

No. 707,017.

Patented Aug. 12, 1902.

W. B. ROHMER.

MAIL BAG CATCHING AND DELIVERING MECHANISM.

(Application filed June 10, 1902.)

(No Model.)

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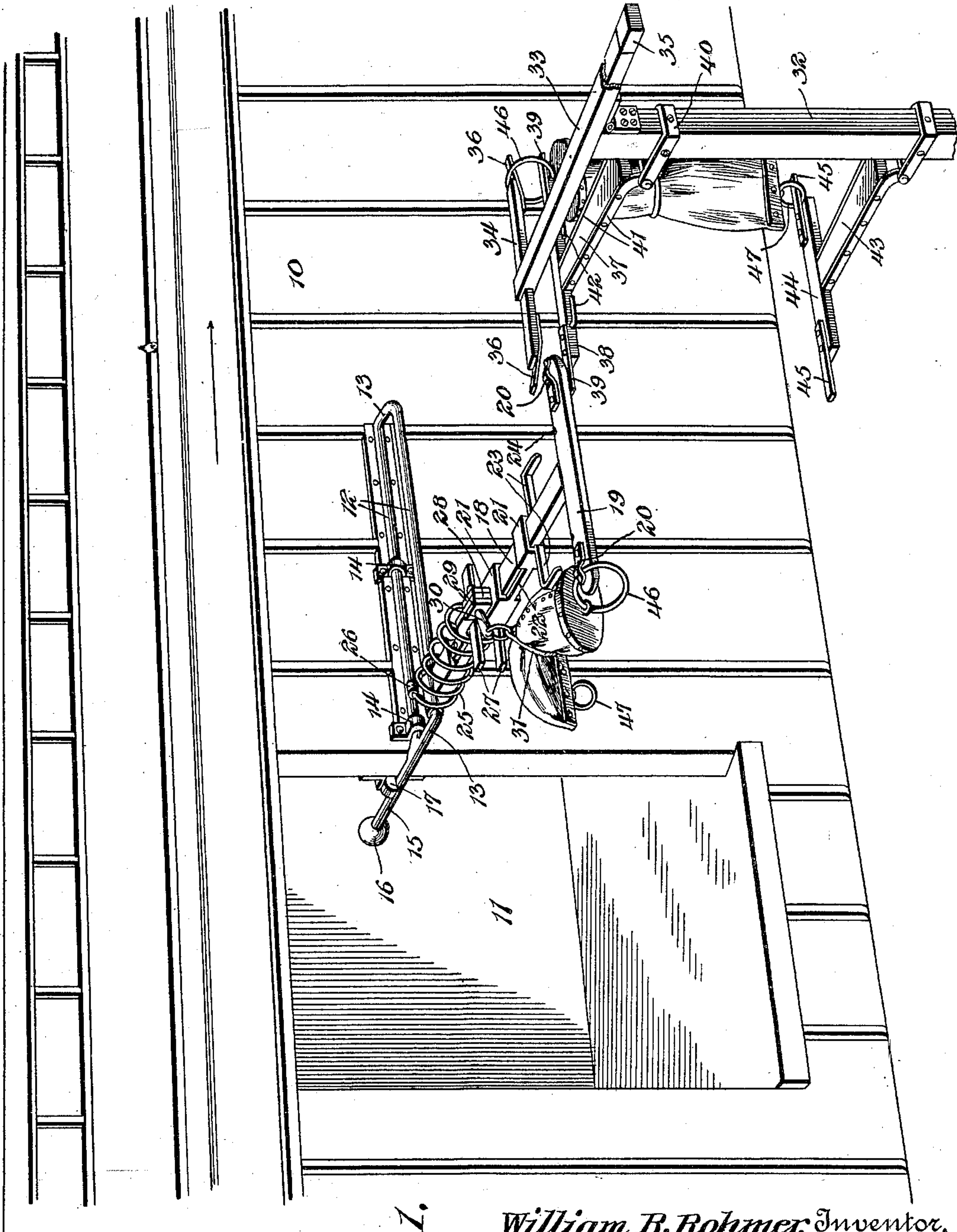


Fig. 1.

