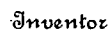
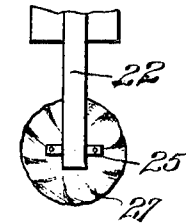


MAIL BAG CATCHING AND DELIVERING APPARATUS.

Patented Mar. 1, 1910.

950,562.



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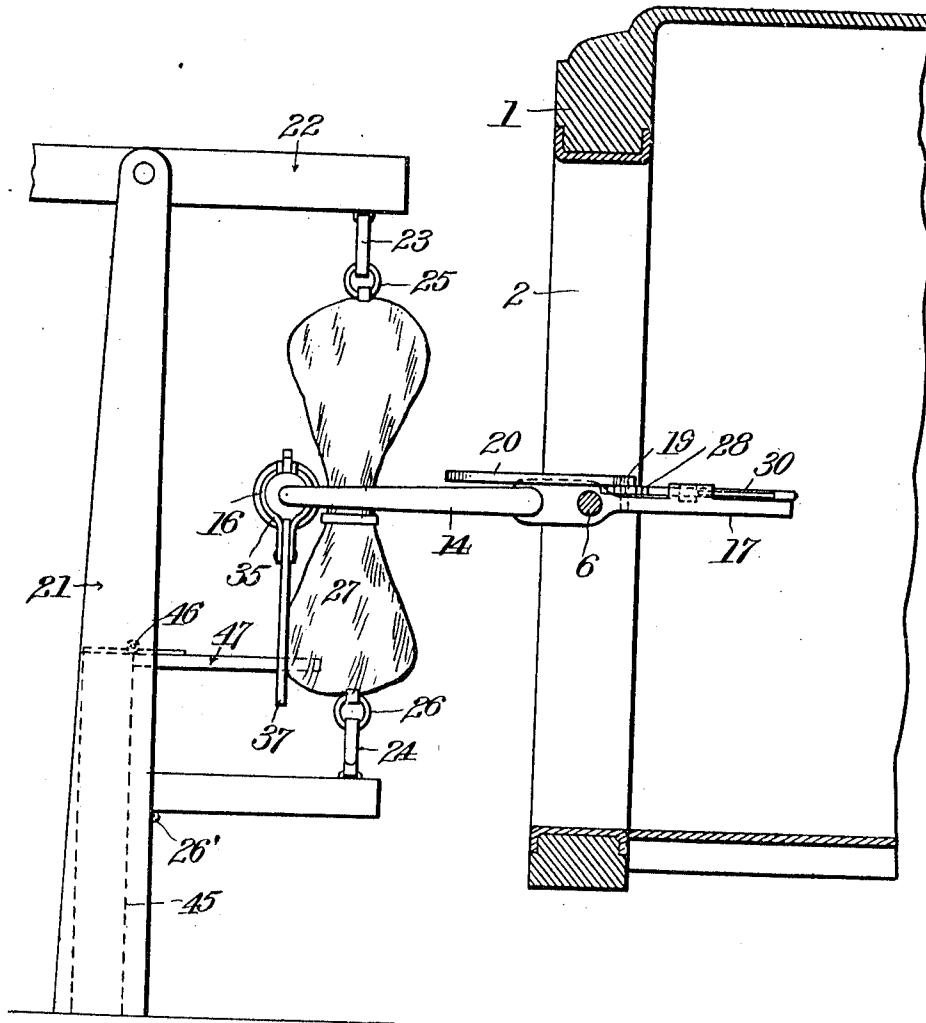


Fig. 3.

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MAIL-BAG CATCHING AND DELIVERING APPARATUS.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WILLIAM H. STORNE, a citizen of the United States, residing at the city of Sault Ste. Marie, in the county of Chippewa and State of Michigan, have invented certain new and useful Improvements in Mail-Bag Catching and Delivering Apparatus, of which the following is a specification.

This invention relates to mail bag catching and delivering devices.

One object of the invention is to provide a device embodying such characteristics that mail bags may be automatically discharged from rapidly moving trains or delivered to them automatically or both.

Another object of the invention resides in the provision of a device of the nature stated embodying such characteristics that mail bags may be delivered to or discharged from rapidly moving trains without liability of injuring or dropping the bags and without the liability of injuring attendants or others incident to the exchange and without any attention on the part of trainmen or others either in the delivery or discharge after once placing the mail bags in proper position to accomplish the purposes stated.

