on the arm 38. It will also be noted that the shanks 22 and the member 35 extend diagonally outward from the post 1 toward the train, the direction being to the left as far as the point where the shanks 22 and the yoke 36 merge into one another. The yoked ends 36 are then bent to the right, forming the hooked end which makes the receiving

pocket; and the arm 38 also extends to the right for a short distance, and then is bent straight out. The end 12 of the arm 38, however, lies a short distance to the right of the longitudinal axis of the short shaft 24. In consequence, when a mail bag is hung upon this pivoted end, the weight thereof will exert a turning moment on the hook 6 as a whole, which will tend to rotate the hook around the shaft 24, lowering the pivoted end 12 and raising the yoked arms 36. A suitable stop, however, will be provided on the plate 27 to hold the base 23 of the hook 6 and prevent its rotation from taking place. This stop is shown at 27, and is arranged to retain the hook in such position that the weight of the bag 7 will hold the hook 6 in a substantially horizontal position, by engaging a projection 23, on the base 23.

The hook 9 carried by the car is similar in construction to the hook 6, and the same numerals with the prime mark added are employed to represent corresponding parts. The inner end of the hook 9, however, is securely mounted upon the rotatable rod 10, and at the point of connection the rod 10 is passed through a block 42. This block 42 is detachably secured to a block 43 rigidly secured to the side of the car adjacent the door-frame by means of a plurality of dove-tailed tenons 44, which engage with correspondingly-shaped mortised spaces behind projections 45 in the block 43. These projections 45 are separated by recesses, as shown on Fig. 7; and when the block 42 is applied to the block 43, the projections 44 will slip into these recesses separating the projections 45, as illustrated by the broken line on Fig. 7. The block 42 is then moved downward, causing the tenons 44 to pass into the spaces behind the projections 45, and be securely mounted in position. It will be understood that the block 43 is mounted in a recess in the side of the frame of the car door, and the tenons 44 will rest upon the bottom of this recess when the locking joint between the two blocks is effected.

The block 42 has a recess formed in its outer corner, as shown at 46. This recess is preferably concentric with the shaft 10, and has mounted therein a leaf spring 47. This leaf spring engages a shoe or projection 48 rigid with the hook 9; and this projection 48 has a notch 51 therein which engages with a catch 49 operated by a pin 50 passing through the top of the block 42. The position of this catch is shown in broken lines on Fig. 4; and it will be apparent from this figure that when the hook 9 is swung inside of the car, the catch will engage the recess 51 and hold the hook at the inner limit of its movement. The spring 47 will resist the inward movement of the hook 9 by

engaging with the projection 48; and the function of this spring is to cushion the hook 9 against the shock incident to the impact of the mail bag supported on the fixed post 1, when the train catches it up in passing.

52 is a bearing block supported on the outside of the car to afford a pivotal mounting for the lower end of the rod 10; and 53 is a bearing which receives the top of the rod. The bearing 53 is made in two sections 54 and 55, pivoted together at one end, as shown by 56. The meeting faces of these two sections have vertical semi-cylindrical recesses formed therein to receive the upper end of the rod 10 (see Fig. 2); and when the pivoted section 55 is folded down against the fixed section 54 and locked in place, the upper end of the rod will be held securely in position, and at the same time be permitted to rotate as required.

The numeral 57 on the top of the head 5 designates a knob which acts as a lock for a lamp 58 on top of the post or support 1.

The manner of operation of my improved mail delivery mechanism will now be described.

The mail bag 7 will be supported from the arm 38 on the post 1, and prevented from swinging by having its lower end anchored to the pivoted projection 12 of the arm 4. In this position, this mail bag will have its constricted portion between its ends in line with the receiving bend or pocket of the hook 9 on the inside of the mail car, and when the car passes, the mail bag will be caught midway of its length by this pocket and pulled off the projections 12. The impact of the mail bag against the extension 39' of the arm 38' will cause the arm 38' to rotate in a clockwise direction by the mail bag engaging the extension 39' of the arm 38', and hence the arm 38' will close over the mail bag in the pocket and come into locking engagement with the V-shaped spring 37. This will prevent the mail bag from falling out; and the upper half thereof will simply drop back over the rear edge of the hook and hang in suspended position. When the bag 7 is engaged in this way by the hook 9, the shock of the impact will throw the hook 9 to the rearward, rotating the shaft 10 around its longitudinal axis. This shock, however, will be cushioned by the spring 47 in the recess 46 in the block 42, so that the breaking of the parts will be avoided. At ordinary speed the force of the impact will be sufficient to throw the hook 9 back with sufficient force to cause the mail bag 7 to swing inside the car, as shown in Fig. 3, and this action will fold up the hook 8 and return this hook to inoperative position against the side of the car at the same time. This is because the section 14 of the hook 8 is rigidly secured to the rod

