

J. ANDERSON.
MAIL POUCH CATCHER.

APPLICATION FILED JAN. 13, 1909.

920,002.

Patented Apr. 27, 1909.

4 SHEETS—SHEET 1.

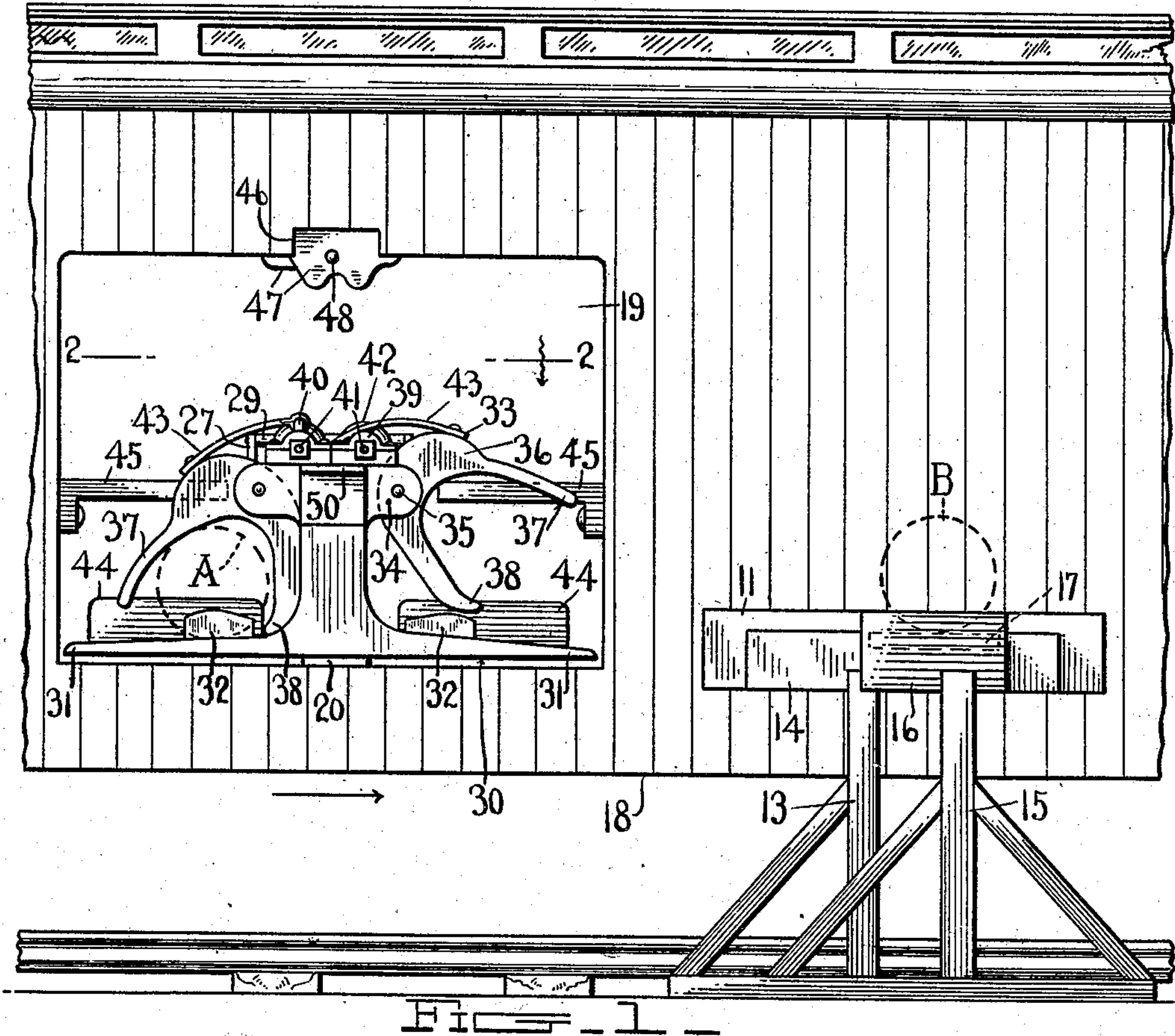


