

(No Model.)

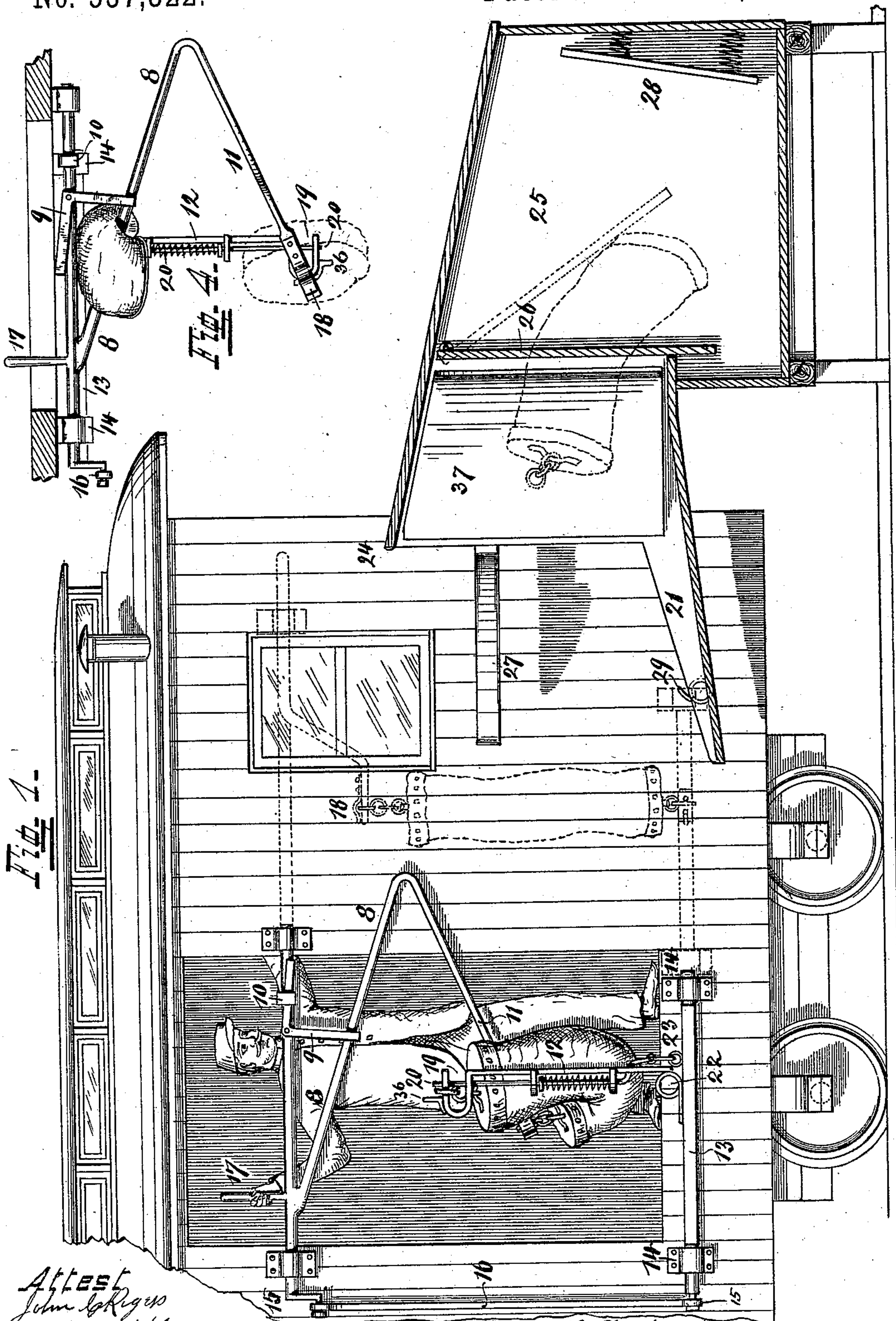
2 Sheets—Sheet 1.

P. M. ANDRIOT & R. E. McCLANAHAN.

MAIL RECEIVER AND DELIVERER FOR CARS.

No. 557,322.

Patented Mar. 31, 1896.