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Witnesses
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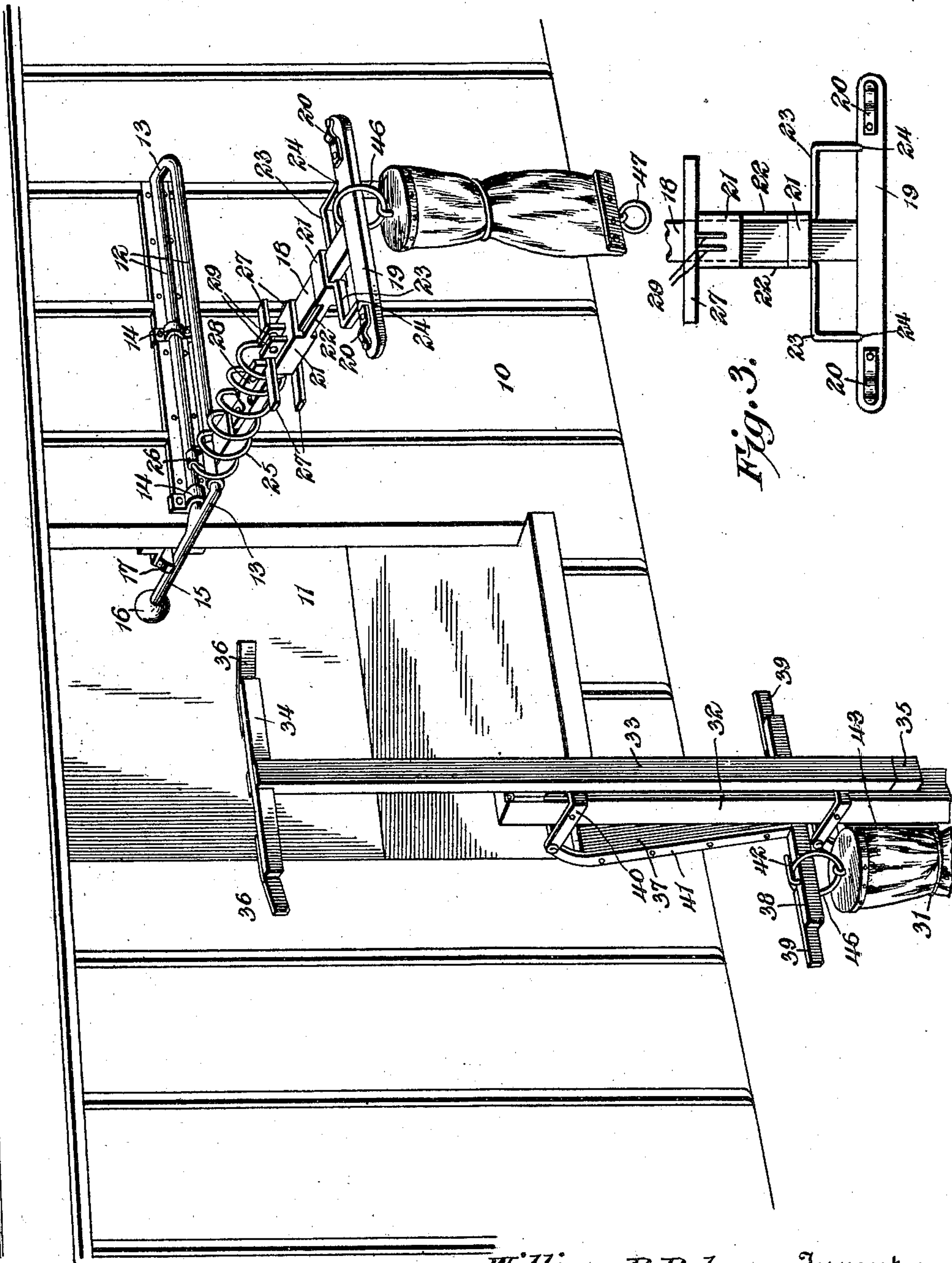
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Fig. 2.

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Fig. 4.

