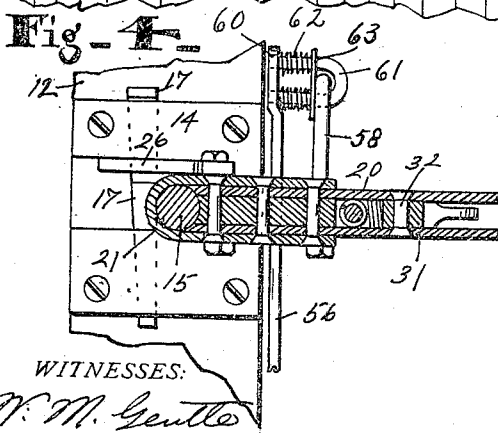
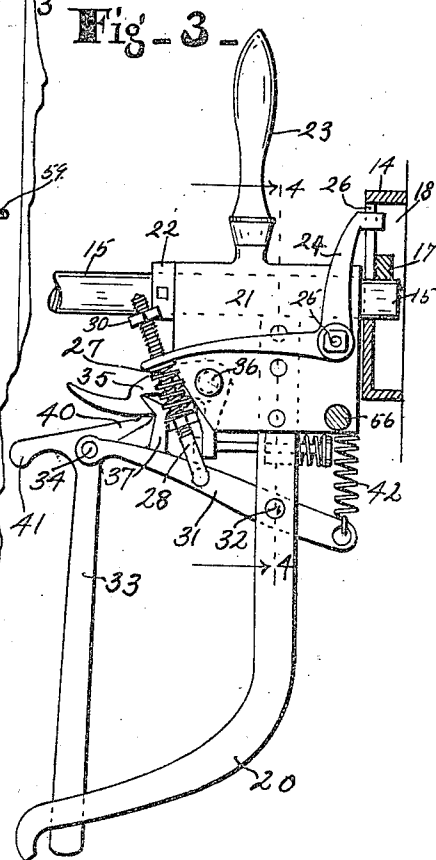
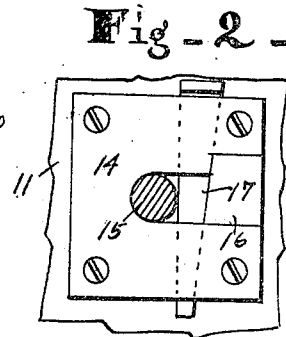
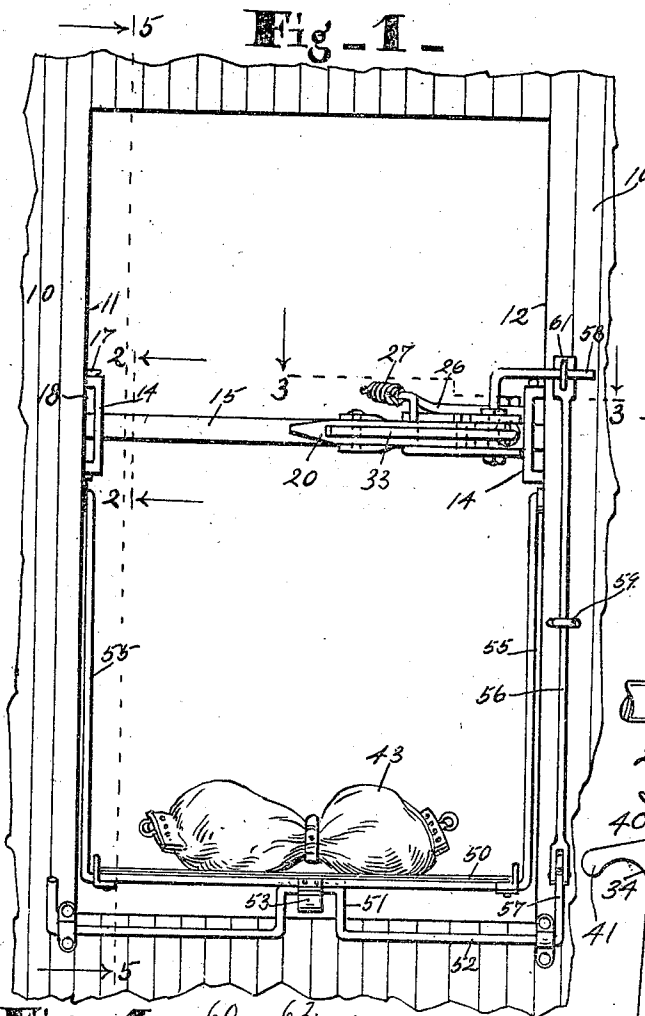


J. WOOD.
MAIL BAG CATCHER AND DELIVERER.
APPLICATION FILED MAY 16, 1909.

948,778.

