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F. M. HURLEY.

MAIL RECEIVING DELIVERY APPARATUS.

APPLICATION FILED MAR. 19, 1906.

2 SHEETS—SHEET 1.

Fig. 1.

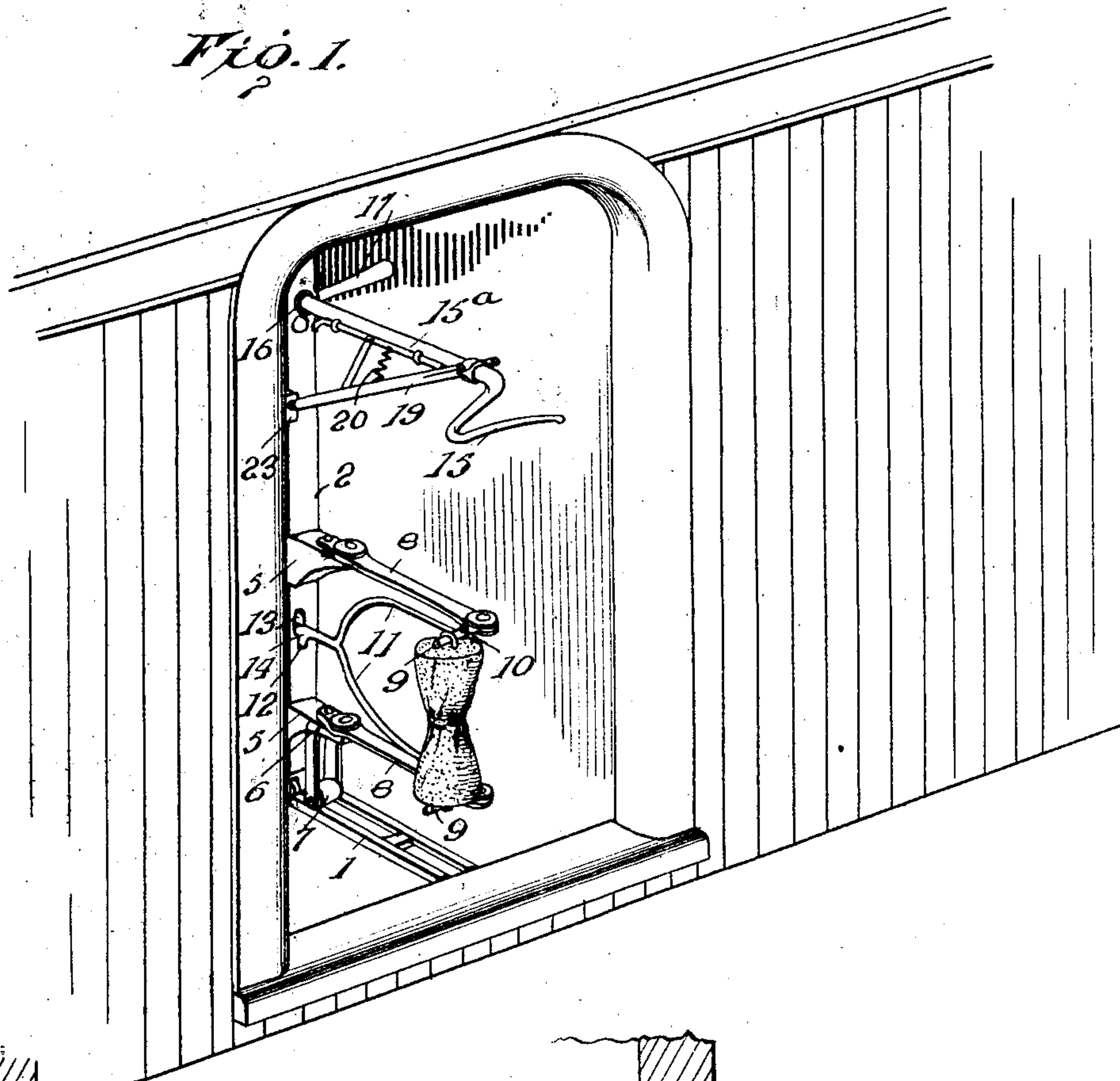
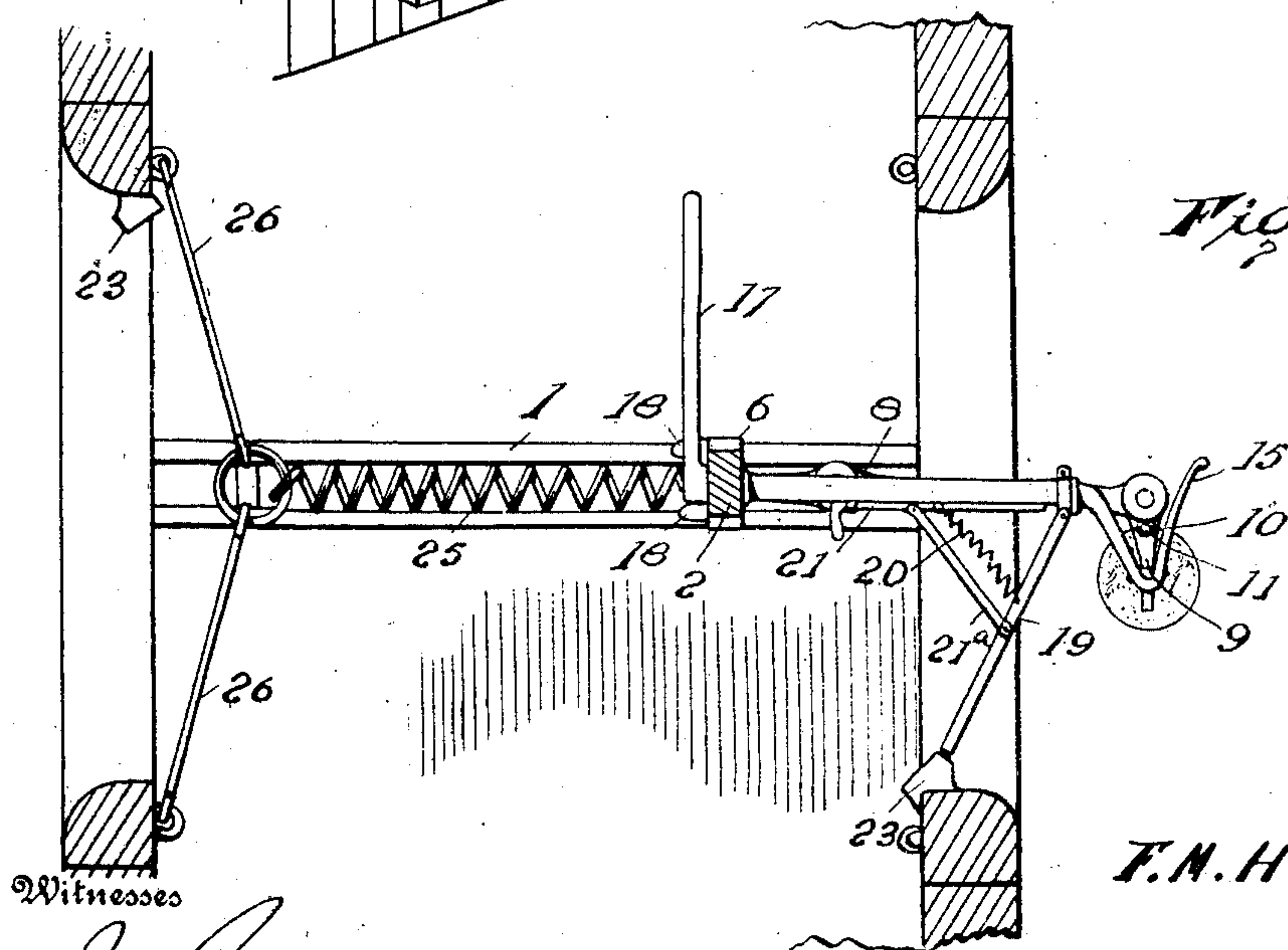