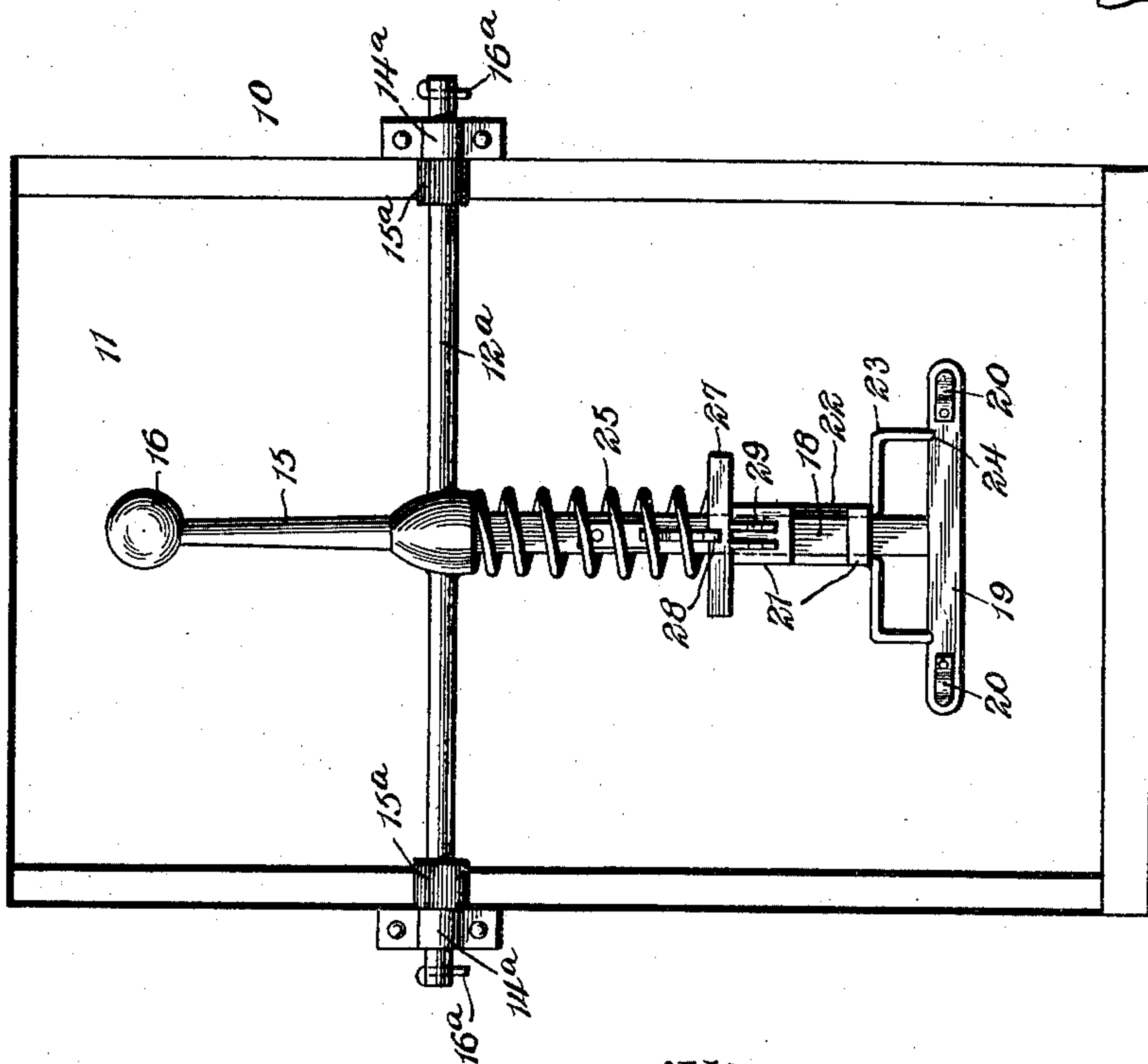