Patented Feb. 8, 1910.

3 SHEETS—SHEET 1.



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3 SHEETS—SHEET 2.

Fig. 5 -

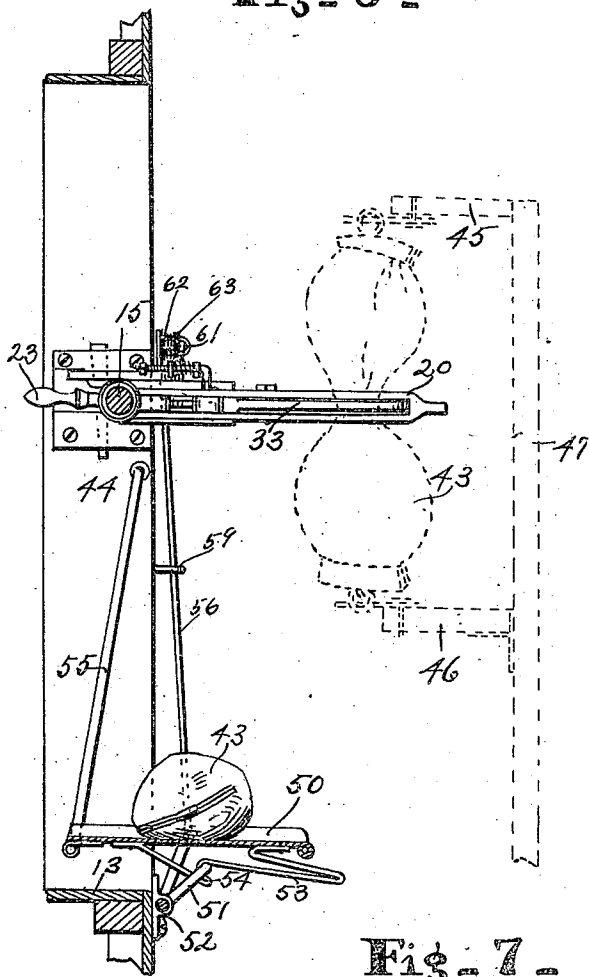


Fig. 6 -

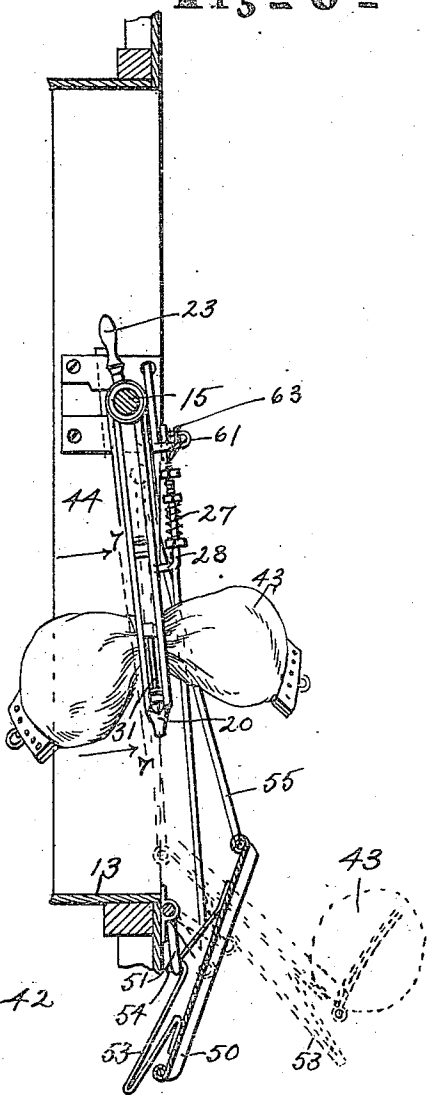
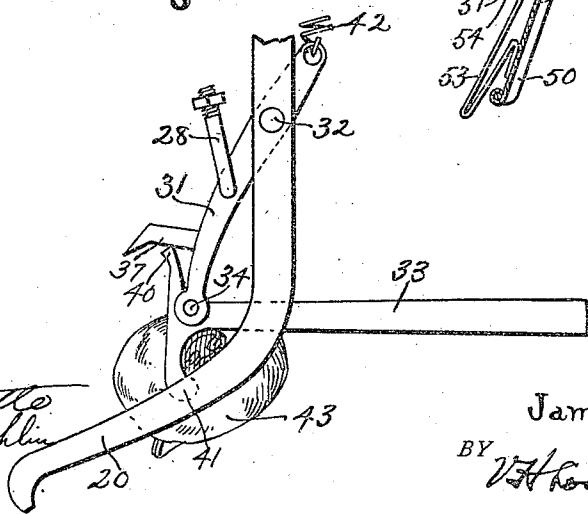


