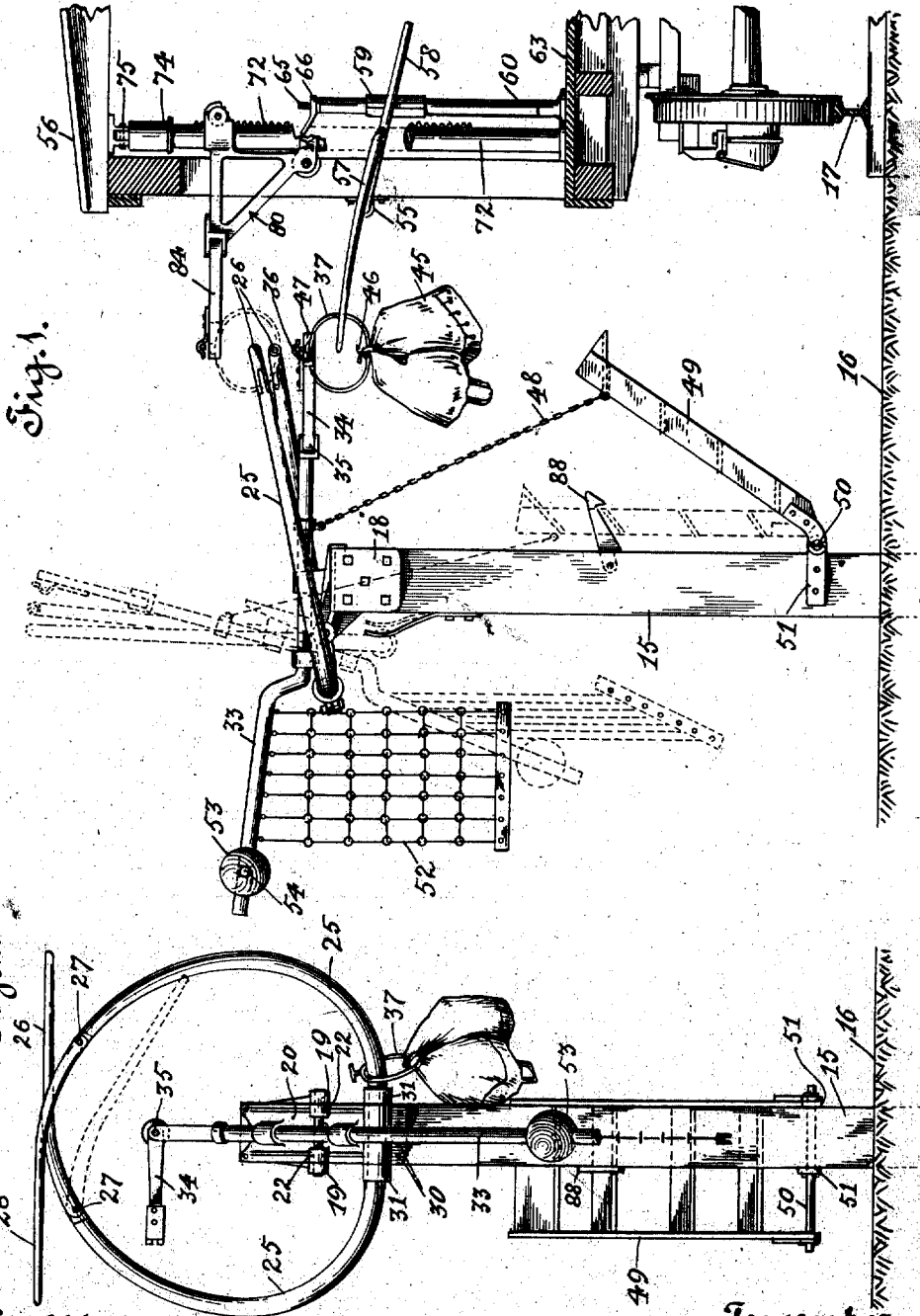


W. H. JONES.
RECEIVING AND DELIVERING MECHANISM FOR MAIL BAGS.
APPLICATION FILED JUNE 30, 1910.

1,002,064.

Patented Aug. 29, 1911.

