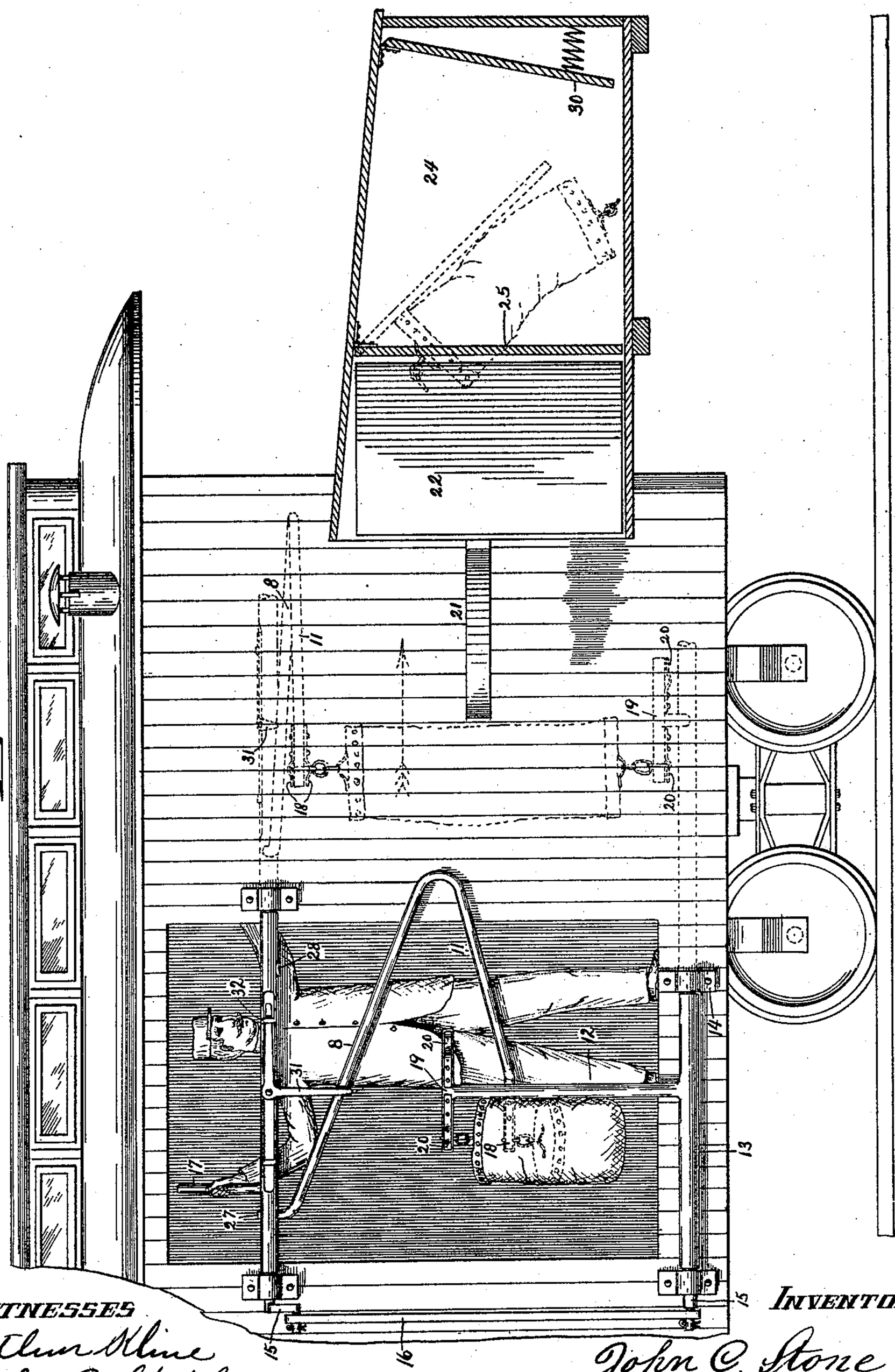
(No Model.) 2 Sheets—Sheet 1.

J. C. STONE.

REVERSIBLE RECEIVER AND DELIVERER FOR MAIL CARS.

No. 574,687. Patented Jan. 5, 1897.

Fig. 1



WITNESSES
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INVENTOR
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(No Model.) 2 Sheets—Sheet 2.