Fig. 7 -



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3 SHEETS—SHEET 3.

Fig - 8 -

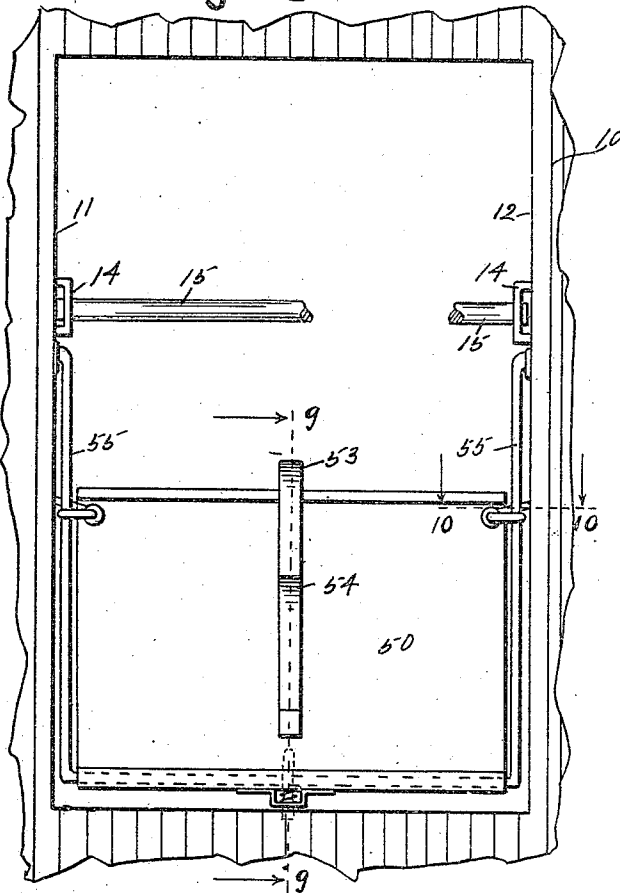


Fig - 9 -

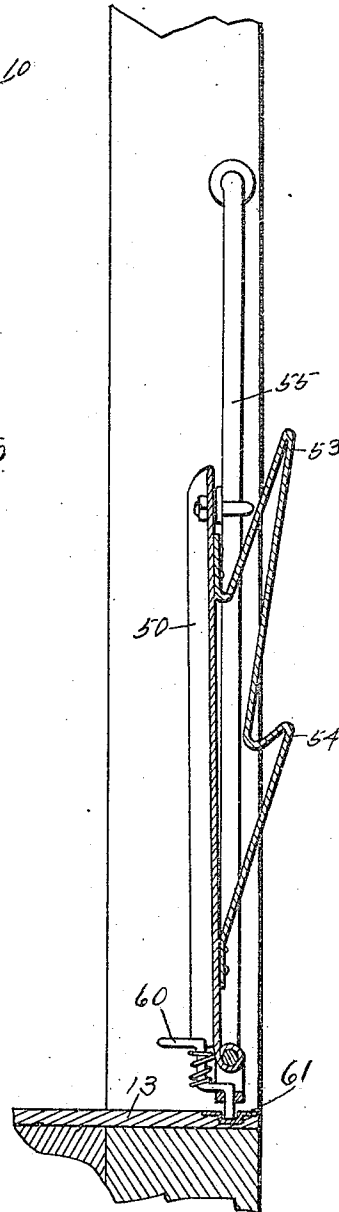


Fig - 10 -

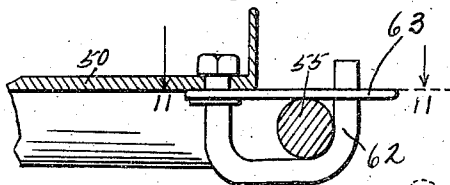
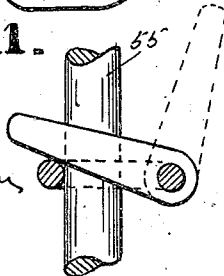


Fig. 11.



