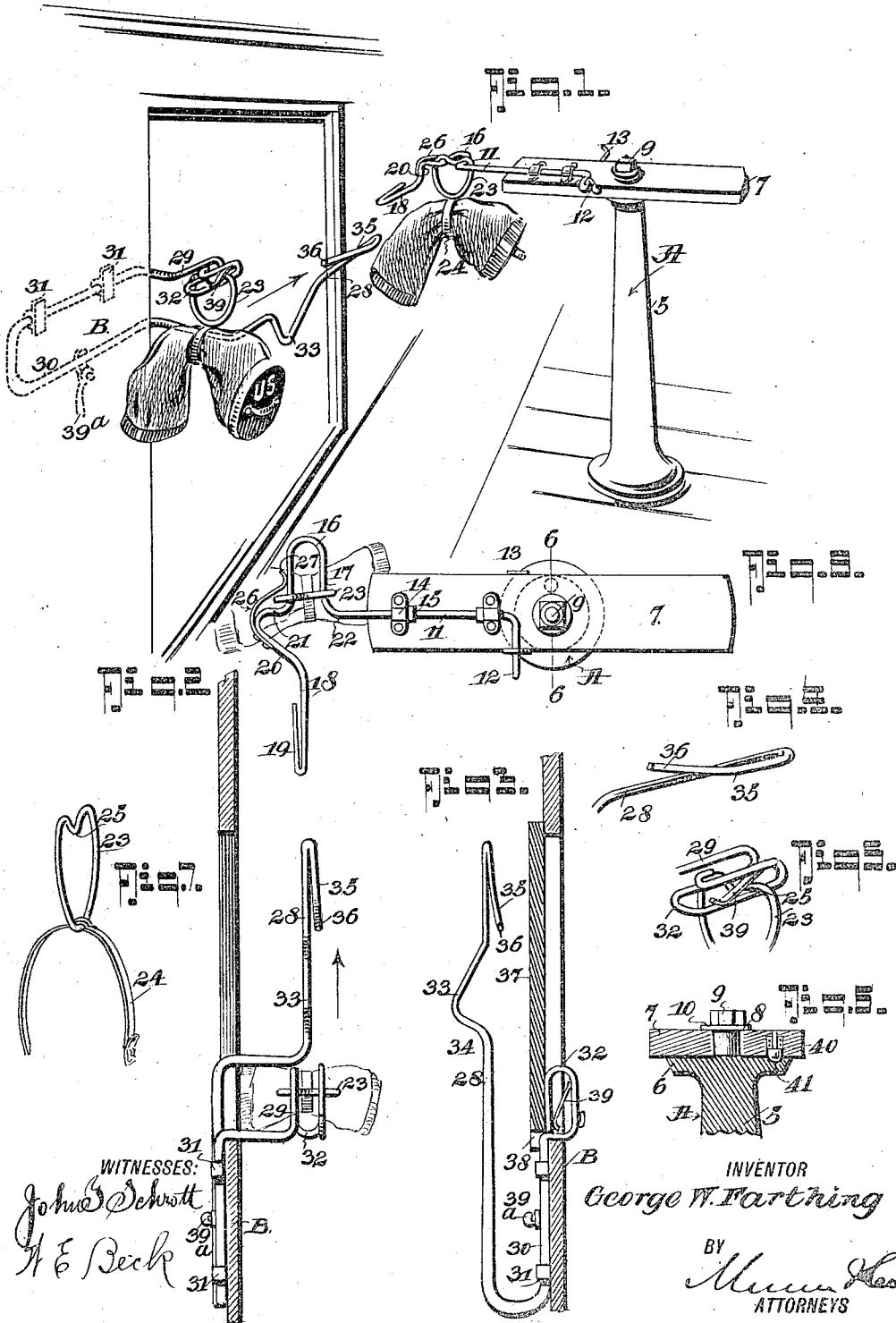


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 MAIL DELIVERY APPARATUS.  
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# UNITED STATES PATENT OFFICE.

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## MAIL-DELIVERY APPARATUS.

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Specification of Letters Patent.

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*To all whom it may concern:*

Be it known that I, GEORGE W. FARTHING, a citizen of the United States, and a resident of Dry Fork, in the county of Pittsylvania and State of Virginia, have invented new and useful Improvements in Mail-Delivery Apparatus, of which the following is a specification.

One of the principal objects of my present invention is to provide an improved mail delivery apparatus for exchange of bags of mail between moving train and station, the apparatus being so constructed as to make the exchange with the least danger of damage to the mail pouches or their contents.