Fig. 1

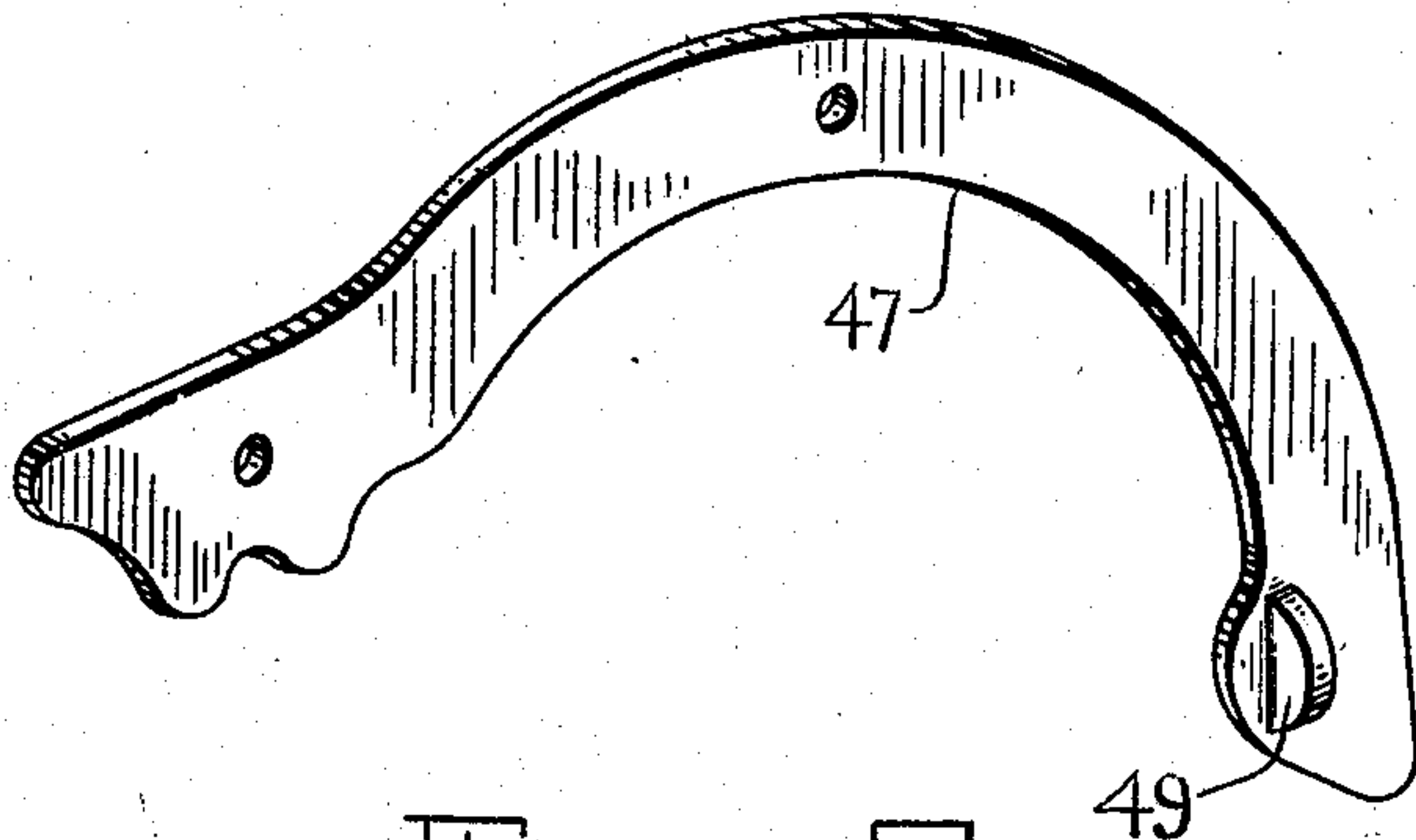


Fig. 2

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4 SHEETS—SHEET 2.

FIG. 2.