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UNITED STATES PATENT OFFICE.

JAMES WOOD, OF NOBLESVILLE, INDIANA.

MAIL-BAG CATCHER AND DELIVERER.

948,778.

Specification of Letters Patent.

Patented Feb. 8, 1910.

Application filed May 15, 1909. Serial No. 496,274.

To all whom it may concern:

Be it known that I, JAMES WOOD, of Noblesville, county of Hamilton, and State of Indiana, have invented a certain new and useful Mail-Bag Catcher and Deliverer; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which like numerals refer to like parts.

The object of this invention is to improve the construction of devices on mail cars for collecting and delivering mail bags and the like.

One feature of this invention consists in combining means for dumping the mail bag with means for catching the mail bag, whereby the two things will be done at the same time and by the same mechanism.

Another feature of the invention consists in improvements in the means for catching the mail bag that tend to simplify the construction and to make it more effective in operation.

The nature of the invention will be understood from the following description and claims and the accompanying drawings:

In the drawings Figure 1 is a front elevation of a portion of a mail car showing the door opening and the device in position for discharging one bag and picking up another one, the car being partly broken away. Fig. 2 is a section on the line 2—2 of Fig. 1, showing in side elevation the means secured to the door casing for mounting the mail catching mechanism. Fig. 3 is a section on the line 3—3 of Fig. 1, showing a plan view of the mail catching mechanism in position to catch a bag. Fig. 4 is a section on the line 4—4 of Fig. 3. Fig. 5 is a central vertical section through Fig. 1 with the mail bag to be caught, and the post at the side of the railway for holding such mail bag being shown in dotted lines. Fig. 6 is a similar section showing the mail catcher and deliverer in its position after operation, the position of the mail delivering means as the bag is escaping therefrom being indicated by dotted lines. Fig. 7 is a section on the line 7—7 of Fig. 6. Fig. 8 is the same as Fig. 1 with the mail-bag catcher removed and the delivering platform in position to close the lower part of the door opening. Fig. 9 is a section on the line 9—9 of Fig. 8, but on a larger scale. Fig. 10 is

a section on the line 10—10 of Fig. 8. Fig. 11 is a section on the line 11—11 of Fig. 10.

Referring to the details of the drawings herein, 10 represents the side of a mail car having an opening with a door casing 11 at one side and another door casing 12 at the other side.

13 is the bottom of the door opening.

On each door casing 11 and 12 there is a similar bearing plate 14 for the horizontal rod 15 on which the mail catcher is mounted. It has a horizontal slot 16 opening toward the interior of the car, whereby the rod 15 may be inserted. The length of said rod is substantially equal to the width of the opening in the car. The rod 15 is held in place by a wedge or pin 17 that is inserted vertically from above through a slot 18 in the plate 14 next to the door casing, so that the pin or wedge 17 fits between the door casing and the plate 14. Since the plates 14 are similarly constructed, the rod 15 and the mail catcher thereon can be turned end for end, so that the mail catcher will operate in either direction.

The mail catcher comprises an arm 20 extending outwardly from a hollow frame plate 21 oscillatably mounted on the rod 15 and held in place against one of the plates 14 by the collar 22, see Fig. 3. A handle 23 extends inwardly from the frame 21 and is rigid so that a mail clerk within the car can turn the device from the vertical position to the horizontal or catching position, that is, from that shown in Fig. 6 to that shown in Fig. 1. It is held in the horizontal position by the bell crank trip 24 which is pivoted at 25 to the frame 21, and one arm thereof projects through a horizontal slot 26 in the plate 14, when the device is in its horizontal position, and thereby maintains the device in such position. This trip 24 for holding the device in a horizontal position is held in the engaging position by a spiral spring 27 on a rod 28, said spring lying between the collar 29 on said rod and one arm on the trip 24, so that said spring will tend to hold the trip 24 in locking engagement. It is released by the rod 28 being drawn outwardly until it brings the nut 30 into engagement with the trip 24, so that the nut 30 will release said trip when the rod 28 is drawn far enough outwardly. This is accomplished by the lever 31 fulcrumed to the arm 32 and pivotally connected at its ends

with the rod 28. The bag actuating trip 33 is pivotally connected at 34 to the end of the lever 31 and the other end of said trip arm 33 projects into proximity with the arm 20. Said catching arm 20 is preferably formed of two plates, as shown in Fig. 5, spaced apart so as to leave a slot between them through which the trip bar 33 projects. Said slot does not extend to the ends of the trip arm 20, so that the bar 33 cannot escape.