10, and the section 15 is connected by means of the link 19 to the fixed bell-crank lever 17. In consequence, when the hook 8 swings to the right along with the hook 9, referring to Fig. 2 for example, the link 19 will pull the section 15 to the left, causing the two sections 14 and 15 to have relative movement about their point of pivotal connection 16, until they are folded together into the position shown in Fig. 3. If, when the train is taking a mail bag from the post 1, another bag is to be delivered to the post, this bag will be supported upon the end of the hook 8 and secured to the end of the arm 38'. In this position, the bag carried by the car will have its middle or contracted portion in line with the pocket adjacent the end of the hook 6; and at the same instant, when the hook 9 receives one of the bags 7, the other bag will be received by the hook 6, the arm 38 of which will fold back in between the shanks 22, to lock the bag 7 in the pocket and prevent it from falling out.

It will be seen from an inspection of Fig. 2, that the moment the bag supported by the hook 6 is caught up by the train, the weight which tends to turn the hook as a whole around the short shaft 24, and which acts to keep this hook in a horizontal position, will be removed. At this instant, the bag 7 carried by the passing train is driven into the bend or receiving pocket on the hook 6 with such force as to engage the extension 39 and rotate the arm 38 into position to be locked by the V-shaped spring in the yoked end of the transverse member 37. The bag will thus be retained, and the force of the impact thereof will have the additional effect of jerking the plunger 32 out of engagement with the projection 31 on the head 5, so as to rotate the hook 6 through an angle of ninety degrees into the position shown in Fig. 8. Further, the weight of this bag will be exerted to rotate the hook 6 around the pivot 24 in a downward direction, and when this hook finally comes to rest it will be at right-angles to the arm 4, and with the bend or receiving pocket thereof in the lowest possible position. The mail bag 7 will now hang down on either side of the hook, and can be readily detached by the mail clerk or station agent mounting the platform for this purpose.

From the above description it will be apparent that I have devised a simple and efficient form of automatic mechanism for delivering mail to and from trains without necessitating the trains stopping at certain stations or even slowing down.

It will of course be understood that the hooks 8 and 9 are arranged at one side of the door frame on a baggage or mail car, and that they will operate only when the train is going in one direction. A similar

pair of hooks 8 and 9 will of course be located on the opposite side of the door-frame, to be used when the car is going in the other direction; and the same outfit will be duplicated on the other side of the car itself. A hook similar to the hook 6, and an arm similar to the arm 4, will also be located beside the other track; or, if the line comprises only a single track, it may be feasible to rotate the hook 6 through one hundred and eighty degrees, making the stop which holds it in a horizontal position detachable for this purpose. The hook 6 can then be utilized to receive mail from trains going in either direction.

It will be noted that the projections 31 on the head 5 of the post 1 serve to hold the hook 6 in either of its extreme positions; and when traveling from its operative position directly above the arm 4, in the direction shown by the arrows in Fig. 8, the plunger 32 will be disengaged from these projections and will be in frictional contact with the head 5, directly, thus acting to some extent as a brake when the hook 6 catches a mail bag and is thrown to the rear of the platform 2.

In practice, I prefer to mount the hooks 6 and 9 in such a way that even though the hook 6 does not deliver a bag to the hook 9, the catching of the bag 7, held by the hooks 8 and 9, by the pocket of the hook 6, will be sufficient to throw the hooks 8 and 9 rearward of the train with enough force to cause them to swing into inoperative position, as shown in Fig. 3. In this case, however, a weight of some kind would have to be hung on the projection 12 on the end of the arm 38 of the hook 6, to hold the hook with its bend in position to receive the lower mail bag. Referring to Fig. 2, I also prefer to mount the hook 6 in such a way that it will be caused to swing from the position shown in Fig. 2 to the position shown in Fig. 8, whenever the hook 9 carried by the mail car catches up the mail bag hanging from the end of the arm 38 of the hook 6, even though no bag is delivered to the hook on the post by the train in passing. The utility of such a manner of operation will be apparent to any one skilled in this art.

I wish to reserve to myself the right to make whatever changes in the shape, size and arrangement of the parts fairly fall within the scope and spirit of my invention. Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. Mail delivery mechanism comprising a member mounted to swing around a pivot, said member having a pocket formed to receive a mail bag therein, and an arm pivoted in the outer end of said swinging member and having an extension, said mail bag and said swinging member being mounted to

have relative motion with respect to each other, said arm being actuated by the impact of said mail bag upon the extension thereof, to move into position to close said pocket and retain said mail bag therein after said mail bag has been engaged by said swinging member.