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Fig. 4

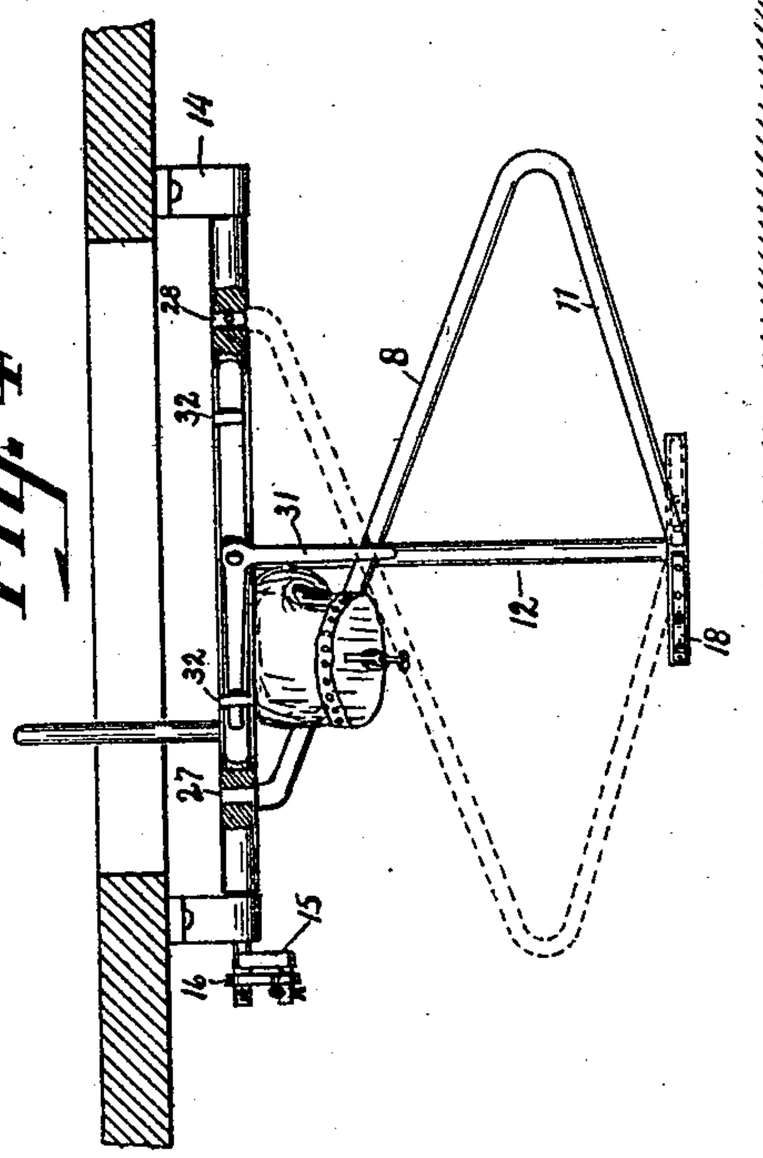

Fig. 3

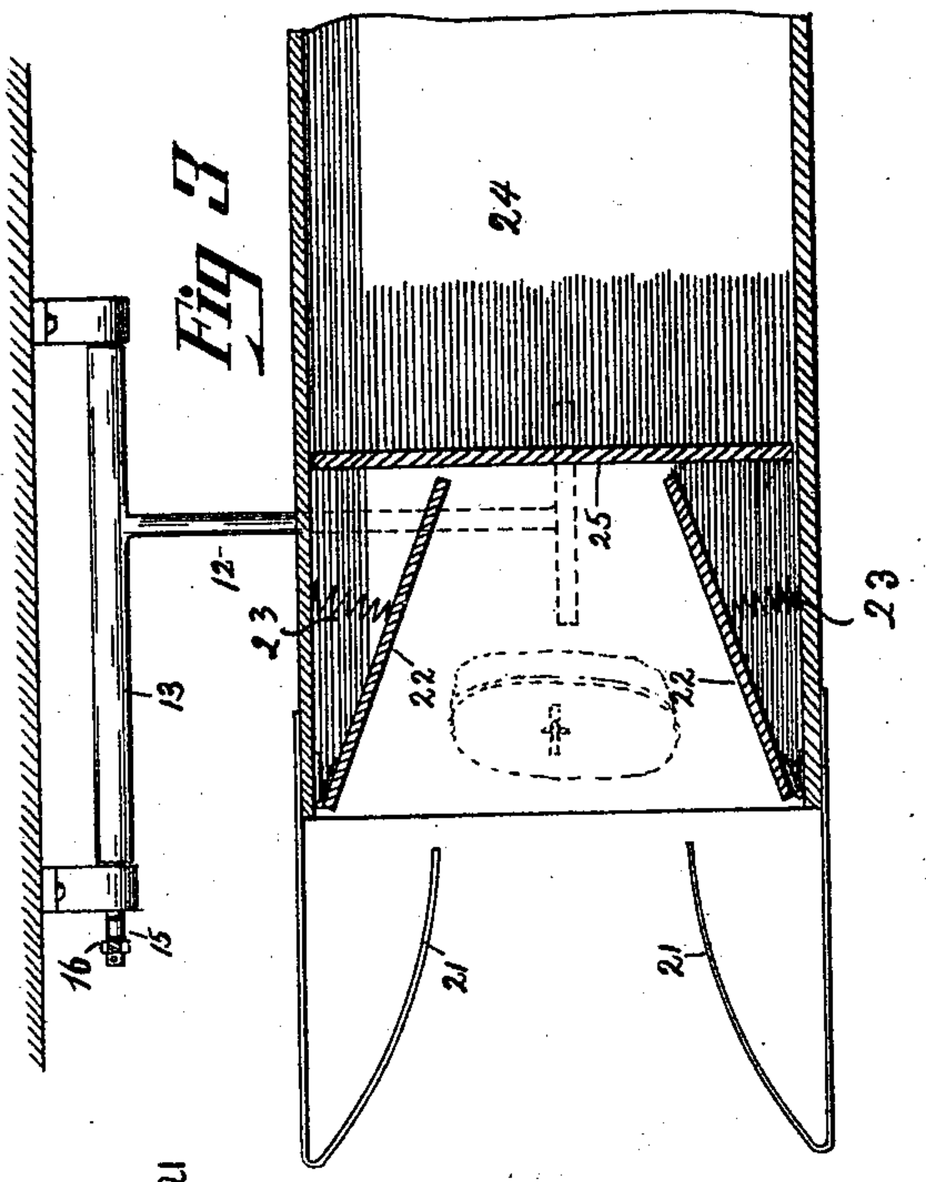

Fig. 5

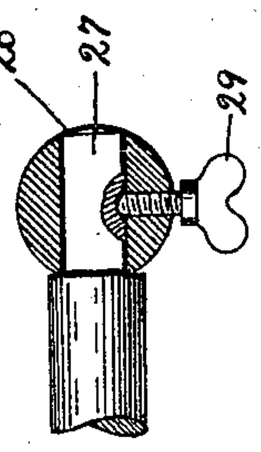

Fig. 2

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UNITED STATES PATENT OFFICE.

JOHN C. STONE, OF DAYTON, KENTUCKY.

REVERSIBLE RECEIVER AND DELIVERER FOR MAIL-CARS.

SPECIFICATION forming part of Letters Patent No. 574,687, dated January 5, 1897.

Application filed June 6, 1896. Serial No. 594,520. (No model.)

To all whom it may concern:

Be it known that I, JOHN C. STONE, a citizen of the United States, and a resident of Dayton, Campbell county, State of Kentucky, have invented certain new and useful Improvements in a Reversible Receiver and Deliverer for Mail-Cars; and I do declare the following to be a clear, full, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, attention being called to the accompanying drawings, with the reference-numerals marked thereon, which form a part of this specification.

This invention relates to improvements in mechanical devices and contrivances partly attached to a railway mail-car and partly stationary, and in the latter case located adjacent to the track, all for the purpose of, first, discharging mail from the car in a manner that the same may be taken up by a stationary receiver, and, second, for the purpose of taking mail into the car, all while the train is in motion.

More specifically, this invention therefore comprises certain improvements in certain devices attached to railway mail-cars and by which a mail-bag may be suspended in a manner and position to permit it to be taken off therefrom and received by a stationary receptacle erected in close proximity to the track.

It also includes such receiver located close to the track and specifically constructed to act in conjunction with the device on the car for the purpose of disengaging and receiving the mail-bag after having so disengaged the same.

The object of the improvements is to have the parts constructed in a manner that they may be operated, no matter what direction the train is traveling in, without requiring the mail-car to be changed nor necessitating a double set of devices on both sides of the car and track.