Fig. 2.



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# UNITED STATES PATENT OFFICE.

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## MAIL-RECEIVING DELIVERY APPARATUS.

No. 826,855.

Specification of Letters Patent.

Patented July 24, 1906.

Application filed March 19, 1906. Serial No. 307,117.

*To all whom it may concern:*

Be it known that I, FRANK M. HURLEY, a citizen of the United States, residing at Blissfield, in the county of Coshocton and State of Ohio, have invented certain new and useful Improvements in Mail-Receiving Delivery Apparatus, of which the following is a specification.

My invention contemplates certain new and useful improvements in mail-bag receiving and delivering apparatus for trains; and the object of the invention is to provide an improved apparatus of this character which can be readily adjusted in a projected position out of either side door of a mail-car in proper relation to simultaneously receive and deliver mail-bags and which is provided with automatic means whereby the entire apparatus will be withdrawn back into the car when the mail-bag has been received thereby, such action being effected by the impact or force of the bag that is received.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and accompanying drawings, in which—

Figure 1 is a perspective view of a portion of a railway mail-car embodying the improvements on my invention. Fig. 2 is a horizontal sectional view. Fig. 3 is a vertical sectional view. Fig. 4 is a detail view illustrating the means for holding the devices in their projected positions from the car-door. Fig. 5 is a detail perspective view of the bag-catching hook. Fig. 6 is a detail perspective view of a portion of the bag-holding arms and the adjusting-rod for holding the fingers of said arms at right angles to the arms. Fig. 7 is a perspective view looking at the under side of the carriage, designed to support the upper end of the standard.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