2. Mail delivery mechanism comprising a member mounted to swing around a pivot and having means for catching a mail bag and retaining the same, said member and said mail bag being mounted for relative movement with respect to each other, and means adjacent the pivot of said swinging member for cushioning the said member against the impact of said mail bag.

3. Mail delivery mechanism comprising a member mounted to swing on a pivot and having means for catching a mail bag, said bag and said member being mounted to have relative movement, a projection on said swinging member adjacent said pivot, and a spring mounted adjacent said pivot in contact with said projection and shaped to exert a braking action thereon, whereby the spring will cushion said member against the impact of the mail bag when the bag is caught by the same.

4. Mail delivery mechanism comprising a member mounted to swing on a pivot and having means for catching and holding a mail bag, said member having a projection adjacent said pivot, a block having a recess into which said projection extends, and a spring in said recess engaging said projection and shaped to exert a braking action thereon, whereby said member will be cushioned against the impact of said mail bag.

5. Mail delivery mechanism comprising a member mounted to swing on a pivot and having means for catching and holding a mail bag, said member having a projection adjacent said pivot, a block having a recess into which said projection extends, a spring in said recess engaging said projection and shaped to exert a braking action thereon, whereby said member will be cushioned against the impact of said mail bag, said block and said projection having interengaging means for catching and locking said member in inoperative position after the same has reached the limit of its movement caused by the impact of said mail bag thereon.

6. Mail delivery mechanism comprising a member having means for catching and holding a mail bag, said member and said mail bag being mounted to have relative movement with respect to each other, means for mounting said member to swing bodily around a pivot, and means connecting said member to said mounting means to enable said member to rotate around an axis at an angle to said pivot.

7. Mail delivery mechanism comprising a member having means for catching and

holding a mail bag, said member and said mail bag being mounted for relative movement with respect to each other, means for mounting said member to swing in a horizontal plane around a vertical pivot, and pivotal means for connecting said member to said mounting means to enable said member to rotate around a horizontal axis and lower the mail bag into position to be removed from said member.

8. Mail delivery mechanism comprising a substantially vertical post, a member having means for receiving and holding a mail bag, said member extending longitudinally outward from said post, said member and said mail bag having relative movement with respect to each other, a pair of rings loosely engaging the top of said post and held against longitudinal movement with respect thereto, said rings being spaced vertically from each other, a plate connecting said rings, and a spindle secured to said plate, said member having its end pivotally mounted on said spindle, whereby said member can swing around said post as a pivot by means of said rings, or be rotated around said spindle as an axis.

9. Mail delivery mechanism comprising a substantially vertical post, a member having means for receiving and holding a mail bag, said member extending longitudinally outward from said post, said member and said mail bag having relative movement with respect to each other, a pair of rings loosely engaging the top of said post and held against longitudinal movement with respect thereto, said rings being spaced vertically from each other, a plate connecting said rings, a spindle secured to said plate, said member having its end pivotally mounted on said spindle, whereby said member can swing around said post as a pivot by means of said rings, or be rotated around said spindle as an axis, a plurality of projections carried upon the side of said post adjacent the top thereof, and a spring-pressed plunger carried by said plate and having a recess in its end to engage said projections to hold said member in different positions of adjustment.

10. Mail delivery mechanism comprising a supporting hook mounted to swing on a pivot, said hook comprising a pair of pivotally-connected sections, and a link connecting the outer of said sections to a fixed point adjacent said pivot, whereby said sections will be folded together when said hook is swung around said pivot in a given direction.

11. Mail delivery mechanism comprising a member having a hook-shaped end to catch and hold a mail bag, an arm pivotally secured to the outer end of said member and having an extension projecting across said pocket, said projection being

actuated by the impact of the mail bag, to rotate said arm, and a V-shaped spring carried by said hook to one side of said pocket in position to engage said arm and retain the same in position to close said pocket and prevent the disengagement of the mail bag therefrom.

12. Mail delivery mechanism comprising a collapsible supporting hook mounted to swing on a pivot and a receiving hook mounted to swing on a pivot and supported below the first-named hook, said receiving hook having a pocket formed therein to catch and hold a mail bag, and means carried by the outer ends of both of said hooks to support a mail bag in position to be delivered therefrom.

13. Mail delivery mechanism comprising a post, a hook-shaped member mounted to extend longitudinally outward from said post, means for connecting said hook-shaped member to said post to rotate around a substantially horizontal axis, said hook-shaped member extending laterally from the direction of said axis, and an arm mounted in the end of said hooked-shaped member and extending laterally in the opposite direction across the line of said axis, whereby a weight connected to the outer end of said arm will balance said hook upon said axis.