Attest
John H. Rogers
Arthur H. Hine

Inventors Peter M. Andriot
Robert E. McClanahan by C. Spengel atty

(No Model.)

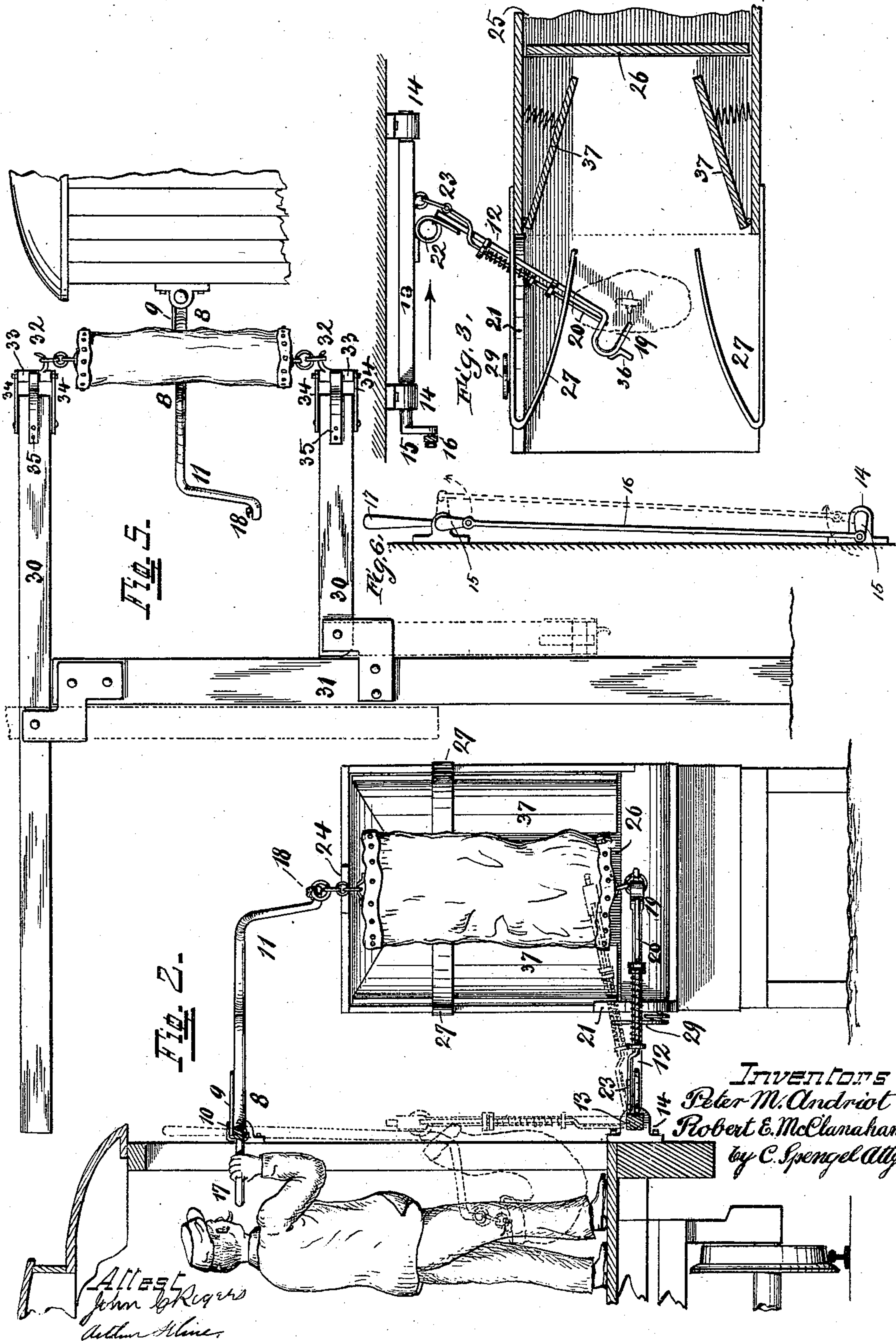
2 Sheets—Sheet 2.

P. M. ANDRIOT & R. E. McCLANAHAN.

MAIL RECEIVER AND DELIVERER FOR CARS.