3 SHEETS—SHEET 1.



Witnesses,
H. H. Austin
D. B. Austin

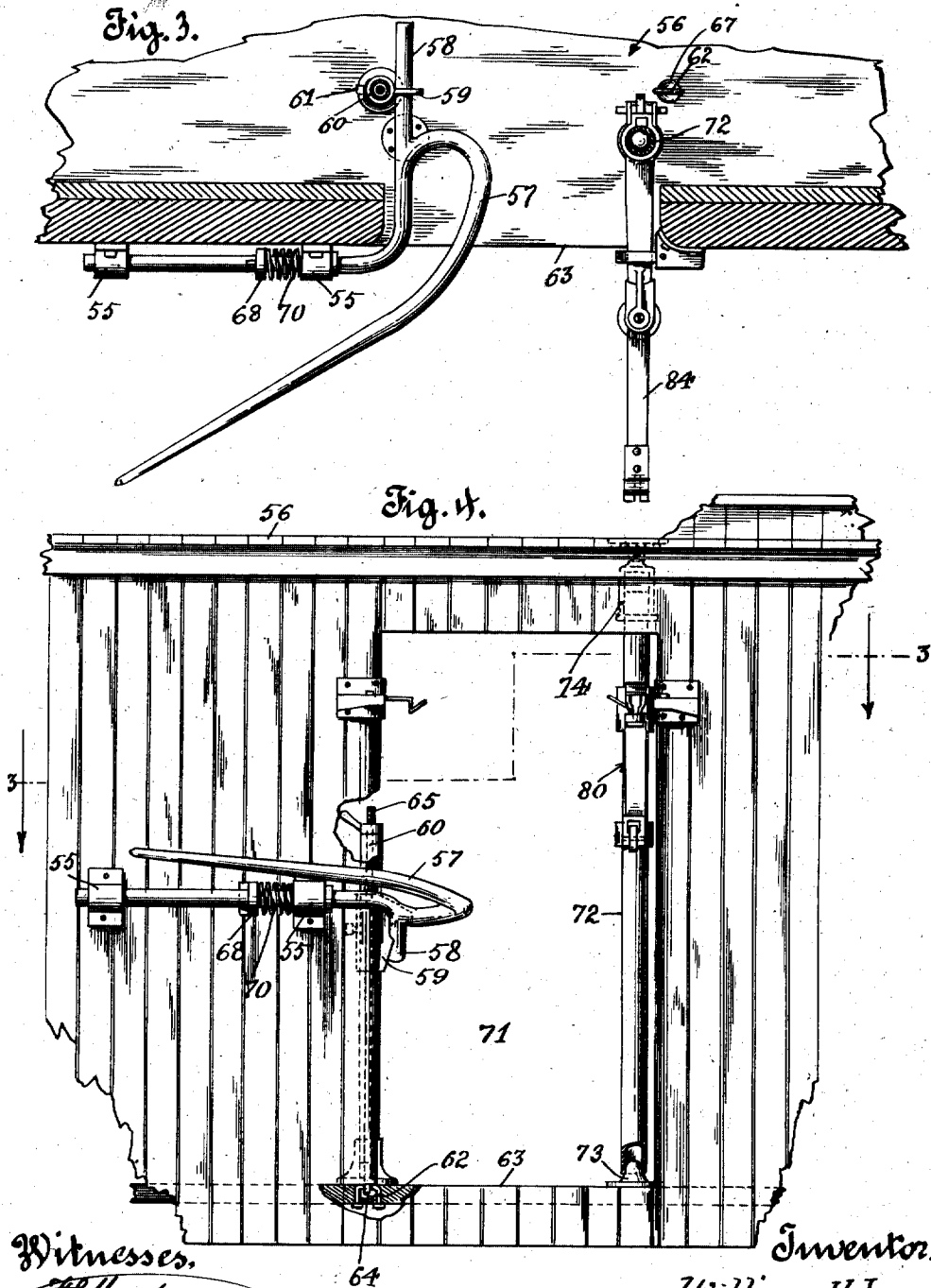
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