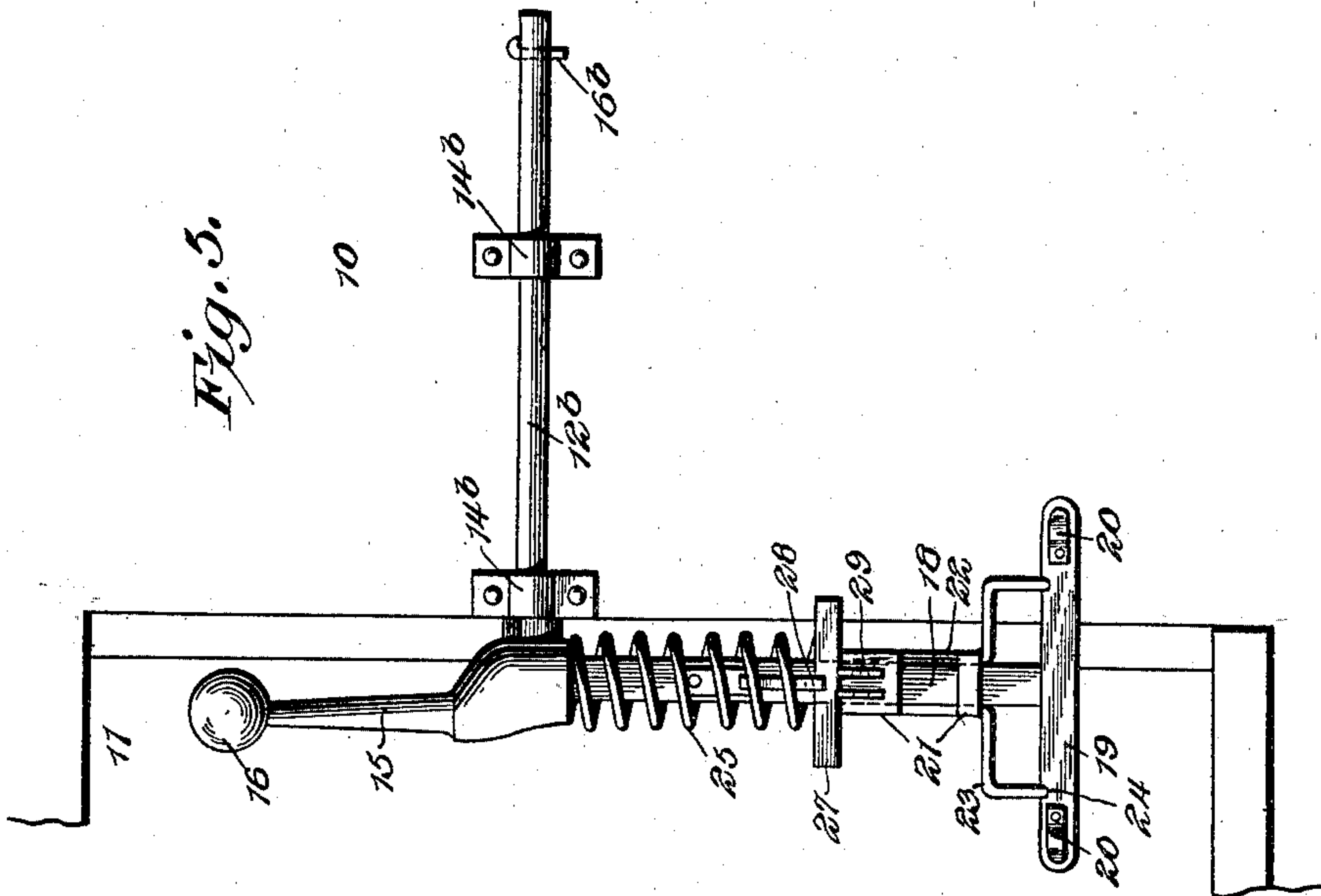