Extending transversely of the floor of the mail-car is a track 1, designed to support my improved apparatus. The standard or upright post 2 of the apparatus is provided at its lower end with a foot 3, mounted between the rails of the track 1, and with rollers 4, mounted on said track-rails. It is also pro-

vided with projecting brackets 5, one above the other, as shown, and to the lowermost bracket hangers 6 are secured, said hangers supporting at their lower ends one or more rollers 7, designed to coact with the rollers 4, so as to support the apparatus in a steady manner as it moves transversely to the car on the track 1. Arms 8 are pivotally mounted on the upper surfaces of the brackets 6, so as to swing in a horizontal plane, and the outer ends of said arms carry pivoted fingers 9, also mounted to swing in the same plane as the arms and designed to directly support that mail bag or bags that are intended to be delivered from the train. The fingers 9 are provided with sockets 10, preferably near their pivoted ends, and a Y-shaped adjusting-rod 11 has its bifurcated and outwardly-bent extremity inserted in the sockets 10 and has its main member 12 adjustably received in an aperture 13 in the standard 2. The main member or stem 12 of the adjusting-rod 10 is preferably buckled intermediate its ends to constitute a locking portion 14, designed to engage opposite sides of the standard when such portion is in the aperture, whereby to hold the adjusting-rod in the required position. The Y-shaped or bifurcated end of the adjusting-rod extends in a vertical plane, as shown.

A catching and receiving hook 15 has its shank 15<sup>a</sup> loosely mounted in an aperture 16 in the standard 2 above the uppermost bracket 5, said shank being capable of rotation about its longitudinal axis in the standard, so that it may be turned to one side or the other to present its hook in different directions, and the rear end of the shank 15<sup>a</sup> is provided with a handle 17, by which the hook may be turned, said handle being adapted for engagement with ledges 18 at opposite sides, so that the hook may be supported in proper horizontal position with its opening facing in one direction or the other. The outer end of the shank 15<sup>a</sup> carries a pivoted latch-bar 19, which extends rearwardly in an oblique direction and is normally turned toward the shank of the hook by means of a compression-spring 20. The opposite movement of said latch-bar may be effected by means of a slidable rod 21, mounted in bearings on the shank of the hook 15 and connected to the latch-bar by a jointed link 21<sup>a</sup>.

The latch-bar 19 is designed to coact with



a spring-projected trigger 22, mounted within a casing 23 at one side of the door-frames, the rear end of the latch-bar being designed for reception in the outer end of said casing with the trigger in retracted position, and this position of the trigger is maintained by means of a latch-pin 24, preferably inserted through the lower side of the casing 23 into engagement with a forwardly-facing shoulder on the trigger.

To the rear end of the standard 2 is secured a compression-spring 25, one end of said spring being provided with a hook designed for detachable engagement with links 26, secured to the sides of the door-frames. The upper end of the standard 2 is revolvably mounted in a carriage 27, which is provided with hangers and rollers 28, mounted to run upon an elevated track 29, extending transversely of the car and preferably near the roof thereof. A spring-catch 30 is secured to the upper end of the standard 2, and its latch is adapted to enter either one of two opposite sockets 31 on the lower side of the carriage, whereby to rigidly hold the standard and the entire apparatus with respect to the carriage and tracks in either one position or the reverse.

In the practical operation of my improved apparatus the spring 25 is secured to the links 26 on the door-frame opposite the door from which it is intended the apparatus shall be projected. The standard 2 is then run transversely toward the opposite door, the spring 25 being stretched or put under tension by such movement, and such movement is continued until the hook 15 and the fingers 9 are carried out of the door into proper position for catching and delivering mail-bags held along the track in the direction in which the car is moving. The latch-bar 19 is manipulated by means of the slidable rod 21 against the tension of its spring 20 and is placed with its rear end in the outer end of the casing 23, the trigger 22 on said casing being held in its retracted position by means of the pin 24, as above described. The fingers 9 are held at right angles to their arms 8 by means of the Y-shaped adjusting-rod 11, the position of said fingers depending upon the direction in which the car is moving, so that the hook on the apparatus along the track may strip the mail bag or bags from said fingers. When the hook 15 catches the mail-bag, the force of the impact will result in the latch-bar 19 retracting the trigger 22 to a further extent, which will carry it away from contact with the ends of the latch-pin 24 and allow said pin to drop out of the casing 23. Thereupon the spring of the trigger will retract and cause the latter to move sharply forward to carry the latch-bar completely out of engagement with the end of the casing 23, and hence the spring 25 will be allowed to act and will draw the entire appa-

ratus back into the car and out of the way. It is of course to be understood that the casings 23 and their concomitant parts may be arranged on both door-frames at opposite sides of the car and at opposite sides of the frames, so that the apparatus may be used in connection with either door by merely turning the standard, as above described, and securing it in the reverse position with its spring-catch 30 engaged in the required socket 31 of the carriage 27 and with spring 25 engaged with the links 26 on the proper door-frame. Hence it will be seen that my apparatus is not only automatic in its action to retract the entire mechanism from its projected position out of the car-door into the car, but that the apparatus may be used with either door, depending upon the direction in which the car is moving or the position of the stationary catching and delivering device along the track.