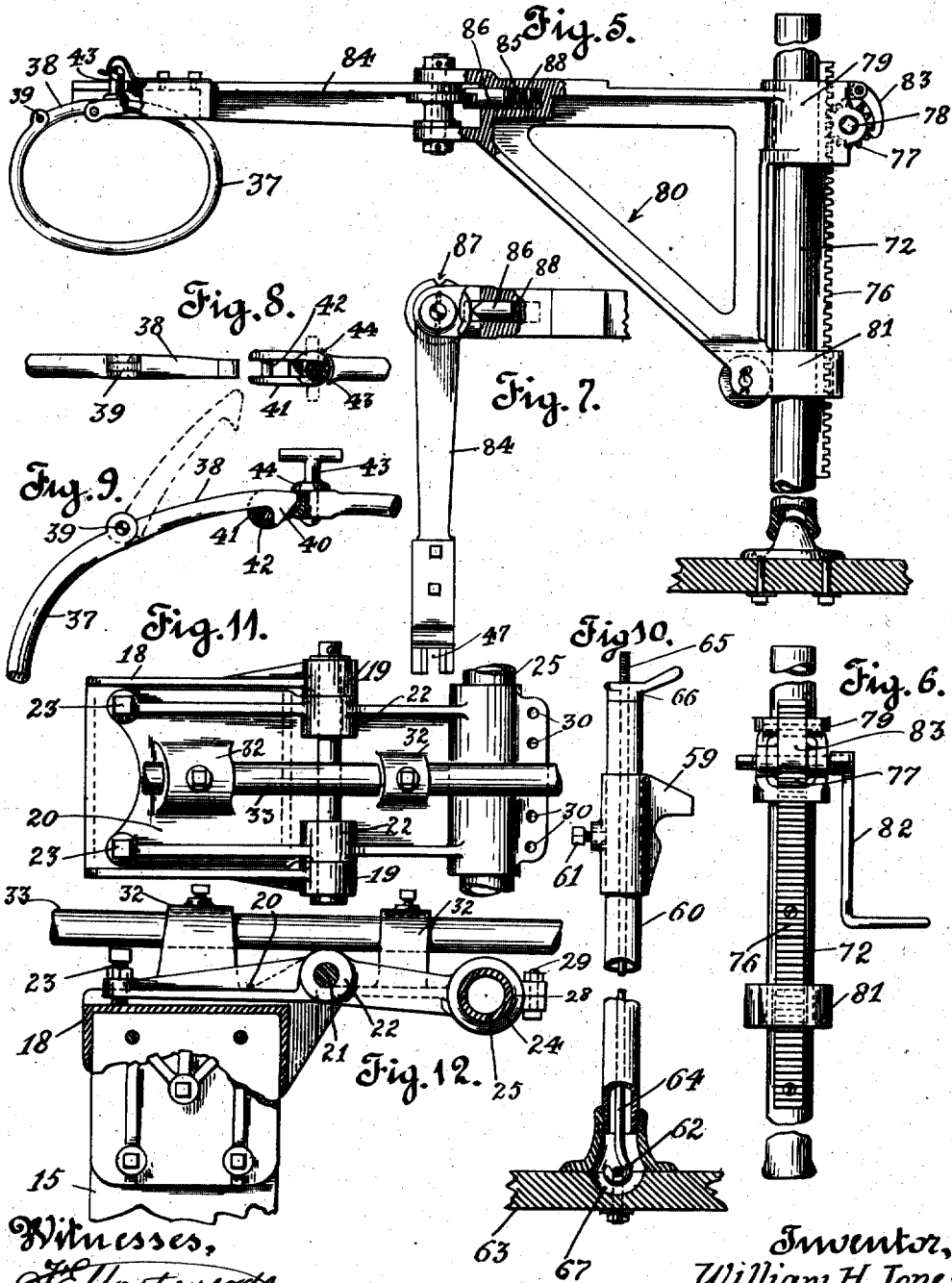
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3 SHEETS—SHEET 3.