The parts just described are held in their operative position ready to catch a bag by a catch 35 pivoted at 36 to the frame 21. Said catch engages the catch 37 connected with the lever 31 and holds said lever 31 in its retracted position, when the rod 28 and spring 27 hold the trip 24 in locking position. Said lever 31 is forced into its retracted position by drawing the outer end of the bag actuated trip bar 33 into the position shown in Fig. 3, that is, to the end of the catch arm 20. That results because the inner finger 40 on the inner end of the bar 33 engages the catch 37 on the lever 31, so that the angle between 31 and 33 cannot be increased beyond what is shown in Fig. 3. The same positions of parts can be obtained by drawing inwardly on the bag holding finger 41 on bar 33 and extending oppositely from the finger 40. This inward movement of the lever 31 on which said bar 33 is pivoted is resisted by a spring 42 connected to the opposite end of the bar 31 and also to the frame 21, and said spring 42, when the catches 35 and 37 are released, throws the free end of the lever 31 and therefore moves the rod 28 so as to bring the nut 30 against trip 34 and to release said trip and permit the whole bag catching device to turn down by gravity from the horizontal to the vertical position. Said catches 35 and 37 are engaged by the bag 43 which is to be caught, striking against the bar 33. The force of the bag and action of the spring 42 throws it in the position shown in Fig. 7, where the bag is held between the arm 20, the bar 33 and the finger 41, said finger 41 projecting somewhat in the slot within the arm 20.

The operation of the mail bag catcher is as follows: It is turned from the vertical position shown in Figs. 3 and 5 to the horizontal position shown in Figs. 6 and 7. The arm 20 projects out from the car so as to catch the bag 43 and it is held vertically between the two arms 45 and 46 of the post 47 standing at the side of the railway. When the bag strikes the bar 33, it is caught, as shown in Fig. 7, and the trip 24 released from the plate 14, so that the mechanism drops down into the opening at the side of the car, as shown in Fig. 6, from which the mail clerk can remove the bag.

The bag delivering or dumping device consists of a plate or platform 50 that is supported loosely on the crank 51 of the

crank rod 52 pivoted to the side of the car just below the opening thereof. This support of the platform 50 on the crank 51 is by means of a bar 53 secured to the underside of the platform 50 having a substantially horizontal portion, with a catch 54 at its rear end so that the platform can be slipped downwardly and outwardly on said crank, but the catch 54 will limit such movement of the platform. The platform is held in position by connecting rods 55 pivotally connected at their lower ends to the end of the platform 50, and said rods 55 at their upper ends are pivotally connected to the plates 14, or otherwise. The platform is actuated and dumped by the actuating rod 56, which at its lower end is pivotally connected with the cranked arm 57 of the crank rod 52, and at its upper end with the crank arm 58 secured to the plate 21. The rod 56 operates through a loose guide 59 secured to the side of the car. The crank arm 57 is preferably located at each end of the shaft 52, so that the device can be turned around and used on the other side. The crank arm 57 extends substantially in the same plane as the crank 51 in the middle of said bar 52 and so that they will extend outwardly at a slight angle from the vertical position when the mail catcher is horizontal, and downwardly when the mail catcher extends downwardly, and thus hold the platform in the proper relative positions.

As shown in Figs. 1 and 4, the rod 56 has a plate 60 on its upper end which carries a staple 61, through which the crank arm 58 projects. Between the crank arm 58 and the plate 60 there is a pair of springs 62 coiling about the members of the staple and a washer 63 is between the springs and the crank arm 58. The crank arm 58 and the construction which has just been specified projects beyond the door casing 12 over the side of the car so that said construction stops the inward swinging movement of the mail catcher as it turns down, and the springs serve as a buffer to break the force of the bar as the plate 60 strikes the side of the car.