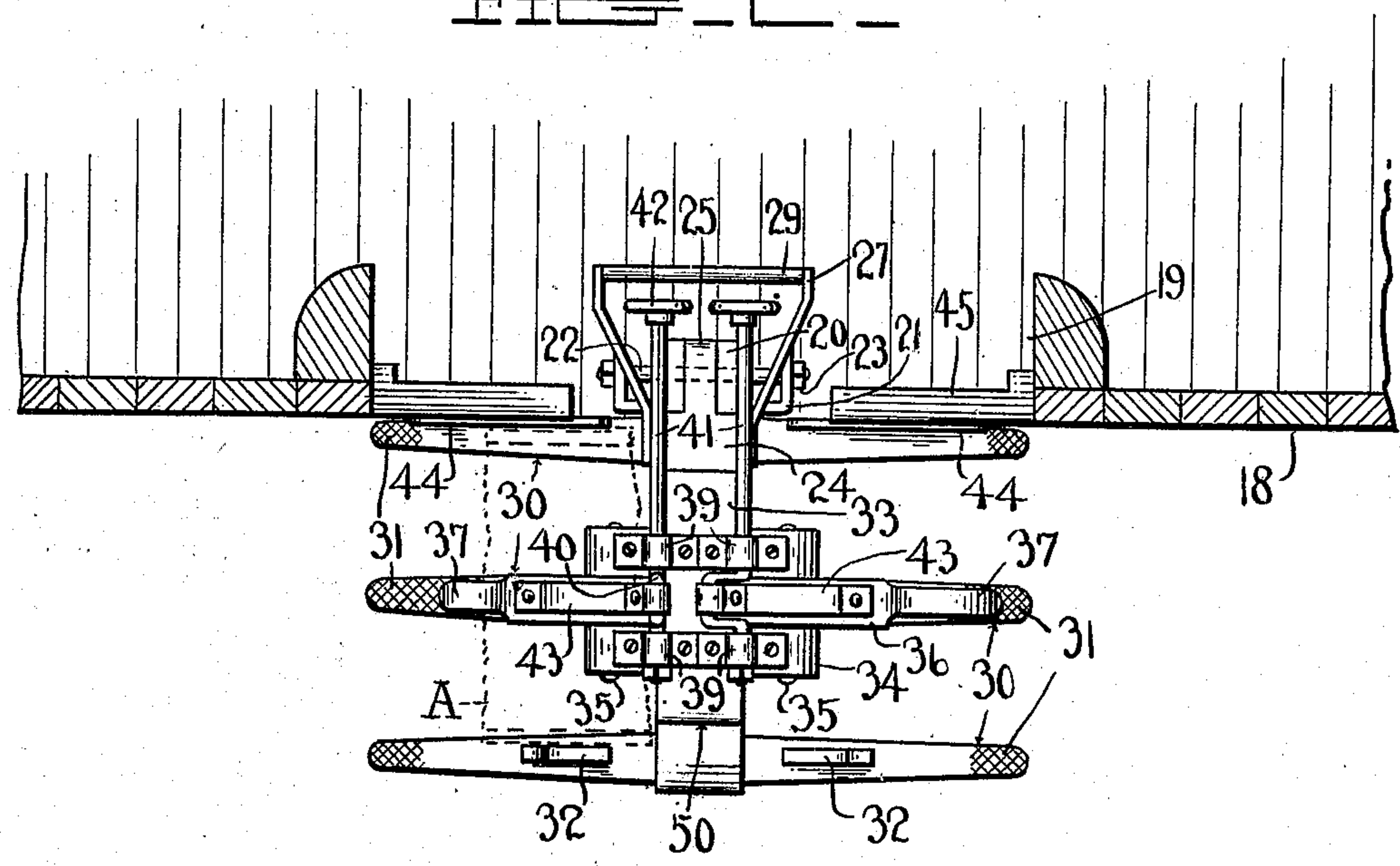
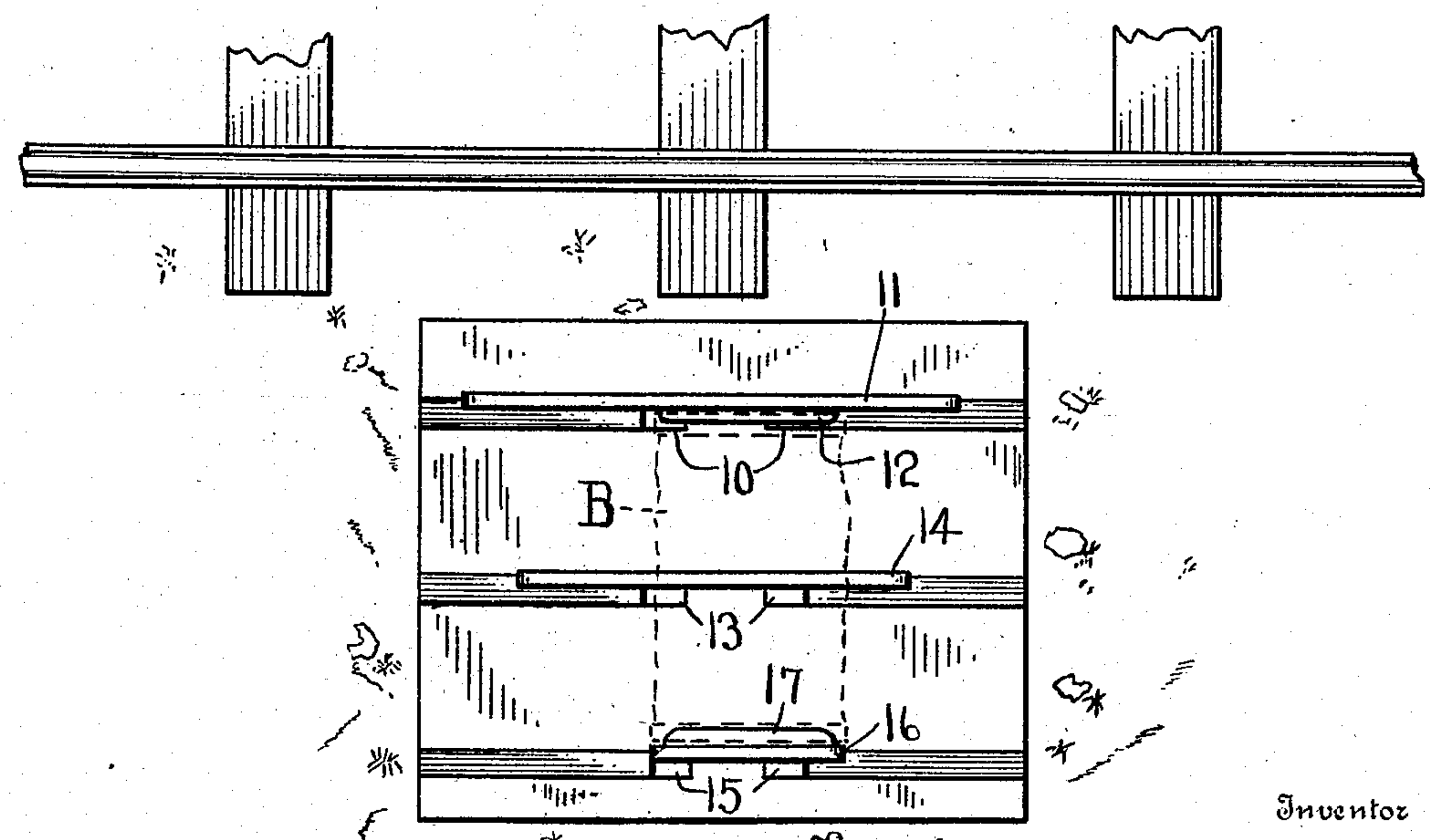


FIG. 7.