A further object of the invention contemplates the provision of an apparatus, which in effecting the exchange of the mail pouches, makes provision for suspending them so that they may swing in the air until the motion imparted to them by the impact incident to the exchange, has been spent, whereby the risk of damage to the mail is reduced to a minimum.

A still further object of the invention is to provide an apparatus of the class designated, in which the stationary member of the apparatus is designed to swing under the impact of the deposited mail sack so as to ease up the force of the blow experienced by the sack at the time of exchange.

A still further object of my invention contemplates the provision of an improved mail exchange apparatus in which the parts are reduced to a minimum, resulting in extreme simplicity and durability, and one which is extremely efficient in operation, inexpensive to manufacture and install, and in which there is small likelihood of the parts getting out of order.

With these and other objects in view, which will become apparent as the description proceeds, the invention resides in the construction, combination and arrangement of parts hereinafter more fully described and claimed and illustrated in the accompanying drawings, in which like characters of reference indicate like parts throughout the several figures, of which:

Figure 1 represents a view in perspective of a mail exchange apparatus constructed in accordance with my invention, showing the same in operation.

Fig. 2 represents a view in section taken horizontally along the mail coach of a train,

showing a top plan view of a train carried member of the apparatus.

Fig. 3 represents a similar view showing the train carried apparatus as turned into the car.

Fig. 4 represents a view in perspective of the receiving arm of the train carried member.

Fig. 5 represents a view in perspective of the mail sack supporting arm thereof.

Fig. 6 represents a view in section taken vertically and transversely on the plane indicated by the line 6-6 of Fig. 8.

Fig. 7 represents a view in perspective of one of the mail bag supporting rings, and

Fig. 8 represents a top plan view of the stationary or track side member of the mail exchange apparatus.

In carrying out my invention I provide an apparatus including a stationary or track side member indicated generally at A, and a train carried member indicated generally at B, which members cooperate in effecting the exchange of mail bags.

The stationary member A, which is adapted to be mounted on the platform of a station, or at some other suitable point along the track, includes a standard 5 having a flat surface crown 6 on which a plate 7 is revolubly mounted by means of a pin 8 carried by the standard, and extending through an opening extending centrally in the plate, said pin having its upper end threaded for the reception of a nut 9 which is turned downwardly upon a washer 10 bearing upon the upper surface of the plate and retaining the latter in frictional engagement with the crown of the standard.

Pivotally mounted upon one end of the plate 7 and extending longitudinally thereof, is a rod 11 having its inner end bent outwardly at 12, to provide an arm which may be engaged by one or the other of a pair of hooks or other retaining devices 13, secured to the sides of the plate. The rod may be mounted in straps 14 against which collars 15 carried by the rod, bear for preventing longitudinal movement of said rod. Any other suitable means of mounting the rod may be employed. The outer end of the rod 11 is bowed or doubled upon itself to form a substantially U-shaped tongue 16, the side members 17 of which extend in spaced and parallel relation with each other. The tongue 16 extends in an opposite direc-

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tion from that in which the arm 12 at the inner end of the rod projects. Beyond the tongue 16 the outer end of the rod is turned at right angles to form an arm 18, which  
5 extends in an opposite direction to the tongue 16, the extreme end of the arm 18 being returned as at 19.

Between the tongue 16 and the outer portion of the arm 18, an offset or bend 20 is  
10 made in the rod, which bend presents a shoulder 21 at the base of the tongue 16 and in relation therewith, substantially similar to the relation which the shoulder 22, formed at the base of the tongue at the  
15 point where it merges with the main portion of the rod 11, bears to the tongue.

The tongue is designed for the reception of one of the mail sack supporting rings 23. These rings are substantially heart  
20 shaped and are strongly secured at their lower portions to straps 24, which are adapted to be drawn about the mail sacks securely attaching them to the rings. The ring fits snugly upon the tongue 16 in the  
25 manner indicated in the drawing, the bowed or inturned portion 25 of the ring fitting between the side members 17 of the tongue, for retaining the ring against twisting movement upon the tongue, which a strong  
30 wind might have a tendency to create. In order to prevent the accidental displacement of the ring from the tongue, a leaf spring 26 is provided, which at its inner end is suitably secured to the bowed portion  
35 20 of the arm, and adjacent its other end overlies the angle formed at the shoulder 21, and bearing slightly against the adjacent side portion 17 of the tongue, is at its outer end, slightly outturned as at 27 to allow of  
40 the ring being readily placed upon the tongue by the station master.