No. 557,322.

Patented Mar. 31, 1896.



UNITED STATES PATENT OFFICE.

PETER M. ANDRIOT, OF DAYTON, AND ROBERT E. McCLANAHAN, OF NEWPORT, KENTUCKY; SAID McCLANAHAN ASSIGNOR TO JOHN C. STONE, OF DAYTON, KENTUCKY.

MAIL RECEIVER AND DELIVERER FOR CARS.

SPECIFICATION forming part of Letters Patent No. 557,322, dated March 31, 1896.

Application filed December 30, 1895. Serial No. 573,716. (No model.)

To all whom it may concern:

Be it known that we, PETER M. ANDRIOT, a resident of Dayton, and ROBERT E. McCLANAHAN, of Newport, Campbell county, State of Kentucky, citizens of the United States, have invented a certain new and useful Mail Receiver and Deliverer for Cars; and we do declare the following to be a full, clear, 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 mechanical devices and contrivances partly attached to a railway mail-car and partly stationary and 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 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.

It finally relates to improvements on the apparatus or crane on which a mail-bag is suspended at a station to be taken up by a passing train.

The general object of the means for discharging mail is to do away with the present mode of tossing the mail-bags off, which often results in loss of mail or accidents to persons who may be close to the passing train, while the stationary receiver into which the bag is deposited prevents misplacing of mail and exposure of the bags to wet in case it is not immediately taken up.

The object in the improvement on the crane is to facilitate the release of the mail-bag therefrom.

In the following specification and particularly pointed out in the claims is found a full description of our invention, its parts, operation 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 our improved device for discharging mail in position before used, showing it also in dotted lines in operative position 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 positions. 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 in engagement therewith for the purpose of disengaging 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 shows in a side view the same parts—that is, for receiving mail—in their operative relation to the suspending crane at the station. This figure is shown at a somewhat reduced scale.

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 we 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-shaft

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 a spring-catch 18, which opens rearwardly and readily yields 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 hook 19 is provided, which is held closed by a spring-latch 20 to prevent the ring or the lower end of the bag from swinging out before the latter is properly launched into position.

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 in front of it an inclined surface 21, upon which the lower arm 12 rides and whereby it is retarded to disengage its hook from the ring on the lower end of the mail-bag, it being understood that said arm is yieldingly connected to its shaft 13 by means of a suitable spring 22. (See dotted lines of lower arm 12 in Fig. 2.) While riding upon this inclined surface 21 arm 12 is also bent back, as shown in Fig. 3, which motion opens latch 20 by means of a rod and a flexible connection 23 secured to shaft 13, which pulls the latch out by reason of the lengthening of the distance which such motion necessarily produces between the latch and its fixed connection.

The lower end of the bag is disengaged first, so that by the time its upper part strikes the upper edge 24 of the receiver it will readily slide out from the spring-catch 18 at the upper arm, and by the momentum received from the motion of the approaching train it is hurled into the box 25 of the receiver, opening by force of this movement the flap-door 26 thereof. A projection 36 on hook 19 prevents the lower ring on the mail-bag from sliding around and back of the hook, which would interfere with its release. Guides 27, preferably elastic, and guide-buffers 37 are provided in front of the receiver and a spring-buffer 28 in the rear part thereof to break the force of the throw. A buffer-spring 29 on inclined surface 21 softens the impact of the lower arm when striking such surface. The lower arm 12, by reason of its spring connection, yields readily while passing the rear part of the receiver and after disengaged from the bag, while the upper arm

remains in position until all parts are swung together inside again.

The mail-bag to be taken on by the car is stretched out between two arms 30, pivotally secured to an upright post 31 to permit their lowering for easy access to connect the bag, after which they are elevated. At the outer ends of these arms are two oppositely-curved hooks 32, projecting from pins 33, which swing in bearings 34. They readily yield and swing in a direction with the passing train and permit the bag to be readily stripped off, while springs 35 return and hold them in their normal positions.

For single tracks the receiver may be mounted on a turn-table to be capable of receiving mail from trains coming in either direction.