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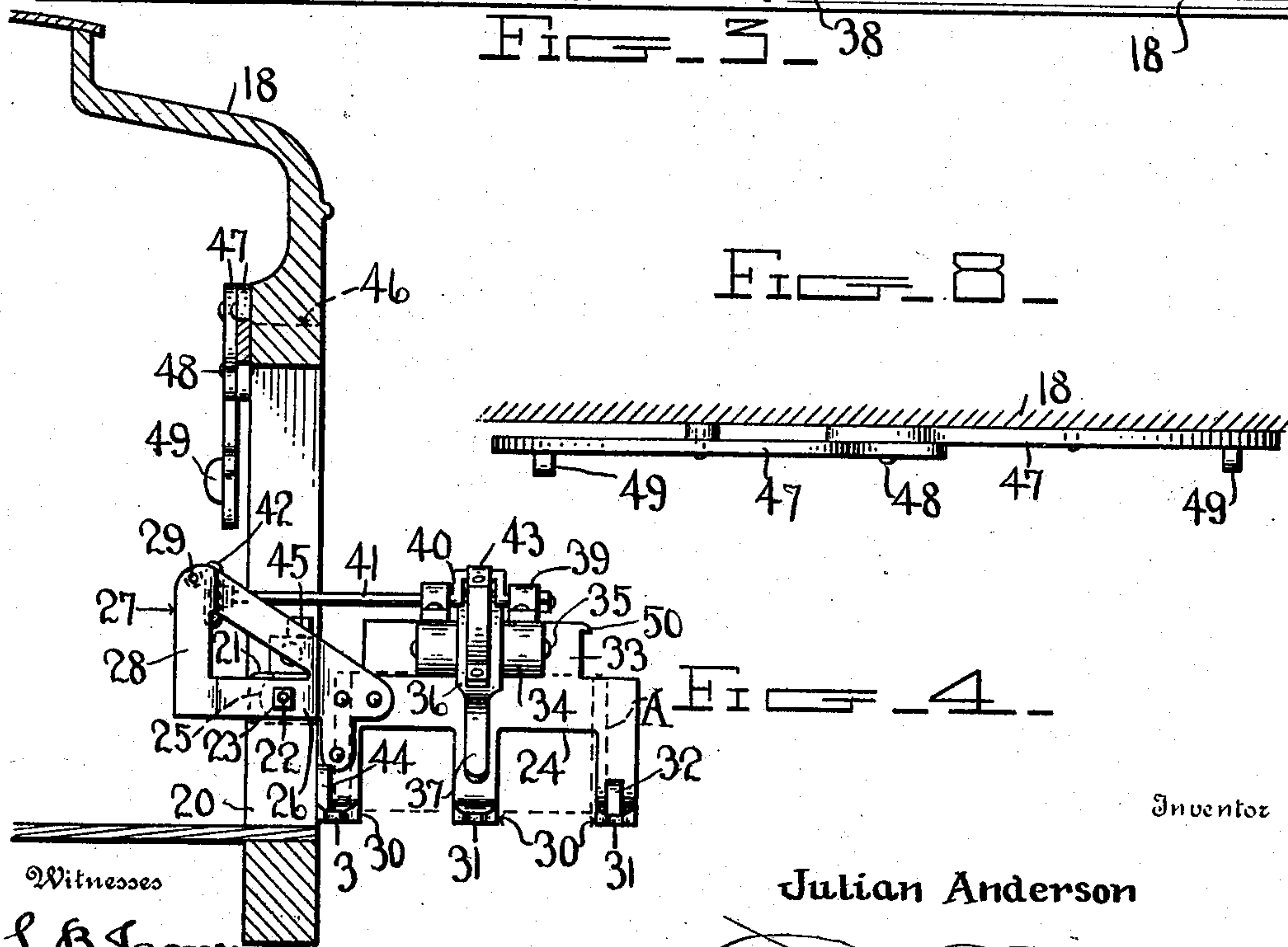
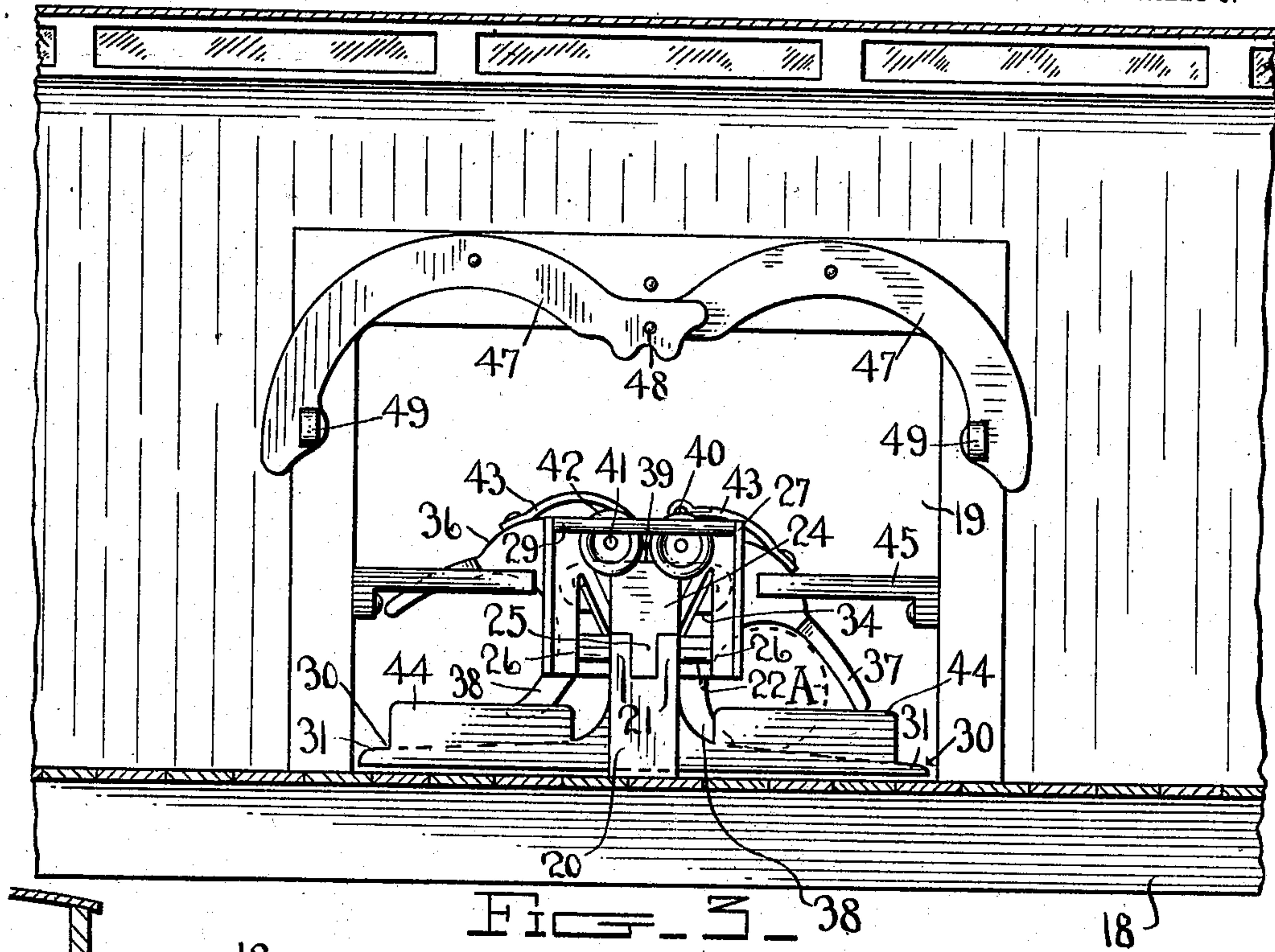
Witnesses
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4 SHEETS—SHEET 3.