In the following specification, and particularly pointed out in the claims, is found a full description of the invention, its operation, parts, and construction, which latter is also illustrated in the accompanying drawings, in which—

Figure 1 shows in side elevation part of a mail-car with my improved device for discharging mail in position before used, showing it also in dotted lines in operative condition in a further-advanced position of the car and while approaching the stationary receiver, which is shown in section in front of the car. Fig. 2 shows in a vertical section parts of the mail-car with the parts for discharging mail in operative position and suspending a mail-bag which is now approaching the stationary receiver alongside the track. The same figure shows also, in dotted lines, the parts before adjusted to their operative position. Fig. 3, in a horizontal section and top view, shows the front end of the stationary receiver and parts of the mail-discharging device on the car just passing, having been in engagement therewith and disengaged the mail-bag. Fig. 4 shows in a horizontal view the mail-discharging device when in operative position and while part of it is used for mail-receiving and with a mail-bag just caught in position. Fig. 5 is a sectional detail view of the connection of the reversible upper arm.

8 is the customary pivoted hooked arm now used to strip off the previously-suspended mail-bag, which arm when approaching the station is laterally elevated or swung out from the car to a horizontal position, as is well known.

For the purpose of discharging the mail I provide two arms 11 and 12, each connected to a rock-shaft, the upper arm 11 forming preferably an extension of hook 8, now used, which thus forms one rock-shaft, while the other arm is connected to a shaft 13, supported in bearings 14 14. The ends of the rock-shafts of these arms have cranks 15, which are connected by a rod 16, so that by one operation of a lever 17 from the inside of the car, the cranks being properly set at an angle ninety degrees apart, the two arms 11 and 12 may be swung out at once. Before this is done, however, the mail-bag to be discharged is connected at its ends to the ends of these arms, which are then in a position as shown in Fig. 1 and by dotted lines in Fig. 2, by means of rings or chains usually found or provided on both ends of the bags, so that when said arms 11 and 12 swing out they carry the bag with them, and as they separate or swing apart they

also straighten such bag out. Fig. 2 shows this latter position, while in dotted lines the bag is shown before swung out.

At the upper arm the ring of the mail-bag is held by one of two spring-catches 18, which open rearwardly and readily yield to release the ring at the upper end of the bag when the latter strikes an obstruction, while at the outer end of the lower arm a cross-piece 19 is provided having a spring-catch 20 at each one of the ends.

The bag having been put out at the proper moment, it will in due time encounter the receiver, which is of course properly located and has projecting from its front two elastic guides 21, between which the mail-bag is first received and steadied in case it should be swaying. In its further progress the chains of the mail-bag encounter the upper and lower edges at the mouth or opening of the receiver, which causes the mail-bag to become disengaged and stripped from the arms, the rings on the former slipping rearwardly out of the spring-catches. The disengaged mail-bag is further guided by guide-buffers 22, hinged to the sides at the front of the receiver and having springs 23 back of them. Thus put in proper position for entering and by the momentum received from the motion of the approaching train the sack is hurled into the box, opening by the force of its movement a flap-door 25 thereof.

The receiver and all its parts are of course so arranged and located, particularly as to its support 26, which is kept to one side, that none of them are in the path of the approaching and extended arms, as best seen in Fig. 2.

In the receiver a spring-buffer 30 is provided in the rear part thereof to break the force of the impact of the throw.

When coming from the other direction, the same parts on the car are used again. On the lower arm the other catch is used, that is, the one which is then rearwardly open, considering the direction of the train, while as to the upper arm the same is reversed, that is, turned over, as shown in Fig. 4 in dotted lines, and the ring on the then upper end of the mail-bag is slipped in under that one of catches 18 which is then uppermost.

To permit such reversal of the upper arm, it is provided with a square end 27, which is adapted to be inserted in either one of two sockets 28, which are contained in the rock-shaft of the upper arm and so located thereon that the outer end of arm 11, with the catches 18 thereon, comes in either one of its positions in proper position with reference to the lower arm. Set-screws 29 are provided for each socket to hold the arm in position.

As to the receiver, either two may be used, the additional one opening in opposite direction, or one may be used open at both ends and having at each end the appurtenances as described here for the one end.

31 is a catch or locking-arm pivotally secured to the upper rock-shaft between the two sockets 28 thereof. It prevents the mail-bag received by the car from dropping off again before the man inside of the car has had time to take it off. Thus for receiving the mail-bag as shown in Fig. 4 this arm was set as shown in Fig. 1, in which position one of its members is struck by the bag, causing the arm to turn and bring its other member up behind the mail-bag and across the space occupied by the same. Spring-catches 32, one for each member, hold the locking-arm in either one of its positions.