With the above and other objects in view the present invention consists in the combination and arrangement of parts hereinafter more fully described, illustrated in the accompanying drawings and particularly pointed out in the appended claims, it being understood that changes may be made in the form, proportion, size and minor detail without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings:—Figure 1 is a horizontal sectional view through a portion of a car, illustrating the invention in plan. Fig. 2 is a side elevation. Fig. 3 is a vertical sectional view through a car illustrating an end view of the invention applied to the car.

Referring now more particularly to the accompanying drawings the reference character 1 indicates a portion of one side of a car having the usual side door opening 2, in the sides of which, in the present instance there are disposed metallic or other plates 3 and 4, the plate 3 having a socket 5 to receive one end of a bar 6 whose opposite end is fitted in a socket 7 in the opposite plate 4 and held against accidental displacement

in the socket 7 by means of a pin or other suitable element 8. By simply removing the pin or other element 8, the bar 6, and consequently the entire device may be removed from the car. The plate 3 is provided with another socket 9 adjacent the socket 5 and it is designed to receive one end of the latch bolt 10 slidably mounted in the two or more brackets 11 on the bar 6 and which is manipulated preferably by a knob 12. When the latch bolt 10 is engaged in the socket 9 the bar 6 can not turn upon its axis.

The character 13 indicates an enlargement on the bar 6 and from it extends an inclined arm 14 which at its outer end is directed substantially parallel with the side of the car as at 15 to provide an axis for the sleeve 16 rotatably mounted thereupon and designed for a purpose presently explained. On the bar 6, intermediate its ends, is a bracket 17 journaled in which is a short shaft 18 upon which is fixedly mounted a member comprising arms 19 and 20 arranged preferably at a direct right angle to each other for rotation into and out of the car between the latter and the diverging or inclined arm 14.

The character 21 indicates a post disposed along the roadway and provided at its upper end with an arm 22 directed toward the car, there being a clasp hook or other suitable element 23 depending from the outer end of the arm 22 in alinement with another similar clasp hook or suitable element 24 secured to the outer end of a lower arm 25 hinged at 26 to the post 21. These clasps 23 and 24 are designed to detachably receive the upper and lower rings 25 and 26 at the ends of the mail bag 27, and it will be understood that when the mail bag is not disposed between the arms 22 and 25 for delivery to the train that the arm 25 may be swung downwardly upon its hinge 26 so as to be out of the way while the arm 22 may be swung upwardly or downwardly on its pivot 27.

When the mail bag has been disposed on the post 21 in the manner just stated it is ready to be automatically taken away by the frame while the latter is in motion. For instance as the train approaches the mail bag 27 the divergent arm 14 engages the bag intermediate its end and causes the rings 25 and 26 to be snapped out of the clasp 23 and 24 and by the said arm 14 deflected toward

the arm 20 mounted on the bracket 17 of the bar 6. The impact of the bag with the arm 20 causes the latter to rotate upon its axis 18 with the bag engaged by the arm 20 intermediate the ends of the bag. The arm 19 obviously follows the arm 20 and holds the bag against the bar 6 firmly and in such a way as to prevent the bag from falling. To insure a firm engagement of the arm 19 with the bag to hold the latter between it and the bar 6 there is provided on the axis 18 a ratchet 28 with which engages the dog 29 of a pawl 30 pivoted at 31 to the bracket 17 with the dog 29 held normally and firmly in engagement with the ratchet through the instrumentality of a spring 32. The teeth of the ratchet are permitted to rotate in the direction of the arrow in Fig. 2 but not in the opposite direction because the dog 29 will prevent the opposite rotation. Consequently the pawl and ratchet mechanism insure a positive clamping of the bag against the bar 6 and between it and the arm 19. The mail clerk or other attendant may then manipulate the pawl and ratchet mechanism to extract the mail bag from its clamped position and take it into the car, and leave the device in position to take in another bag at another station or by manipulating the latch bolt 10 rotate the bar 6 in its sockets 5 and 7 to turn the apparatus into the car as may be desired.

More than one bag at a time may be delivered to the train and the operation of the device for delivering the bags to the trains will now be understood.