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4 SHEETS—SHEET 4.

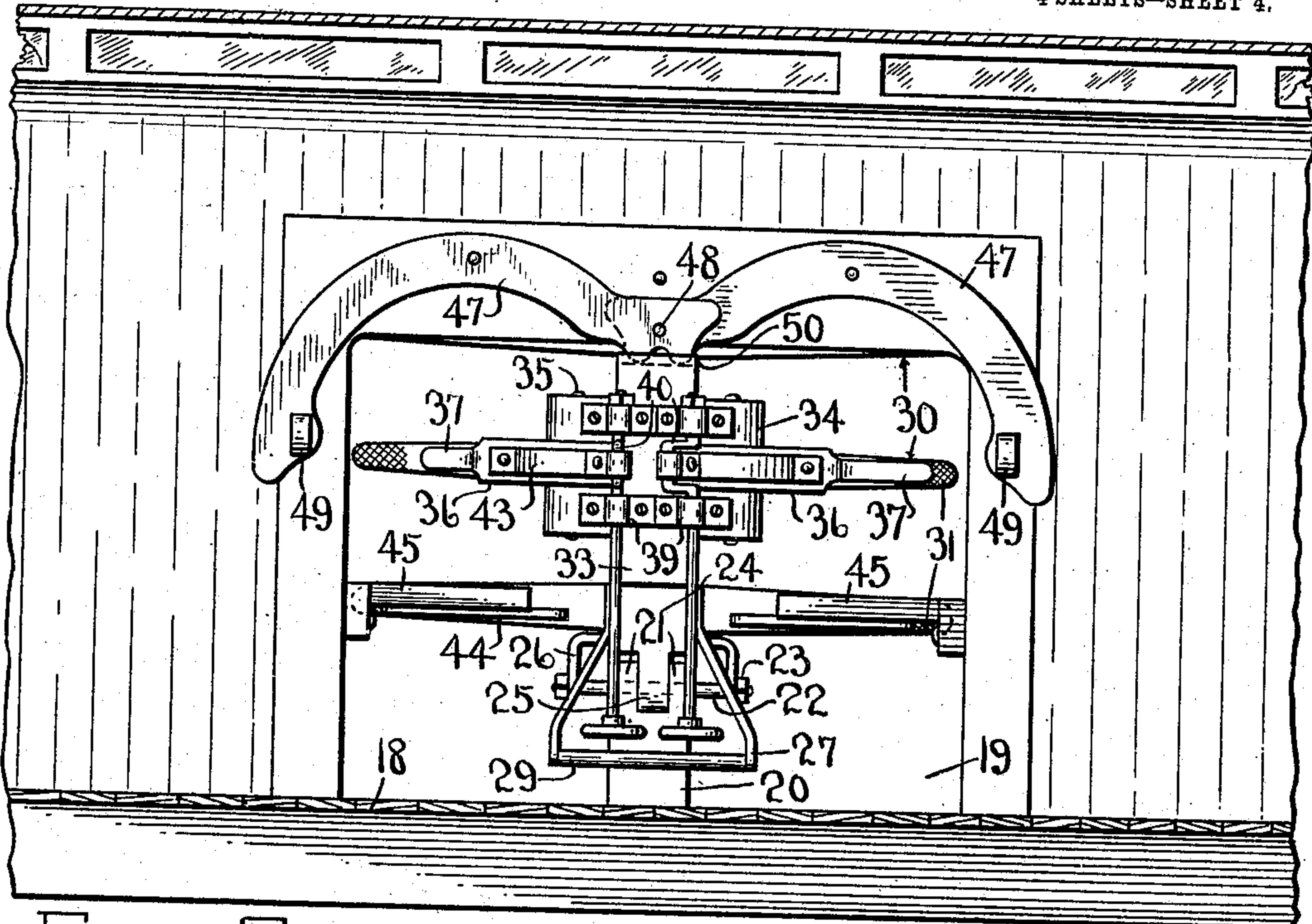


FIG. 6.