Witnesses,
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William H. Jones,
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UNITED STATES PATENT OFFICE.

WILLIAM H. JONES, OF MANHATTAN BEACH, CALIFORNIA, ASSIGNOR TO UNIVERSAL MAIL DESPATCHER COMPANY, OF LOS ANGELES, CALIFORNIA, A CORPORATION OF CALIFORNIA.

RECEIVING AND DELIVERING MECHANISM FOR MAIL-BAGS.

1,002,064.

Specification of Letters Patent.

Patented Aug. 29, 1911.

Application filed June 30, 1910. Serial No. 569,770.

To all whom it may concern:

Be it known that I, WILLIAM H. JONES, citizen of the United States, residing at Manhattan Beach, county of Los Angeles, State of California, have invented new and useful Improvements in Receiving and Delivering Mechanism for Mail-Bags, of which the following is a specification.

The object of this invention is to provide simple durable and economical mail bag delivering and receiving mechanism, capable of ready attachment to the mail car and which will not interfere with the use of the door and can be readily shifted from one side of the car to the other, and also to provide a simple and durable and economic mail delivering and receiving mechanism constructed adjacent to a railway track upon which an outgoing mail bag can be secured, and when the same is received by the mail car, and a mail bag is received from the car, the delivering and receiving arms will swing away from the track so as not to lie close enough to the track to endanger any person on a train who may be attending to any duties thereon. I accomplish this object by the mechanism described herein and illustrated in the accompanying drawings, in which;

Figure 1 is a side elevation of the mail bag receiving and delivering mechanism adjacent to the track, with a mail bag in position thereon, and a fragment of a car with the mail bag receiving and delivering mechanism attached thereto, the car receiving mechanism being shown in position to receive the bag from the track delivering mechanism. Fig. 2 is an elevation of the track receiving and delivering mechanism after a mail bag has been received thereon and one delivered therefrom, viewed from a point back of and away from the track. Fig. 3 is a top plan view of the car receiving and delivering mechanism showing the same attached to the fragment of a car, the section of car being taken on the irregular line 3—3 of Fig. 4. Fig. 4 is a side elevation of a fragment of a car with the receiving and delivering mechanism secured thereto, in the position shown in Fig. 3, with parts in section and parts broken away for clearness of illustration. Figs. 5, 6 and 7 are enlarged details illustrating the

car delivery mechanism with a mail bag ring in place in Fig. 5. Figs. 8 and 9 are 55 enlarged detail views of a portion of the mail bag ring. Fig. 10 is an enlarged detail of a portion of the car receiving mechanism. Figs. 11 and 12 are enlarged fragmentary details of a portion of the mail bag deliver- 60 ing and receiving mechanism located at the side of the track.

In the drawings 15 is a standard or post which is set into the ground 16 at the side of the railroad track 17 a sufficient distance 65 away so as not to interfere with the cars passing on said track. Upon the top of said standard is a cap 18 which is provided with bearing lugs 19, which are preferably in a plane at the rear of the post or away from 70 the track and project above the top of the post as best shown in Fig. 12. Arm plate 20 is pivotally mounted in lugs 19 by means of bolt 21 which passes through said lugs and through lugs 22 upon the top of said 75 plate. In the rear end of the arm plate are adjusting bolts 23, the lower ends of which are adapted to contact with cap 18 as best shown in Fig. 12, and thereby adjust the angle of inclination of the arm plate to the 80 cap. In the front end of the arm plate is a transverse horizontal opening 24 in which is received the mail bag receiving arms 25. The body portion of these arms preferably consists of a piece of bent tubing which may 85 be circular, but is preferably elliptical in shape as is best shown in Fig. 2. The outer ends 26 of these arms are preferably solid metal and are hinged at 27 to the tubular portion and cross each other and project in 90 opposite directions as best shown in Fig. 2. The front portion of the arm plate is slitted at 28 to provide a slight spring in the front end of the arm plate, so that when arms 25 are placed through the aperture 95 they can be positioned correctly, and then securely clamped in place by means of bolts 29, which pass through holes 30 in the end of the plate. After arms 25 are properly positioned, collars 31 may be shrunk upon 100 the arms to more securely hold the arms from accidental movement. These collars may be omitted if desired.

Upon the top of arm plate 20 are upwardly extending lugs 32 in which lugs are 105 received shank 33 of the mail bag delivering

arm 34. Arm 34 is pivotally connected to the shank at 35 so as to turn horizontally when the arm is positioned to deliver a mail bag as shown in Fig. 1. Upon the top of the outer end of arm 34 is a spring 36 which has a crook in its outer end. This spring holds the mail bag ring 37 detachably secured in the outer end of the arm. The mail bag ring consists of an elliptical shaped ring preferably of steel having the top portion thereof formed of a latch 38 which is pivoted at 39 to one portion of the body and has a hook end 40 which passes between the bifurcated ends 41 of the other end of the body, and rests upon a bar 42 which passes transversely through the bifurcated ends and is secured therein. A T-shaped locking bolt 43 is revolubly mounted at the inner ends of furcations 41, and is provided with a collar 44 which is cut away on one side as shown in Fig. 8 so that the cut away portion may be brought into register with the furcations and thereby permit the latch to pass into the furcations as shown in Fig. 9, or out of the same. When the locking bolt 43 is given a quarter turn the latch is locked in the furcations. The mail bag 45 is secured to the ring by a cord or other fastening 46 which is tied around the bag and into the ring. The shank of the locking bolt is then passed through a slit 47 in the end of arm 34 with the top thereof resting under the spring and across the slit. A chain 48 is secured to the shank of arm 34 just back of its connection to said shank. The other end of the chain is secured to a ladder 49 which is pivotally mounted by bolt 50 in bearings 51, which bearings are secured to the standard 15 near the ground. The rear end of the shank 33 is provided with a bag buffer 52 and with a counter balancing weight 53 which weight is held adjustably secured thereon by a set screw 54. This weight is positioned so that when the arms are in the position shown in Fig. 1 they will be in balance and held in a horizontal position.