To discharge a bag from the train to a station the ring 25 of the bag 27 is slipped upon the rod 33 slidably mounted in the guide 34 on the sleeve 16. On the sleeve 16 is a strap 35 between the ends of which is pivoted at 36 a lever 37 pivoted at 38 to the sliding rod 33. The free end of the rod 33 is withdrawn from its socket 39 by manipulating the lever 37 and after the ring 25 has been slipped upon the bar 33 the lever is manipulated to return the free end of the rod 33 to the socket 39 in the depending projection 40 on the sleeve 16. The sleeve 16 being rotatable on its axis 15, as already stated, there is disposed on the axis 15 a notched collar 41 in the notches of which is designed to engage one end or portion of a lever 42 pivoted at 43 in the bracket 44 on the sleeve 16 to prevent accidental movement of the sleeve and also prevent a consequent lateral or other swaying of the mail bag supported upon the rod 33.

At the station there is provided a short post 45 shown in dotted lines in Fig. 3 which has hinged at 46 an arm 47 which latter, when disposed toward the track, will engage the lever 37 and effect a withdrawal of the rod 33 from its socket 39 in the projection 40 and insure a dropping of the bag at the

station at which the projecting arm 47 is disposed for engagement with the lever 47. More than one bag can be supported upon the rod 33, but in any event, the bag or bags will be dropped therefrom at the station at the proper time into a suitable receptacle (not shown) or other place designed for the purpose.

From the foregoing it will be seen that a comparatively simple, inexpensive, durable and efficient device is provided for the simultaneous delivery and discharge of mail bags to and from railroad stations or other places and trains during movement of the latter and without any attention on the part of attendant or others save to position the bags for discharge or delivery. Obviously, one or more mail bags may be delivered without receiving bag or bags or vice versa.

What is claimed is:—

1. In a device of the character described, a bar adapted for connection with a car and provided with a bracket intermediate its ends and also provided with an enlargement, an arm diverging from the bar, arms rotatably mounted upon said bracket, a pawl and ratchet mechanism having connection with the axis of said arms to prevent accidental backward movement of the second mentioned arm, a post, a mail bag suspended from the post and disposed for engagement by the first mentioned arm for deflection into engagement with one of the second mentioned arms to rotate both of the second mentioned arms to effect a clamping of the mail bag between said bar and the other of said second mentioned arms.

2. In a device of the character described, a bar adapted for connection with a car and provided with a bracket, an arm diverging from the bar, a pair of arms rotatably mounted upon said bracket, a pawl and ratchet mechanism to prevent backward rotation of said pair of arms, a post, a mail bag suspended from the post for engagement by the first mentioned arm for deflection into engagement with one of said pair of arms to rotate the latter arms and effect a clamping of the bag between said bar and the other of said pair of arms.

3. In a device of the character described, a bar adapted for connection with a car, an arm diverging from said bar, a pair of arms rotatably mounted on said bar, means for preventing backward rotation of said pair of arms, a post, a mail bag suspended from the post for engagement by the first mentioned arm for deflection into engagement with one of said pair of arms to rotate the pair of arms and effect a clamping of the bag between the bar and said other of said pair of arms.

4. In a device of the character described, a bar adapted for connection with a car, an arm diverging from said bar, a pair of arms

rotatably mounted on said bar, means for preventing backward rotation of said pair of arms, a post, a mail bag suspended from the post for engagement by the first mentioned arm for deflection into engagement with one of said pair of arms to rotate the pair of arms and effect a clamping of the bag between the bar and said other of said pair of arms, the aforesaid diverging arm having a rearward extension, a sleeve rotatably mounted upon said rearward extension, a mail bag suspending rod slidably carried by said sleeve, a lever having connection with said rod, means to prevent accidental rotation of said sleeve, a second post provided with an arm for engagement with said lever to shift said rod and discharge the mail bag.

5. In a device of the character described, a bar adapted for connection with a car, an arm diverging from the bar and provided with a rearward extension, a sleeve rotatably

bly mounted upon said rearward extension, a collar on said extension provided with a notch, a lever pivoted on the sleeve and engaging the notch of the car to prevent accidental rotation of the sleeve, the sleeve having a depending projection and a guide, the projection having a socket, a rod for the suspension of a mail bag slidably mounted through said guide and into and out of said socket, a lever connected to the rod, a post provided with a hinged arm adapted when in one position to engage said lever to effect an automatic withdrawal of the rod from said socket and thereby automatically discharge the mail bag.

In testimony whereof I have affixed my signature, in presence of two witnesses.

WM. H. STORNE.

Witnesses:

AMY C. RAMSEY,
WM. M. SNELL.