Fig. 5.



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MAIL-BAG CATCHING AND DELIVERING MECHANISM.

SPECIFICATION forming part of Letters Patent No. 707,017, dated August 12, 1902.

Application filed June 10, 1902. Serial No. 111,061. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM BELL ROHMER, a citizen of the United States, residing at Bay St. Louis, in the county of Hancock and State of Mississippi, have invented a new and useful Mail-Bag Catching and Delivering Mechanism, of which the following is a specification.

This invention relates to mechanism for delivering mail-bags to and from moving trains, the object being to provide means which will positively transfer the bags and properly hold them after such transfer, thereby avoiding the danger of damage to said bags or their contents.

One of the features of the invention resides in a novel form of keeper which automatically locks the transferred bag upon the catcher, the actuating mechanism for said lock being released upon the detachment from the catcher of the bag to be delivered therefrom.

Other features relate to various structural details, all of which go to make up an apparatus of the above character that is entirely efficient in operation.

The preferred mechanism for accomplishing the above object is fully illustrated in the accompanying drawings and described in the following specification, though it will be understood that various changes may be made from the construction shown and described.

In the drawings, Figure 1 is a perspective view of the mechanism, illustrating the general arrangement and relation of the parts just before the exchange of mail-bags takes place. Fig. 2 is also a perspective view illustrating the relation of the elements just after the exchange. Fig. 3 is a top plan view of the outer portion of the catcher and deliverer, carried by the car. Figs. 4 and 5 illustrate slightly-modified forms of construction.

Similar numerals of reference designate corresponding parts in all the figures of the drawings.

The mail-car, which may be of the usual or any desired construction, is designated by the reference-numeral 10 and is provided with the usual doorway 11 in its side. A frame is mounted at one side of this doorway and comprises spaced horizontally-disposed rods 12, connected at their ends by cross-pieces 13. One rod is pivotally and slidably mounted in

ears 14, which are secured to the wall of the car, as shown. This frame is provided with a handle 15, that extends through the doorway and has its inner end weighted, as shown at 16. A latch 17, arranged within the car, is adapted to engage over the handle to hold the same and the frame in horizontal position. The frame, furthermore, carries the catcher and deliverer, which is preferably constructed as follows: An outwardly-extending arm 18 is attached to the end of the outer rod 12 which is nearest the doorway, said arm having a cross-head 19, that extends beyond both sides of the same. This cross-head constitutes the support for the bag that is transferred to the train. The ends of the cross-head carry retaining-springs 20, that are secured at their inner ends to said heads, the outer ends being spaced from the same and being intumed, as shown. A keeper is employed for preventing the detachment of the bag transferred to the arm. In the construction shown this keeper comprises a pair of spaced sleeves 21, slidably mounted upon the arm and connected by webs 22, the outer sleeve being provided with angularly-formed fingers 23, the free ends of which are movable into and out of seats 24, formed in the inner face of the cross-head. This keeper is urged to its outer position by means of a coiled spring 25, surrounding the arm, one end of said spring being secured in an ear 26, the other end bearing against cross-pieces 27, attached to the inner sleeve 21. The arm 18 is provided on its upper face with an eye 28, and the inner sleeve 21 is provided with spaced eyes 29, that pass on opposite sides of the eye 28 when the keeper is retracted. The openings through said eyes are alined when in said retracted position. A pin 30 is adapted to be passed through said eyes to hold the keeper in retracted position, this pin being secured to a belt 31, that is fastened about an intermediate portion of the mail bag or pouch, all of which is clearly shown in Fig. 1.

In connection with the above-described mechanism there is also employed alongside the track means for delivering and receiving the pouches. As shown, this mechanism includes an upright standard 32, to the upper end of which is hinged a delivery-arm 33, the forward end of which is provided with a

cross-bar 34, the rear end being weighted, as shown at 35. The under side of the cross-bar 34 is beveled in opposite directions at its ends, and to these beveled portions are secured supporting-strips 36, which are thus arranged at an inclination. Beneath the arm 33 is pivotally arranged a receiving-arm 37. This arm also carries at its outer end a cross-bar 38, to the upper face of which are attached the strips 39, which project beyond the ends of said bar. The preferred manner of mounting this arm is as follows: A strip 40 is secured about the standard and has its ends projecting beyond the inner face of the same. To the opposite edges of the arm are attached plates 41, which project beyond the inner end of the same, the projecting ends of the plate and strips being pivotally connected. The cross-bar 38 of this arm is provided on its rear face and on opposite sides of the arm with retaining-hooks 42. Some distance below the second arm is arranged a third or positioning arm 43. This arm 43 is attached to the standard in the same manner as the one above described. It has at its free end a cross-bar 44, which is provided at its ends with the usual strips 45.

The mail pouches or bags employed in connection with this apparatus are of the standard shape and size, the only difference being that they are each provided at one end with a comparatively large ring 46 and at their other end with a small ring 47, the intermediate portion of the pouch being surrounded by the strap 31, already described, to which is attached the pin 30.