Revolubly mounted in bearings 55, which bearings are secured to the side of the car 56, is the catcher or receiving hook 57, which when positioned as shown in Fig. 1 is adapted to enter the mail bag ring while the car is in motion and thereby disengage said ring from the holding arm 34. As best shown in Fig. 3 it will be seen that a portion of this catcher lies within the car. The motion of the car will cause the bag to slide down the catcher hook and hang thereon just inside the door. The catcher hook has a shank or handle 58 which engages an arm 59 when the catcher hook is positioned on the car for removing a mail bag from the track holding device. This arm is adjustably mounted upon a standard 60 so that the point of the catcher hook can be adjusted to

about the center of the bag ring when in a delivery arm. A set screw 61 holds the arm in its adjusted position. Standard 60 is hollow, and at the side of the door at which said standard is positioned when in use a staple bolt 62 is secured to the floor 63 of the car. This bolt is engaged by a rod 64, the lower end of which is formed into a hook. The upper end is threaded as shown at 65 in Fig. 10 and a wing nut 66 is screwed upon the rod to hold the standard in its position. When it is desired to have the staple bolt level with the floor a channel 67 is cut in the floor so that the rod may be easily engaged with the bolt. By this construction when it is desired to have the standard used at the other door of the car, it can be quickly and easily changed thereto.

Between bearings 55 of the catcher hook is a collar 68 which is secured to the hook, and between said collar and one of the bearings is a spring 70 which bears against the collar and bearing to cushion the hook when receiving a bag.

On the other side of the car door 71 from the car receiving hook is located the car delivering mechanism, which consists of a standard 72, preferably hollow, the lower end of which is received upon a stud 73 secured on the floor of the car. The upper end of this standard passes into a cup shaped socket 74 which is pivotally secured to bearings 75 at the top of the car. There is sufficient play in this socket so the standard may telescope therein, and the lower end can be placed over stud 73. It will be understood that there are staple bolts and studs properly positioned on both sides of the car at the door openings therein to enable the receiving and delivering standards to be shifted from side to side as required by the different directions in which the mail car may run.

On one side of standard 72 is secured a rack 76 which is engaged by a pinion 77 mounted upon shaft 78 which shaft passes through top sleeve 79 of crane 80. The lower end of the crane is provided with a sleeve 81. Both ends of shaft 78 are preferably square and project beyond the sleeve for the reception thereon of a wrench or crank 82 by means of which the pinion can be rotated to adjust the position of the crane upon the shaft. A dog 83 secured to the top sleeve engages the pinion to hold it against rotating after the crane has been adjusted to its proper position. In the outer end of the crane is pivotally mounted the car delivering arm 84. This arm is so mounted that it turns horizontally when positioned for use. The outer end of the crane is provided with a socket 85 in which is housed a detent bolt 86 which is adapted to engage a notch 87 in the inner end of arm 84 when said arm is brought to lie in the same plane as the crane, which is

the position of use as shown in Figs. 1 and 5. A spring 88 holds the detent bolt against the rear end of the delivery arm so that when the notch registers therewith the bolt will be forced into the notch. The same kind of a detent bolt is provided in the joint between delivery arm 34 and the shank thereof. The object of these detent bolts and notches is to keep the arm in the same plane as the other parts when the devices are first positioned for use and to hold the arms against accidental displacement and still permit the arms to turn on their pivots when required by the delivery therefrom of a mail bag.