Having thus described the invention, what is claimed as new is—

1. An apparatus of the character described, comprising a bag-catching hook, means for holding said hook in a projected position from the car-door, a spring normally tending to withdraw said hook and held from action by the means for holding the hook projected, and means for releasing said last-named means whereby to allow the spring to act.

2. An apparatus of the character described, comprising a bag-catching hook, a spring normally tending to hold said hook within a car, means for holding said hook in a projected position from the door of the car, against the action of said spring, and means whereby the impact of a bag in the hook will release the same from the means which holds it projected.

3. An apparatus of the character described, comprising a bag-catching hook, a latch-bar carried thereby and designed to hold the hook in projected position from the door of a car, a spring tending to retract said hook, and means whereby the impact of a bag in the hook will release the hook-holding means.

4. An apparatus of the character described, comprising a standard, tension means secured to said standard, a swiveled bag-catching hook carried by said standard, means carried by said hook for holding the latter with the tension means under tension, out of the door of a car, and means whereby the impact of a bag in the hook will release said holding means, whereby the spring will draw the standard and hook backwardly.

5. An apparatus of the character described, comprising a spring-pressed trigger, means for holding said trigger in retracted position, a bag-catching hook designed to be held in projected position out of the door of a car, and provided with a latch-bar arranged to be held contiguous to said trigger and in operative relation thereto, and means whereby the



impact of a bag in the hook will release the trigger-holding device and allow the same to act upon said latch-bar, as and for the purpose set forth.

5 6. An apparatus of the character described, comprising a standard mounted to move transversely of a car, a bag-catching hook carried by said standard and provided with a pivotal latch-bar, a spring normally tending  
10 to hold the latch-bar against the shank of the hook, a casing secured to a door-frame of the car, a spring-projected trigger in said casing, means for holding said trigger in retracted  
15 position, the latch-bar being designed for insertion in the end of the casing to hold the hook in projected position, and means whereby the impact of a bag in the hook will automatically release the trigger and allow the  
20 same to push the latch-bar out of the casing, and means for drawing the standard and hook rearwardly into the car, substantially as set forth.

7. An apparatus of the character described, comprising a standard mounted to move  
25 transversely of a car, a bag-catching hook carried by said standard and provided with a pivotal latch-bar, a spring normally tending to hold the latch-bar against the shank of the hook, a casing secured to a door-frame of the  
30 car, a spring-projected trigger in said casing, means for holding said trigger in retracted position, the latch-bar being designed for insertion in the end of the casing to hold the hook in projected position, a slidable actuating-rod for said latch-bar, means whereby the  
35 impact of a bag in the hook will automatically release the trigger and allow the same to push the latch-bar out of the casing, and means for drawing the standard and hook  
40 rearwardly into the car, substantially as set forth.

8. An apparatus of the character described, comprising in combination with a car, transverse tracks, a standard mounted to run on  
45 said tracks, means for reversing the standard on the tracks, bag devices carried by said standard, and means for holding said stand-

ard in one position or the reverse with respect to the tracks.

9. An apparatus of the character described, 50 comprising a standard, bag-holding arms pivotally mounted on said standard, fingers pivotally mounted on the ends of said arms, an adjusting-rod secured to said fingers and arranged for detachable engagement with the  
55 standard and designed to hold said fingers in angular relation to the arms.

10. An apparatus of the character described, comprising a standard, bag-holding arms pivotally mounted on said standard, fin- 60 gers pivotally mounted on the ends of said arms, and a Y-shaped adjusting-rod connected to said fingers, and arranged for detachable connection to the standard, and designed to hold said fingers in angular relation 65 to the arms.

11. In an apparatus of the character described, the combination of a transversely-movable standard, arranged to move across  
70 the floor of a car, bag devices carried by said standard, means for reversing the standard and the bag devices, means for projecting the bag devices out of either door of the car, and a spring designed to retract said standard  
75 and bag devices.

12. In an apparatus of the character described, the combination of a transversely-movable standard, arranged to move across  
80 the floor of a car, bag devices carried by said standard, means for reversing the standard and the bag devices, means for projecting the bag devices out of either door of the car, a spring secured at one end of said standard and having a hook at its other end, and links  
85 secured to the door-frames and arranged for detachable connection to said hook, as and for the purpose set forth.

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

FRANK M. HURLEY. [L. S.]

Witnesses:

LAURA FOX,  
ELMER L. FOX.