The manner of operating the mechanism may probably be best described as follows: The agent at the station first arranges the two upper arms in horizontal position and secures them by passing the large ring 46 of the pouch over the strips 36 and 39 on the side away from the approaching train. The lower arm 43 is then raised, and the corresponding strip 45 is engaged in the lower ring 47. As a result it will be seen that the pouch is held rigidly and will not be swayed by the wind. The mail agent upon the train first draws the frame across the doorway and rotates it to permit the more convenient placing of the bag or pouch in proper position. The arrangement of the pouch is shown in Fig. 1. The large ring 46 is engaged over the end of the cross-head toward the rear of the train, the keeper being retracted and the pin 30 passed through the aligned eyes. The frame is then slid back to one side of the doorway and held in horizontal position by the latch 17, engaging over the handle 15. The cross-head 19 is so arranged that it will pass between the cross-bars 34 and 38, and therefore as the car passes the mechanism beside the track the bar 38 will pass through the ring 46 of the pouch upon the car, disengaging it from the cross-head and also withdrawing the pin 30 from the eyes. At the same time, however, the forward end of the cross-head passes through

the ring 46 of the pouch supported by the arms of the standard until said ring strikes the arm 18, whereupon this bag will be disengaged from the cross-bars and be carried by the delivery mechanism upon the car. The keeper now being released, the spring will force it forward and the fingers will be brought into engagement with the cross-head, thereby locking the pouch against disengagement therefrom. Upon the removal of the pouch from the arms of the standard the upper arm will be tilted to a vertical position, while the second and third arms will drop, the second arm supporting the delivered pouch and the retaining-hook preventing the disengagement of the same. The station agent may then remove the pouch from the arm, and the agent upon the car by throwing the frame across the doorway may readily reach and disengage the exchanged pouch.

In Figs. 4 and 5 slightly-modified forms of construction are illustrated. In both these instances the delivery and locking mechanism is exactly the same as that already described, the only difference being in the manner of supporting the same. In Fig. 4 this arm is supported upon a rod 12^a, that extends across the doorway, being supported in suitable eyes 14^a at the opposite sides of the same. The rod is provided with suitable rubber buffers 15^a, which receive and absorb the shocks and jars to which the apparatus is necessarily subjected. The rod 12^a is held in place by removable pins 16^a, that pass through the ends, so that by removing said pins the entire device may be taken from the doorway. In Fig. 5 the construction is closely analogous to that illustrated in Figs. 1 and 2, with the exception that only one supporting-rod 12^b is employed, which is journaled in eyes 14^b, this rod being also slidable in said eyes, its movement being limited by a pin 16^b, passed through its free end. The pin may be removed to permit the detachment of the rod, so that it can be placed upon the opposite side of the car when so desired. By this means it will be seen that thoroughly-reliable apparatus is provided which will positively exchange the pouches and in which the pouch delivered to the car is securely locked against disengagement, the lock being automatic in its action and being freed by the release of the bag delivered from the car. It is to be understood that the various parts and elements of the structure can be made of any material desired, and changes may also be made in the size, proportion, and details of construction without in any manner departing from the spirit of the invention.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In apparatus of the class described, the combination with a mail-bag-catcher arm adapted to receive and support a mail-bag, of a keeper slidably mounted upon the arm and arranged to retain the bag upon the catcher.

2. In apparatus of the class described, the combination with a catcher-arm having a cross-head arranged to engage the ring of a mail-bag, of a keeper slidably mounted upon the arm and having a retaining-finger arranged to prevent the detachment of the mail-bag ring from the head.

3. In apparatus of the class described, the combination with a catcher-arm having a cross-head arranged to engage the ring of a mail-bag, of a keeper slidably mounted upon the arm and having a retaining-finger that is movable into engagement with the cross-head to prevent the detachment of the mail-bag ring.

4. In apparatus of the class described, the combination with a catcher-arm having a cross-head arranged to engage the ring of a mail-bag, of a keeper slidably mounted upon the arm and having a retaining-finger that coacts with the cross-head to prevent the detachment of the mail-bag ring, and a spring for moving the keeper toward the cross-head.

5. In apparatus of the class described, the combination with a catcher-arm having a cross-head arranged to engage the ring of a mail-bag, of a keeper slidably mounted upon the arm and having a retaining-finger that coacts with said cross-head to prevent the detachment of the mail-bag ring, and a coiled spring surrounding the arm and bearing against the keeper to move the same.