The train carried member of the apparatus is made from a single rod, and includes a receiving arm 28 and a supporting arm  
45 29 connected by a U-shaped portion 30, the upper arm of which is pivotally mounted longitudinally of the mail coach on the inside thereof as indicated at 31. The arm 28 is offset outwardly from the U-shaped  
50 portion 30, as is also the supporting arm 29. The latter at its outer end, is formed into a supporting tongue 32, similar in shape to the tongue 16, which supporting tongue 32 is arranged above and at the rear  
55 of the receiving arm 28 of the train carried section of the apparatus. The tongue 32 is formed by bending the outer portion of the arm 29 downwardly and then bowing it around in a horizontal plane, and then  
60 bending it upwardly and returning it in parallel relation with the arm, and finally over-bending the extremity as indicated in the drawing. The tongue 32 is adapted to support one of the mail sack carrying rings  
65 23, in the manner already described, with

respect to the tongue 16. The arm 28 is provided with a downwardly offset or bent portion 33, which portion defines a shoulder 34 at its rear end, and gradually inclines  
70 upwardly from the shoulder to the outer portion of the arm. The free end of the arm 28 is returned upon itself as at 35, and is bent slightly upwardly as at 36, whereby to form a prong or tongue adapted to prevent the displacement of the mail bag  
75 supporting ring from the arm 28, after said ring has been engaged thereon in a manner to be described.

When the train carried section of the device is out of operation, it may be swung  
80 inwardly until the arm 28 is arranged entirely within the car, whereupon the door 37 of the car may be closed as indicated in Fig. 3, a suitable recess being provided either in the car door or in the door frame  
85 for receiving a portion of the device which projects without the car, as indicated at 38. When the device is in operative position, however, the arm is swung outwardly as indicated in Fig. 1, and a suitable latch 39  
90 carried on the inside of the car is turned to engage the U-shaped portion 30 for retaining the device in operative position.

The stationary member A and the train carried member B of the apparatus, are so  
95 positioned relatively to each other, that as the train carried section passes the stationary section, the arm 18 of the latter lies between the arm 28 and tongue 32 of the former, and in position to project through  
100 the ring 23 supported by said tongue 32. The arm 28 of the train carried portion of the device, extends in position to pass through the ring 23 supported by the tongue 16 of the stationary member. It will thus  
105 be seen as the train passes, an exchange of the mail pouches will be secured, the pouch carried by the moving section of the apparatus being deposited on the arm 18 of the stationary member, and the sack carried by  
110 the tongue of the stationary member will be deposited on the arm 28 of the moving member.

The offset portion 33 of arm 28, provides means for supporting the ring which this  
115 arm engages as the exchange takes place, thereby preventing its displacement from the arm. As the bag is caught by the arm 28, it is allowed to swing free in the air until the motion imparted by the impact has been  
120 spent. Prong 36 of the arm 38 will prevent the sack from being thrown off the arm 38 by reason of the rebound which takes place as the bag is caught. The spring 26 provided on the stationary member of the apparatus, will not  
125 interfere with the ready detachment of the ring 23 from the apparatus by the arm of the train carried member. A spring 39, which has the same functions as the spring 26, is carried by the tongue 32 of the train  
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supported section of the apparatus, and while preventing accidental displacement of the ring 23 therefrom, allows ready detachment of it by action of the arm 18 in engaging the ring as the exchange of mail pouches takes place.

The plate 7 is provided with a spring actuated detent 40 which, when the device is in the position indicated in Fig. 1, engages an indentation 41 provided in the crown 6 of standard 5. The detent thus retains the plate against accidental rotary movement, but as impact is imparted to the plate incident to the deposit of the mail pouch, the force is great enough to shift the detent out of the indentation and to swing the plate around, thus easing the force of the blow. When not in operation the plate may be moved to a position parallel with the track, so that the device carried by the plate will be out of the way. The receiving arm of the stationary apparatus while being long enough to readily engage the ring of the pouch carried by the train supported portion of the apparatus, is short enough to prevent its engagement with the side of the train as the plate 7 swings around. It is my intention to have the stationary and train supported portions of the apparatus mounted at such a height that the windows of the locomotive cab will pass at a point above the stationary member so that there will be no danger of the locomotive crew being injured as the locomotive passes.

The working parts of the device are made of suitable heavy metal to withstand the strain incident to their operation. The rod of which the train carried portion of the device is made, tapers from its central portion toward its ends as indicated in the drawing. The rod from which the stationary portion is formed is similarly tapered toward its outer end.

The train carried member of the apparatus, may, when not in use, be swung, if desired, upwardly within the car to assume an upside down position, and will then be positioned near the roof of the car where it will be out of the way.