Having described our invention, we 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 provided with means for holding the mail-bag stretched out between their ends, in combination with a stationary box-shaped receiver located within the path of the bag when so suspended and with an opening toward the approaching bag and adapted to strip the same from the supporting-arms and receive it.

2. In combination with a device to discharge mail from cars and which is adapted to be projected from the mail-car, to suspend a mail-bag, a stationary receiver located in the path of the suspended bag and adapted to disengage and retain the same and having guides and guide-buffers at its entrance, a flap-door thereat with a spring-cushioned buffer inside to break the force of the entering bag.

3. A device to discharge mail-bags from mail-cars, consisting of two arms pivotally supported and operatively connected so that they may at the same time be projected laterally to a horizontal position and one below the other the lower arm having also the capacity to yield rearwardly when in this position, the ends of these arms constructed in a manner to permit the bag to be detachably connected to them, in combination with a stationary track device adapted to detach and retain the bag.

4. A device to discharge mail-bags from mail-cars consisting of two arms pivotally supported and operatively connected so that they may at the same time be laterally projected to a horizontal position and one below the other, the end of the upper arm having a spring-catch, the end of the lower arm which is yieldingly connected to its pivot, having a hook 19 between which and the aforesaid catch the mail-bag is detachably connected and suspended, in combination with a stationary receiver having an inclined surface 21 in front, upon which the lower arm rides

and whereby it is retarded to disengage its hook from the mail-bag and a stop or impediment 24, which completely disengages the bag.

5. A device to discharge mail-bags from mail-cars, consisting of two arms pivotally supported and operatively connected so that they may at the same time be laterally projected to a horizontal position and one below the other one, the end of the upper arm having a spring-catch, the end of the lower arm which is yieldingly connected to its pivot having a hook 19 between which and the aforesaid catch the mail-bag is detachably connected and suspended, being attached to them before the arms are swung out, a spring-latch to keep such hook 19 closed to prevent disengagement of the mail-bag therefrom before such bag is fully in position, in combination with a stationary receiver having an inclined surface in front, upon which the lower arm rides and whereby it is retarded which motion causes the spring-latch to open and disengage hook 19 from the mail-bag and a stop or impediment 24, which completely disengages the bag.

6. A device to discharge mail-bags from mail-cars, consisting of two arms pivotally supported and operatively connected so that they may at the same time be laterally projected to a horizontal position and one below the other one, the end of the upper arm having a spring-catch, the end of the lower arm which is yieldingly connected to its pivot having a hook 19 between which and the aforesaid catch the mail-bag is detachably connected and suspended being attached to them before the arms are swung out, a spring-latch 20 carried by the lower arm and connected in a manner to keep such hook 19 normally closed to prevent disengagement of the mail-bag therefrom before such bag is fully in position, and further adapted to slide out and open hook 19 when the lower arm is retarded

or bent backwardly, in combination with a stationary receiver having an inclined surface in front upon which the lower arm rides and whereby it is retracted, which motion causes the spring-latch to open and to disengage hook 19 from the mail-bag and a stop or impediment 24, which completely disengages the bag.

7. The stationary apparatus or crane located near a track for the purpose of suspending a mail-bag to permit the same to be received by a passing mail-car, such apparatus consisting substantially of two pivotally-supported arms 30 connected one below the other and having on their outer ends oppositely-curved hooks 32 pins 33 from which they project, bearings 34 in which they are pivotally supported in a manner to permit them to swing and yield in a horizontal plane and springs 35 bearing laterally against flat surfaces at the sides of pins 33 whereby they and the hooks thereon are held to their normal position.

8. A device to discharge mail-bags from mail-cars consisting of two arms pivotally supported and operatively connected so that they may at the same time be laterally projected to a horizontal position and one below the other, the lower arm being yieldingly connected to its pivot and both being provided with means to detachably hold the mail-bag stretched out between them, in combination with a stationary receiver having an inclined surface 21 in front of it upon which the lower arm rides and whereby it is retarded to disengage the mail-bag from it and a stop or impediment 24, which completely disengages the bag.

PETER M. ANDRIOT.

ROBERT E. McCLANAHAN.

In presence of—

C. SPENGEL,

ARTHUR KLINE.