14. Mail delivery mechanism comprising a vertical support, a hook connected to said support and mounted to rotate around a substantially horizontal axis projecting therefrom, said hook extending laterally from the direction of said axis and having an arm in its outer end extending laterally in the opposite direction across the line of said axis, whereby a weight carried upon the outer end of said arm will exert a turning moment on said hook, and means rigid with said post for retaining said hook in balanced position when the outer end of said arm is weighted.

15. Mail delivery mechanism comprising a post, a hook-shaped member, means for mounting said hook-shaped member upon said post to swing around the same as an axis, said mounting means comprising a spindle extending laterally from said post, upon which said hook-shaped member is journaled to swing around the same as an axis, the said hook-shaped member extending diagonally from the axis of said spindle, and an arm mounted in the end of the hook-shaped member and extending diagonally in the opposite direction across the line of the axis of said spindle, whereby a weight connected to the outer end of said arm will balance said hook upon said spindle, and when said weight is removed, the hook-shaped member will rotate around said spindle as an axis into its lowermost position.

16. Mail delivery mechanism comprising a post, a hook-shaped member, means for mounting said hook-shaped member upon said post to swing around the same as an axis, said mounting means comprising a spindle extending laterally from said post, upon which said hook-shaped member is journaled to swing around the same as an axis, the said hook-shaped member extending diagonally from the axis of said spindle, an arm mounted in the end of the hook-shaped member and extending diagonally in the opposite direction across the line of the axis of said spindle, whereby a weight connected to the outer end of said arm will balance said hook upon said spindle, and when said weight is removed, the hook-shaped member will rotate around said spindle as an axis into its lowermost position, and means carried by the mounting means adjacent the base of said spindle for retaining the hook in balanced position when the outer end of said arm is weighted.

17. Mail delivery mechanism comprising a hook-shaped member, a block associated with said hook-shaped member and having cushioning means engaging said member, said block having a dove-tailed tenon projecting from one end thereof, and a second block having a dove-tailed mortise formed at one end, said second block being mounted in a recess of greater height than the first block, whereby the second block can be secured to the first block by inserting the tenon formed thereon into said recess and then moving the first block to bring the said tenon into engagement with the mortise of the second block.

18. Mail delivery mechanism comprising a hook-shaped member, a block associated with said hook-shaped member and having cushioning means engaging said member, said block having a plurality of dove-tailed tenons projecting from one end, said tenons being separated by intervening spaces, and a second block having a plurality of dove-tailed mortises formed in one end, said mortises being separated by intervening spaces, said second block being mounted in a recess formed in a supporting member, the recess being of greater height than the second block by an amount equal to the thickness of one of said tenons, whereby the first block can be secured to the second block by moving the tenons thereon into the upper part of said recess and the spaces between the mortise spaces of the second block, and then depressing the first block to bring the tenons and mortises into engagement.

19. Mail delivery mechanism comprising a hook-shaped member, means for pivotally mounting said hook-shaped member upon the side of a railway car, said hook-shaped member having a pocket therein to receive a mail bag, a second hook-shaped member

mounted above the first-named member, said second-named member comprising collapsible sections, means for pivotally mounting said second-named member upon the side of a car, and means carried by the outer end of said members for carrying a mail bag to be delivered from the car.

20. Mail delivery mechanism comprising a hook-shaped member, means for mounting said hook-shaped member upon a post to swing around the same, said means comprising a horizontal spindle upon which said hooked-shaped member is journaled to enable the same to be swung downward when the same is to be lowered, said hook-shaped member having a pocket to receive a mail bag from a passing train, and a second member pivotally mounted to swing in a vertical plane below said first member, said members having means at their outer ends for supporting a mail bag to be delivered to said train.

21. Mail delivery mechanism comprising a hook-shaped member, means for pivotally mounting the same upon the side of a car to receive a mail bag from a station, a second hook-shaped member, and means for mounting the same upon a post or support beside the track, so as to swing around said post as a pivot, said mounting means comprising a horizontal spindle upon which said second-named hook is journaled to enable

the same to swing into lowermost position, said second-named hook serving to receive a mail bag from a passing train.

22. Mail delivery mechanism comprising a pair of hook-shaped members, means for pivotally mounting the same above each other upon the side of a car, said hook-shaped members having means at their outer ends for supporting a mail bag to be delivered to a station, and one of said hook-shaped members having a pocket to receive a mail bag from said station, a third hook-shaped member, means for mounting the same to swing around a post or support beside the track, said means comprising a horizontal spindle upon which said hook-shaped member is journaled, to enable the same to swing downward, said hook-shaped member having a pocket to receive a mail bag from said car, an arm pivotally mounted below said third hooked-shaped member, and means carried by said third hook-shaped member and said arm to support a mail bag to be delivered to said car.

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

BENJAMIN FRANKLIN NICOLL.

Witnesses:

WILLIAM ARDILL,
PAUL FORTIER.