When the device is not being used, the platform is turned to a vertical position and held in that position in the opening at the side of a car like a door. For that purpose the platform is turned into a vertical position with the inner end thereof turned down and held in position by a spring foot bolt 60 that engages a recessed plate 61 in the bottom 13 of the door opening. The top of the platform, when in that position, is held in place by hooks 62 engaging the rods 55, and the latch 63 pivoted on one side of said hook 62 and dropping across on the other side beyond the rod 55, as shown in Fig. 10.

What I claim as my invention and desire to secure by Letters Patent is:

1. The combination with a car or the like, 130

of a mail-bag catching device mounted so as to be vertically oscillatable, a platform for dumping mail-bags mounted below the mail-bag catching device, means for pivotally mounting the inner end of said platform, a crank rod mounted in connection with the car with an upwardly extending crank for supporting the outer end of the platform, and a connecting rod between said crank and the mail-bag catching device that supports the platform when the mail-bag catching device is in the catching or horizontal position and drops it down when the mail-bag catching device turns downwardly.

2. The combination with a car or the like, of a mail-bag catching device mounted so as to be vertically oscillatable, a platform for dumping mail-bags mounted below the mail-bag catching device turns downwardly. cally mounting the inner end of said platform, a crank rod mounted in connection with the car with an upwardly extending crank for supporting the outer end of the platform, a bar on the underside of said platform adapted to rest on said crank and having a hook at its inner end so as to limit the outer movement of the platform while supported by said crank, and a connecting rod between said crank and the mail-bag catching device that supports the platform when the mail-bag catching device is in the catching or horizontal position and drops it down when the mail-bag catching device turns downwardly.

3. The combination with a car or the like having an opening in the side thereof, of a mail-bag catching device mounted in said opening, a mail-bag dumping platform in said opening, means connecting the two devices so that the mail-bag catching device will give said platform a dumping movement, and means for holding said platform in a vertical position in the lower part of said opening for closing the same.

4. The combination with a car or the like, of an oscillatable curved arm adapted to be projected outwardly from the car for catching a mail-bag, means for holding said arm temporarily in a horizontal or catching position, means mounted in connection with said arm that is actuated by a bag as it is being caught, and means controlled by said bag actuated means for releasing said means for holding said arm in a catching position, whereby the device will turn down by gravity.

5. The combination with a car or the like having an opening in the side thereof, of a horizontal bar in said opening, a frame

oscillatably mounted on said bar with an inwardly extending handle, a bag catching arm projecting from said frame that is bent laterally at its outer end, spring actuated means on said frame for locking the device in a horizontal position for catching a bag, a spring drawn lever mounted on the inner end of said arm and projecting in the direction of the bent end of said arm, disengageable catches for holding said lever in a retracted position, and a bag actuated bar projecting from the end of said lever into proximity with the end of said arm in position to be struck by a bag, the inner end of said bar having an inwardly extending finger thereon for releasing said catches and an outwardly projecting finger for engaging the bent end of the arm for holding the bag after the catches have been disengaged.

6. The combination with a car having an opening in the side thereof, of a plate secured to each side of the opening, a rod mounted horizontally in said plates, a frame pivoted on said rod adjacent to one of said plates, a locking bar mounted on said frame adapted to engage one of the plates and hold the frame in a horizontal position, a mail-bag catching arm projecting from said frame with its outer end bent laterally, a lever pivoted between its ends to the inner end of said arm with the longer end thereof projecting in the direction of the bent end thereof, a spring for retracting the shorter end of said lever, a catch mounted on said frame for holding the longer end of said lever retracted, a rod on said lever projecting through a hole in said locking bar, a spring on said rod on one side of said locking bar for holding it in the locking position, a nut on said rod on the other side of said locking bar for disengaging it from the locking position when said lever is released, a mail-bag actuated bar pivoted to the longer end of said lever and extending into proximity with the bent end of said arm, a finger on the inner end of said bar for releasing said catches when the bar is actuated, and a finger extending outwardly from the end of said bar for cooperating with the bent end of said arm for holding the bag as it is caught.

In witness whereof, I have hereunto affixed my signature in the presence of the witnesses herein named.

JAMES WOOD.

Witnesses:

G. H. BOINK,
O. M. McLAUGHLIN.