The mail car may be equipped on each side with one of the devices already described, so that in case the apparatus is used on a single track railroad, the mail coach having been turned around on its return trip, may, as it passes the stationary apparatus be in position to effectuate the interchanging of the mail pouches. To this end the rod 11 carried by the stationary member, may rotate to a position opposite that occupied, as shown in the drawing, the arm 12 being engaged by the opposite hook or retaining element 13 so as to properly maintain the stationary apparatus in correct position for supporting the mail pouches on the return trip of the train.

I claim:

1. A mail delivery apparatus including a stationary member comprising a standard, a friction retained plate revolubly mounted thereon, means for restraining the plate against accidental movement, a rod pivotally mounted longitudinally of the plate and having a laterally offset end portion, means carried by the plate for engaging the end portion when the rod is in one position or another for retaining the rod against rotation, said rod being bent to form an arm at its outer end for receiving mail bag supporting rings, said arm extending approximately at right angles to the rod to form a substantially U-shaped tongue extending in an opposite direction to the arm for supporting a mail bag supporting ring, an offset portion formed in the receiving arm for preventing loss of mail pouches therefrom, and a spring for preventing accidental removal of the mail bag supporting ring from said tongue, said spring allowing ready placement of the ring on the tongue.

2. A mail delivery apparatus including a train carried member comprising a rod bent to a substantially U shape having its bowed portion arranged within a car and further having one of its legs pivotally mounted within the car, said rod being offset beyond the car at one end to form a supporting arm and at its other end to form a receiving arm extending forwardly of the supporting arm and adapted to receive a bag supporting ring, said receiving arm having an offset therein to retain the ring and having its outer end provided with a returned prong to prevent displacement of the ring from the arm, a tongue carried by the supporting arm extending in a direction opposite to the receiving arm and adapted to receive a bag supporting ring, and means for preventing accidental removal of the ring from the tongue, said means allowing ready placement of the ring on the tongue.

3. A mail delivery apparatus, including a stationary member comprising a horizontally arranged plate, means by which the plate is rotatably mounted upon a vertical axis, a rod pivotally mounted in horizontal position for movement about its axis upon the plate and having an arm formed at one end to engage mail bag supporting rings and having a tongue projecting in an opposite direction from the arm for supporting a mail bag supporting ring, means whereby the rod may be rotated on its axis at will for reversing the directions in which the arm and tongue extend, and means for retaining the rod in adjusted position at will, whereby the tongue will project in one direction or another.

4. A mail delivery apparatus, including a U-shaped portion pivotally mounted upon one of its arms within a car longitudinally

thereof, the U-shaped portion having one end offset beyond the car to form an arm for receiving a mail bag supporting ring and having its other end offset beyond the  
5 car above the said arm and provided with means for supporting a mail bag supporting ring.

5. In apparatus of the character specified, a longitudinal member, a substantially U-shaped tongue at one end of the longitudinal member and an arm projecting in an opposite direction to the tongue and forming an extension of the outer member thereof, there  
10 being an offset or shoulder between the tongue and arm about in line with the longitudinal member, said tongue and arm being disposed at a right angle to the longitudinal member and projecting beyond opposite  
15 sides thereof.

20 6. A mail bag delivery apparatus, including a standard, a plate rotatably mounted thereon and frictionally retained against accidental displacement, a horizontally extending rod mounted for rotation about its axis  
25 on the plate and provided with an arm for receiving a mail bag supporting ring, and with a tongue extending in an opposite direction to the arm for supporting a mail bag supporting ring, said rod adapted to be  
30 turned at will for reversing the position of the arm and tongue.

7. A mail delivery apparatus, including a substantially U-shaped supporting tongue, a heart-shaped ring having a reëntrant portion, and having means for supporting a  
35 mail bag, said ring straddling the tongue with the reëntrant portion arranged between the arms of the tongue, whereby the ring will be supported against twisting movement relatively to the tongue, and  
40 means for preventing accidental removal of the ring from the tongue.

8. In apparatus of the character specified, a support, a horizontal member rotatable on the support about a vertical axis, yieldable  
45 means between the support and horizontal member to normally hold the latter in an adjusted position and resist rotation thereof, a longitudinal member reversibly mounted upon the horizontal member and having  
50 a lateral arm at its inner end and an oppositely extending tongue and arm at its outer end with a shoulder between the arm and tongue, retaining means mounted upon the horizontal member to engage the inner arm  
55 of the reversible member to hold it in the required position, and retaining means at the outer end of the reversible member cooperating with the tongue to prevent displacement therefrom of the mail supporting  
60 element.

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