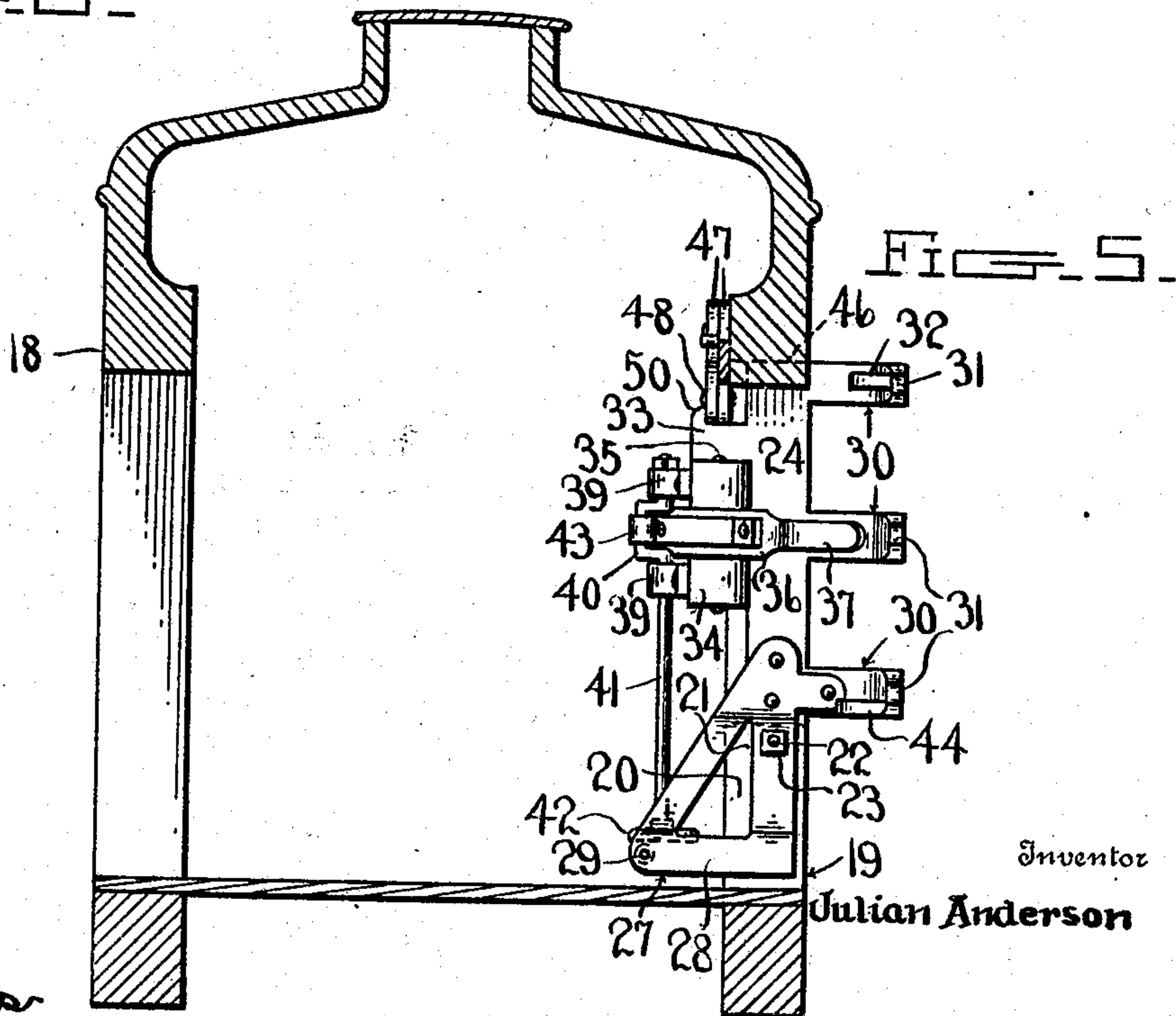


FIG. 5.

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UNITED STATES PATENT OFFICE.

JULIAN ANDERSON, OF HELENA, MONTANA.

MAIL-POUCH CATCHER.

No. 920,002.

Specification of Letters Patent.

Patented April 27, 1909.

Application filed January 13, 1909. Serial No. 472,079.

To all whom it may concern:

Be it known that I, JULIAN ANDERSON, a citizen of the United States, residing at Helena, in the county of Lewis and Clark, State of Montana, have invented certain new and useful Improvements in Mail-Pouch Catchers; and I do hereby 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.

This invention relates to devices for delivering and catching mail pouches such as are employed on moving trains, one pouch being caught and another delivered by the same device.

One of the objects of the invention is to improve the general construction of devices of this character.

Another object of the invention is to improve the structure of such devices so as to make them equally applicable to trains running in either direction.

A third object of the invention is to provide an improved form of mail bag catcher adapted to close within the door of a mail car when the bag has been caught and at the same time move the bag within the car.

A fourth object of the invention is to provide an improved form of catcher in which the bag can be placed on the catcher without danger of dropping out of the door, the delivering device being arranged to move outward in an improved manner after receiving the bag.

With the above and other objects in view, the invention consists, in general, of certain devices placed adjacent the track and other improved devices carried on a car arranged to catch and deliver mail pouches from and to the device at the side of the track.

The invention further consists in certain novel details of construction and combinations of parts hereinafter fully described, illustrated in the accompanying drawings, and specifically pointed out in the claims.