6. In apparatus of the class described, the combination with a catcher-arm having a cross-head that extends beyond both sides of the same, said head being adapted to receive the ring of a mail-bag, of a keeper-sleeve slidably mounted upon the arm, said sleeve carrying outstanding fingers that coact with the oppositely-projecting portions of the head to prevent the detachment of the mail-bag ring, and a coiled spring surrounding the arm and bearing against the sleeve to move said sleeve and the fingers carried thereby into their coacting relations.

7. In apparatus of the class described, the combination with a car having a doorway, of a supporting-frame slidably mounted upon the side of the car and movable across the doorway, and a catcher-arm secured to the frame.

8. In apparatus of the class described, the combination with a car having a doorway, of a supporting-frame pivotally and slidably mounted upon the side of the car at one side of the doorway, said frame being movable across the doorway, and a catcher-arm secured to the frame.

9. In apparatus of the class described, the combination with a car having a doorway, of a supporting-frame comprising spaced bars one of which is slidably and pivotally attached to the side of the car contiguous to the doorway, a catcher-arm attached to one end of the frame and projecting outwardly, and an op-

erating-handle secured to the frame and extending through the doorway of the car.

10. In apparatus of the class described, the combination with a mail-bag catcher and deliverer, of a keeper mounted thereon and adapted when in operative position, to prevent the detachment of the bag caught, said keeper being automatically movable, means for holding the keeper in inoperative position, said means being released by the detachment of the bag to be delivered.

11. In apparatus of the class described, the combination with a mail-bag catcher and deliverer comprising an arm having a cross-head, of a keeper movably mounted upon the arm and movable toward and from the cross-head, means for moving the keeper toward the cross-head, and locking mechanism for holding the keeper retracted, said mechanism being released by the detachment of the bag to be delivered.

12. In apparatus of the class described, the combination with a mail-bag catcher and deliverer comprising an arm having a cross-head, of a keeper movably mounted upon the arm and movable toward and from the cross-head, means for moving the keeper toward the cross-head, and a holding device for maintaining the keeper in retracted position, said device being carried by the bag to be delivered.

13. In apparatus of the class described, the combination with a mail-bag catcher and deliverer comprising an arm having a cross-head, of a keeper movably mounted upon the arm and movable toward and from the cross-head, a spring bearing against the keeper to urge it toward the cross-head, eyes arranged respectively upon the keeper and the arm, said eyes being in alinement when the keeper is retracted, and a pin arranged to be passed through the eyes when alined to hold the keeper in its retracted position.

14. In apparatus of the class described, the combination with a mail-bag catcher and deliverer comprising an arm having a cross-head, of a keeper movably mounted upon the catcher and deliverer and comprising a sleeve slidably mounted upon the arm and having retaining-fingers movable into coacting relation with the cross-head, a coiled spring surrounding the arm and bearing against the sleeve to urge the keeper toward the cross-head, eyes arranged respectively upon the sleeve and the arm, said eyes being in alinement when the keeper is retracted, and a pin arranged to be passed through the eyes when alined to hold the keeper in retracted position, said pin being carried by the bag to be delivered.

15. In apparatus of the class described, the combination with a standard, of a deliverer-arm pivotally mounted at the top of the standard and having a bag-supporting cross-bar, a catcher-arm pivotally mounted upon the

standard below the delivery-arm and having
a bag-receiving cross-bar, and a positioning-
arm pivotally mounted upon the standard be-
low the catcher-arm, said positioning-arm be-
5 ing also provided with a cross-bar.

16. In apparatus of the class described, the
combination with a standard, of a strap em-
bracing the standard and having its termi-
nals projecting beyond one face of the same,
10 a bag-supporting arm, plates secured to the
opposite side faces of the arm and projecting

beyond one end of the same, the projecting
ends of the strap and plates being pivotally
connected.

In testimony that I claim the foregoing as 15
my own I have hereto affixed my signature in
the presence of two witnesses.

WILLIAM BELL ROHMER.

Witnesses:

RAPHAEL RUSECH,
ALPHONSE FAYARC.