In places requiring the use of mechanism to receive and deliver mail bags from moving mail cars, a bag is delivered from the mechanism at the side of the track to the car, and another is received from the car delivering mechanism upon the track receiving mechanism. The mail agent on the car and the mail agent at the track receiving devices respectively secure a mail bag to a mail bag ring and then place the ring in the delivery arm. The agent at the track device pulls the latter down to the position shown in full lines in Fig. 1 and then mounts the ladder and places the mail bag upon the arm as herein before described. The receiving and delivering mechanism of the track device is then in the position shown in Fig. 1. The agent on the car positions his catcher hook so that it will enter the bag ring of the track device when the car reaches that point. This hook will be on that side of the door approaching the station. He will also secure the mail bag destined for that station to a bag ring and will place the same in the delivery arm of the car device and swing the same to its outward position at right angles to the side of the car. In this position the holding ring will be entered by one of the receiving arms of the track device and the momentum of the bag will cause it to swing back upon the receiving arm and strike against the buffer which will check its movement and the weight of the bag will cause the movable parts to assume the position shown in dotted lines in Fig. 1 and in full lines in Fig. 2. When the ladder assumes the position shown in dotted lines it is engaged by a catch 88 which locks it in that position. The station agent can then mount the ladder and remove the mail bag and holding ring from the receiving arm. By having the receiving arms jointed and projecting in both directions they are adapted to receive mail bags from a car going in either direction. By having the car mechanism transferable from one side of the car to the other the mail bags can be put out upon that side of the car upon which the track mechanism is located, no matter in which direction the car is going. The con-

struction of the mail bag ring with a latch that can be locked and unlocked provides an efficient and quickly operated device for securing the mail bags to the delivery arms.

Having described my invention what I claim is:

1. In a device for receiving and delivering mail bags of the character described herein, a mail bag ring composed of a body of resilient material having a latch forming a portion of said ring, said latch being pivotally connected at one end to the body portion and having the other end adapted to pass into a slit in the other part of the body portion; a stop for preventing the inward movement of the latch; a T-shaped locking bolt revolvably mounted in the body of the ring adjacent to the slit therein; a slitted collar secured upon said locking bolt, said slit being adapted to register with the slit in the body of the ring whereby when said locking bolt is turned a quarter of a turn the latch is locked in the slit and the top of the bolt lies at right angles to the plane of the body of the ring.

2. In a mail bag receiving and delivering mechanism the combination of a mail car provided with door openings in the sides thereof; of a receiving hook pivotally mounted on the side of the car at one side of the door, said hook having a handle; and a standard removably secured within the car; an adjustable arm slidably mounted upon said standard, said arm being adapted when properly positioned to engage the handle of the receiving hook and hold said hook positioned for use.

3. A device for receiving and delivering mail bags from cars comprising a standard; a cap upon the top of said standard having rearwardly and upwardly extending lugs; an arm plate pivotally secured to the lugs of said cap, said arm plate having upwardly extending lugs with apertures therethrough; and a transverse adjustable aperture in the rear portion thereof; a jointed delivery arm adjustably mounted in the lugs of said arm plate, the front end of said arm having a vertical slot therein; a spring secured to said arm, said spring having the free end thereof extending over the slot in the arm; a counterbalance weight adjustably mounted on the rear end of said delivery arm; receiving arms secured in the rear portion of said arm plate, said arms extending outwardly and upwardly and then crossing each other, the outer ends being jointed so that the outer end of one arm will turn inwardly when a bag is received on the other arm; means to detachably secure a mail bag to said delivery arm in combination with a car having delivering and receiving mechanism thereon.

4. In a device for receiving and delivering mail bags from cars, a standard; means to detachably secure the same at the side of the

car door opening; a rack secured to said
standard; a crane slidably mounted upon said
standard; a pinion revolubly mounted on
said crane, said pinion meshing with the
5 rack on said standard; a dog on said crane
adapted to secure the pinion against rotation
when the crane is in its adjusted position; a
delivering arm having a vertical slot in the
front end thereof and a notch in the rear end
10 thereof mounted in the outer end of said
crane; a detent bolt mounted in said crane
and adapted to enter into the notch in the
end of the delivery arm when the crane and
arm are in the same vertical plane; a spring
15 behind said detent adapted to hold the detent
yieldingly engaged with the arm; and a
spring secured upon said arm, the free end

of which projects above the slot in the free
end of the arm.

5. In a device for receiving and delivering 20
mail bags from cars, a standard; means to
detachably secure the same at the side of the
car door opening; a jointed delivery arm
slidably mounted upon said standard; and
means to adjust the height upon said stand- 25
ard of said delivery arm.

In witness that I claim the foregoing I
have hereunto subscribed my name this 25th
day of June, 1910.

WILLIAM H. JONES.

Witnesses:

G. E. HARPHAM,
S. B. AUSTIN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."