In the accompanying drawings, like characters of reference indicate like parts in the several views, and:—Figure 1 is a side elevation of a portion of a car equipped with this invention, one pouch being shown as in the act of being caught while another is being delivered. Fig. 2 is a section on the line 2—2 of Fig. 1, the section showing a top plan view of the catching and deliver-

ing mechanism in the position shown in that figure. Fig. 3 is a view from the interior of the car with the mechanism in the position shown in Fig. 1. Fig. 4 is a vertical section through the car door with the mechanism shown in the position indicated in Fig. 1. Fig. 5 is a view similar to Fig. 4 with the mechanism folded or swung inward to the position for removing a bag from the catching device and placing a bag on the delivering device. Fig. 6 is a view from the inside of the car showing the mechanism in the position indicated in Fig. 5. Fig. 7 is a top plan view of the devices located at the side of the track. Fig. 8 is a detail view of the latch mechanism for holding the car supported devices in the position indicated in Fig. 6. Fig. 9 is a detail perspective of one of the clamping arms.

Throughout the drawings the letter A indicates the bag to be delivered and the letter B the bag to be caught. These bags are of the usual form and construction and with this device do not require any special attachment to enable the device to properly perform its functions.

Considering first the devices which may be called the stationary or track devices. These consist, in general, of a supporting rack having spaced members, but these members are of peculiar construction. Adjacent the track there is provided a pair of posts 10 on which is supported a bar 11 preferably having its upper edge horizontal and being parallel to the track. Upon the outside face or that away from the track there is mounted on the bar 11 a narrow shelf 12. About eighteen inches from the pair of posts 10 is fixed another pair of posts 13 similar in character to the posts 10. From the upper ends of the posts 13 there is provided a bar 14 similar in character to the bar 11 but of less length and considerably lower in height. Equidistant with the posts 10 from the posts 13 are posts 15 which support a short bar 16, the upper edge of which is at a greater height than the bar 11 and is similarly arranged. This bar 16 is provided, like the bar 11, with a small shelf 17 on the side which faces the central post. The shelves 12 and 17 are substantially in alinement and are slightly below the top edge of the central bar 14.

It will be noted from the foregoing that when a mail pouch is supported on the rack

formed by these posts and shelves the center of the pouch will rest on the bar 14 while one end will rest on one of the shelves, the other end resting on the opposite shelf. The center of the pouch is thus raised slightly above the ends as would be natural in such constructions.

At 18 is shown the usual mail car and this is provided with a doorway 19. Centrally located of the doorway 19 is a standard 20 provided with a pair of spaced ears 21. Mounted within the ears 21 is a shaft or bolt 22 provided with suitable nuts 23 on the ends thereof. Upon the bolt 22 is mounted a beam 24 having a reduced and perforated end 25 to fit between the ears 21 and over said bolt. This beam is further provided with resilient arms 26 provided with suitable perforations in alinement with the perforations in the ears 21 and the nuts on the shaft 22 outside of these arms so that the required degree of tension may be brought upon the arms to frictionally hold the catcher in lowered position. The beam 24 is further provided with other arms 27 which are rigidly attached thereto and also to the resilient arms, counterweights 28 being attached to the arms 27 and 26.

Connecting the arms 27 is an operating handle or bar 29. Beneath the beam 24 are held a plurality of standards 30. Each of these standards 30 is provided with oppositely extending fingers 31, said fingers being tapered toward their points and merging into a gradual curve into the standards. These standards are of such length and are so positioned that the fingers 31 will pass between the bars of the stationary rack previously described and below a bag held thereon. At the same time, the fingers are of sufficient height so that the bar 11 of that rack will project above the fingers and push a bag supported thereon off from the fingers. Each of the outermost fingers is provided with an upwardly extending guard 32 arranged to prevent the bag being misplaced when about to deliver the same as well as to prevent a caught bag being thrown off endwise from the car.

Mounted on the beam 24 is a block 33 provided on each side with spaced ears 34. These ears are provided with suitable perforations to receive bolts 35 which extend therethrough. Mounted on each of the bolts 35 between the ears 34 is an arcuate arm 36 each provided with a finger 37. The end of each of the arcuate arms 36 is tapered as indicated at 38 and is so arranged that when the arms are in position to catch a mail bag the end 38 will come in contact with the bag and rotate the arm 36 so as to bring the arm 37 down over the bag and hold it securely upon the fingers 31. In order to move these arms to catching and holding position manually there is provided on the top of the

block 33 certain bearings 39 which are so spaced as to receive between them the cranks 40 of shafts 41. These crank shafts 41 extend inward in parallel relation and terminate adjacent the operating bar 29 where they are provided with hand wheels 42. Connected at one end to one of the cranks 40 and at the other end to the corresponding arcuate arm 36 is a resilient link 43 upwardly bowed so as to form a slightly yieldable connection between the crank 40 and the arcuate arm 36 to which it is connected.

In order to understand the operation of catching a mail bag it will be noted that the entire frame embracing the beam 24 is dropped downward as indicated in Fig. 1. Now let it be supposed that a bag is in position on the stationary rack or support and ready to be caught. The operator within the car, having positioned the catcher as just noted, rotates the hand wheel 42 located nearer the forward end of the car to raise the catching arm 37. As the car passes the stationary rack the bag strikes the end 38 of the arm 36 and causes the same to rotate bringing the arm 37 down with its end in juxtaposition to the fingers 31. In this operation the shock of the sudden blow on the arm is absorbed by the resilient link 43 and the parts are thus moved without damage. The bag is now on the fingers 31 and ready to be moved into the car. To accomplish this, the operator depresses the handle bar 29 and swings the beam 24 upward on the shaft 22. In order to prevent the bag dropping off the rack when swung up in this position there is provided on each of the inside fingers 31 a shelf 44 against which the base of the bag rests when the device is swung up. The hand wheel 42 may again be rotated and the bag freed from the gripping arms 37 and swung inside of the car.