Having described my invention, I claim as new—

1. A mail-discharging device for mail-cars consisting of two arms pivotally connected to the car and adapted to be laterally projected therefrom and each provided with two catches for securing the mail-bag which is stretched out between the arms, one of the catches on each arm to be only used at the time, the other catches provided for use when the car is traveling in the other direction, in combination with stationary means provided adjacent to the track and within the path of the suspended bag and adapted to take the same off the car.

2. A mail-discharging device for mail-cars, consisting of two arms 11 and 12 each pivotally connected and the two adapted to be together projected out laterally from the car for the purpose of suspending between them a mail-bag, the upper arm 11 which is reversibly connected, having for such purpose two catches 18 at its end, the lower arm 12 having a cross-piece 19 and a catch 20 at each one of its ends thereof, one of the catches on each arm to be used only at the time, the other set being provided when the parts are to be reversed, in combination with stationary means provided adjacent to the track and within the path of the suspended bag and adapted to take the same off the car.

3. A mail-discharging device for mail-cars, consisting of two arms 11 and 12, a rock-shaft for each of the arms to which they are connected, means whereby the two rock-shafts may be operated in a manner that they are projected out together laterally from the car for the purpose of suspending between them a mail-bag, the lower arm 12 having a cross-piece 19 with a catch 20 near each end of the latter, the upper arm having two catches 18 on opposite sides at its end, sockets 28 provided in the upper rock-shaft in either one of which the upper arm may be inserted, such sockets so located that in either position the catches on the upper arm come above one of the catches on the cross-piece of the lower arm whereby either set of catches may be used to suit the direction in which the train travels, in combination with stationary means provided adjacent to the track and within the path of the suspended bag and adapted to take the same off the car.

4. A mail-discharging device for mail-cars consisting of two arms pivotally connected to

the car and adapted to be laterally projected therefrom and each provided with two catches for securing the mail-bag which is stretched out between the arms, one of the catches on each arm to be used only at the time, the other catches provided for use when the car is traveling in the other direction, in combination with a stationary receiver so located adjacent to the track and of such dimensions as to reach into the space between the arms before mentioned when they are extended, its open mouth within the path of the approaching bag and its upper and lower edges thereat adapted to disengage the bag by stripping it from the supporting-arms and a support 26 for the receiver located on one side only to clear the lower arm 12.

5. A mail-discharging device for mail-cars, consisting of two arms 11 and 12, a rock-shaft for each of the arms to which they are connected, means whereby the two rock-shafts may be operated in a manner that they are projected out together laterally from the car for the purpose of suspending between them a mail-bag, the lower arm 12 having a cross-piece 19 with a catch 20 near each end of the latter, the upper arm having two catches 18 on opposite sides at its end, sockets 28 provided in the upper rock-shaft, in either one of which the upper arm may be inserted, such sockets so located, that in either position, the catches on the upper arm come above one of the catches on the cross-piece of the lower arm, whereby either set of catches may be used to suit the direction in which the train travels, in combination with a stationary receiver so located adjacent to the track and of such dimensions as to reach into the space between the arms before mentioned when they are extended, its open mouth within the path of the approaching bag and its upper and lower edges thereat adapted to disengage the bag by stripping it from the supporting-arms and a support 26 for the receiver located on one side only to clear the lower arm 12.

6. In a mail receiving and discharging device, an arm 8 having a square end 27 secured to a rock-shaft whereby it may be manipulated to be either in or out of operative position and with which rock-shaft it forms the means for receiving mail-bags, said arm 8 having an extension to form another arm 11, having two catches 18 at its free end for the purpose of suspending the mail-bag to be discharged, sockets 28 in the rock-shaft near each end thereof, either one adapted to receive the square end of combined arms 8 and 11 whereby these arms may be reversed to be operative in either direction of the train and set-screws, one for each socket to hold the arms in position on the rock-shaft.

7. In a mail receiving and discharging device, an arm 8 secured to a rock-shaft whereby it may be manipulated to be either in or out of operative position and with which rock-shaft it forms the means for receiving mail-bags, said arm 8 having an extension to form another arm 11, having two catches 18 at its free end for the purpose of suspending the mail-bag to be discharged, sockets 28 in the rock-shaft near each end thereof, either one adapted to receive the square end of combined arms 8 and 11 whereby these arms may be reversed to be operative in either direction of the train and an angle-shaped locking-arm 31 pivotally secured to the rock-shaft midway between the sockets 28 therein and adapted to be used in either position of arm 8.

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

JOHN C. STONE.

Witnesses:
C. SPENGEL,
ARTHUR KLINE.