In order to provide for the delivery of a bag, the device is turned up as in the position in which the bag is received within the car and the proper hand wheel rotated to move the end of the clamping or locking arm 37 away from its corresponding finger 31. The bag is then set on the shelf and the same hand wheel again rotated to lock the bag in position. The device is then dropped downward by raising the operating bar 29. Now when the car passes by the stationary rack, the bar 11 of that rack will lie between the inside and middle fingers 31 and since this bar projects above the plane of the top of these fingers the end of the bar will strike the bag carried on those fingers and raise and force the same backward, at the same time lifting the lower end of the arm 37 and freeing the bag from the gripping effect of said arm so that it falls off of the rear of the fingers 31. The resilient link 43 acts in this case precisely similar as in the other to eliminate the danger of fracture of the

parts and absorb the shock incident to the sudden striking of the bag.

In order to prevent danger to the operator there is provided on each side of the doorway 19 a guard or safety arm 45 of substantially the same height as the shelf 44 when the beam 24 is raised. It will be observed that this bracket not only prevents injury to the operator but also assists in properly positioning a bag for delivery and in removing a bag which has been caught by forming a continuation of the shelf 44 located adjacent said bracket.

In order to hold the arm 24 in its raised position and prevent the accidental falling thereof, the upper side of the doorway is cut away as indicated at 46 and upon each side of the doorway is fitted a latch arm 47, the ends of the arms being pivotally connected as indicated at 48. These arms are further provided with operating handles 49 located in suitable position to enable them to be released by a person standing on either side of the device.

Upon the block 33 is mounted a latch 50 arranged to engage the latch arm when the arm 24 is raised. From this construction it will be apparent that the device is securely held in raised position while it may be lowered from either side of the door by simply moving the handle of the latch lever on that side.

In order to understand the complete operation of the device let it be supposed that the train is approaching a station at which one bag is to be delivered and another caught. The arm 24 is held in the raised position during the ordinary running of the train. As the train approaches the station, the operator inside the car places the bag for delivery in position as previously described. He then pulls the lever to release the latch at the same time pulling upward on the operating bar 29 and places the device in its lowered position. Either now or previously he has moved the forward finger 37 to its raised position as previously noted. The fingers 31 at the forward end now receive the bag and lock it in position while the fingers at the rear end permit the bag previously upon the arm to be delivered. The operator now depresses the bar 29 and delivers the received bag within the car, the latch 50 engaging the latch lever to hold the device in raised position. This operation is repeated with each station approached.

The device thus described is strong and simple in its character and efficient in its operation, is of few parts and readily manufactured.

It is obvious that many minor changes may be made in the form and construction of the parts without departing from the material principles thereof. It is not therefore desired to confine the invention to the

exact form herein shown and described, but it is wished to include all such as properly come within the scope of the claims.

Having thus described the invention, what is claimed as new, is:—

1. In a device of the kind described, a pivoted bar provided with pouch supporting means comprising spaced fingers rigidly attached to the bar, a clamping arm arranged to automatically grip the pouch when caught by the supporting means, and other means operable from the pivoted end of the bar to manually set the clamping arm.

2. In a device of the kind described, a bar pivoted to swing in a vertical plane, pouch supporting means carried by the bar comprising spaced fingers rigidly attached to the bar, a clamping arm arranged to automatically grip the pouch when caught by the supporting means, and other means operable from the pivoted end of the bar to manually set the clamping arm.

3. In a device of the kind described, a pivoted bar provided with pouch supporting means, a clamping arm arranged to automatically grip the pouch when caught by the supporting means, a crank shaft, and a resilient connection between said crank shaft and said clamping arm.

4. In a device of the class described, a pivoted bar provided with pouch supporting means, a clamping arm pivotally mounted on the bar and arranged to automatically grip the pouch when caught by the supporting means, a crank shaft supported on the bar, a spring link connecting said crank shaft and clamping arm, and an operating handle held upon said crank shaft adjacent the pivoted end of the bar.

5. In a device of the kind described, a pivoted bar provided with pouch supporting means comprising spaced fingers rigidly attached to the bar and symmetrically disposed on opposite sides thereof, and a clamping arm arranged to automatically grip the pouch carried on each side of said bar to coact with said fingers.

6. In a device of the kind described, a pivoted bar arranged to swing in a vertical plane, pouch supporting means carried by said bar comprising spaced fingers rigidly attached thereto, and shelves attached to said fingers nearest the pivoted end of the bar, means to raise said bar, and releasable means to hold said bar in raised position.

7. In a device of the kind described, means adjacent a track to support a mail pouch, in combination with a pivoted bar mounted for movement in a vertical plane and carried upon a car, pouch catching and supporting means held upon said bar, and a clamping arm arranged to automatically grip the pouch when caught by said catching and supporting means.

8. In a device of the kind described, means adjacent a track to support a mail pouch comprising spaced rails, in combination with a car supported bar pivoted to swing in a vertical plane and provided with pouch catching means comprising spaced fingers rigidly attached thereto and arranged to pass between the members of the stationary pouch support, a clamping arm pivotally mounted on said bar to automatically grip a pouch when caught by the fingers, a crank shaft supported on the bar and movable therewith, a resilient connection

between the crank of said crank shaft and said clamping arm, a hand wheel mounted on said crank shaft, means attached to said bar to raise the same, and car supported locking means to releasably hold said bar in raised position.

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

JULIAN ANDERSON.

Witnesses:

C. D. MARTIN,

H. B. ANDERSON.