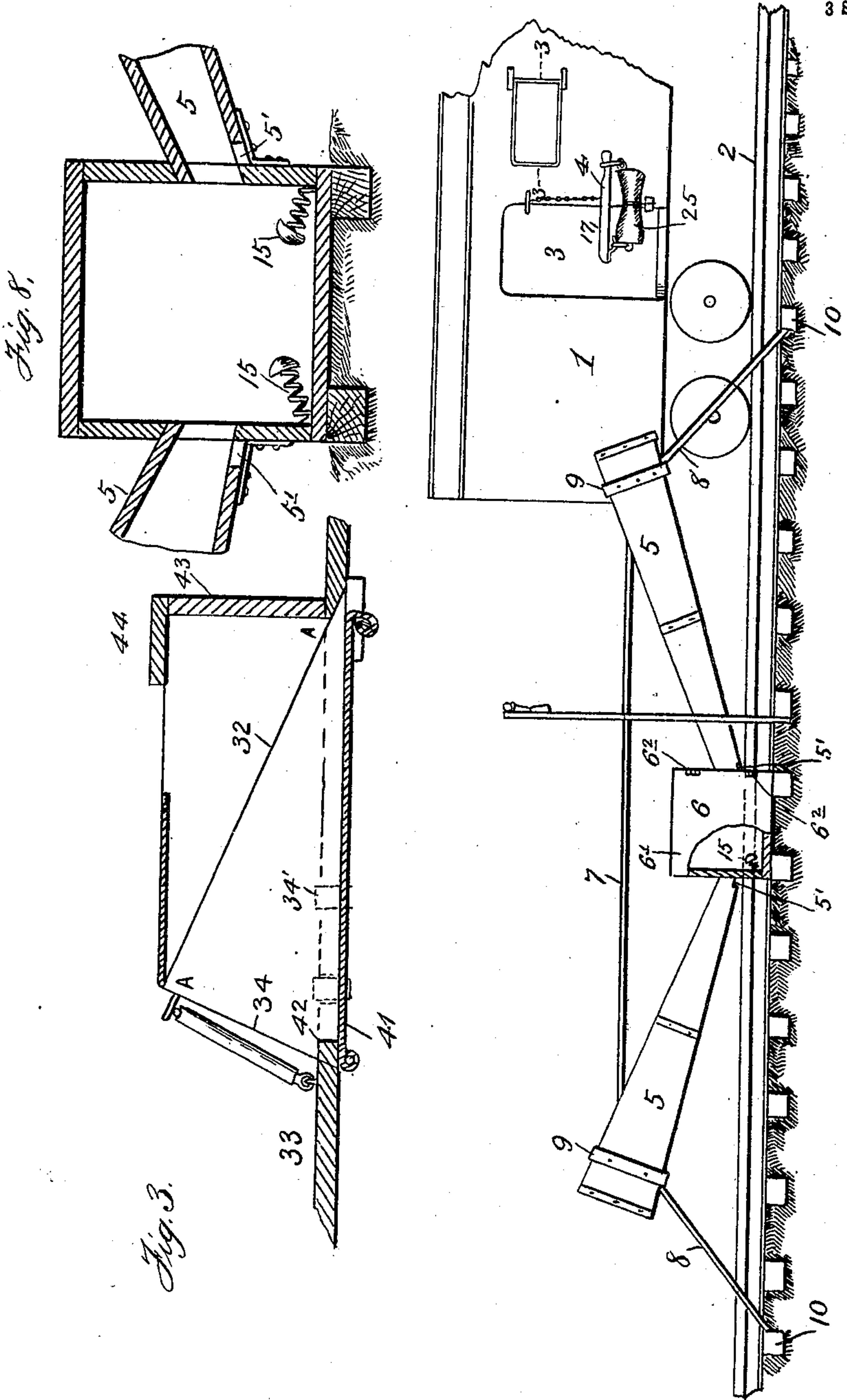


D. W. MILLSAPS.
MAIL BAG DELIVERER AND RECEIVER.
APPLICATION FILED JULY 22, 1908.

914,442.

Patented Mar. 9, 1909.

3 SHEETS—SHEET 1.



Witnesses
J. L. Orrand
R. R. Duffie

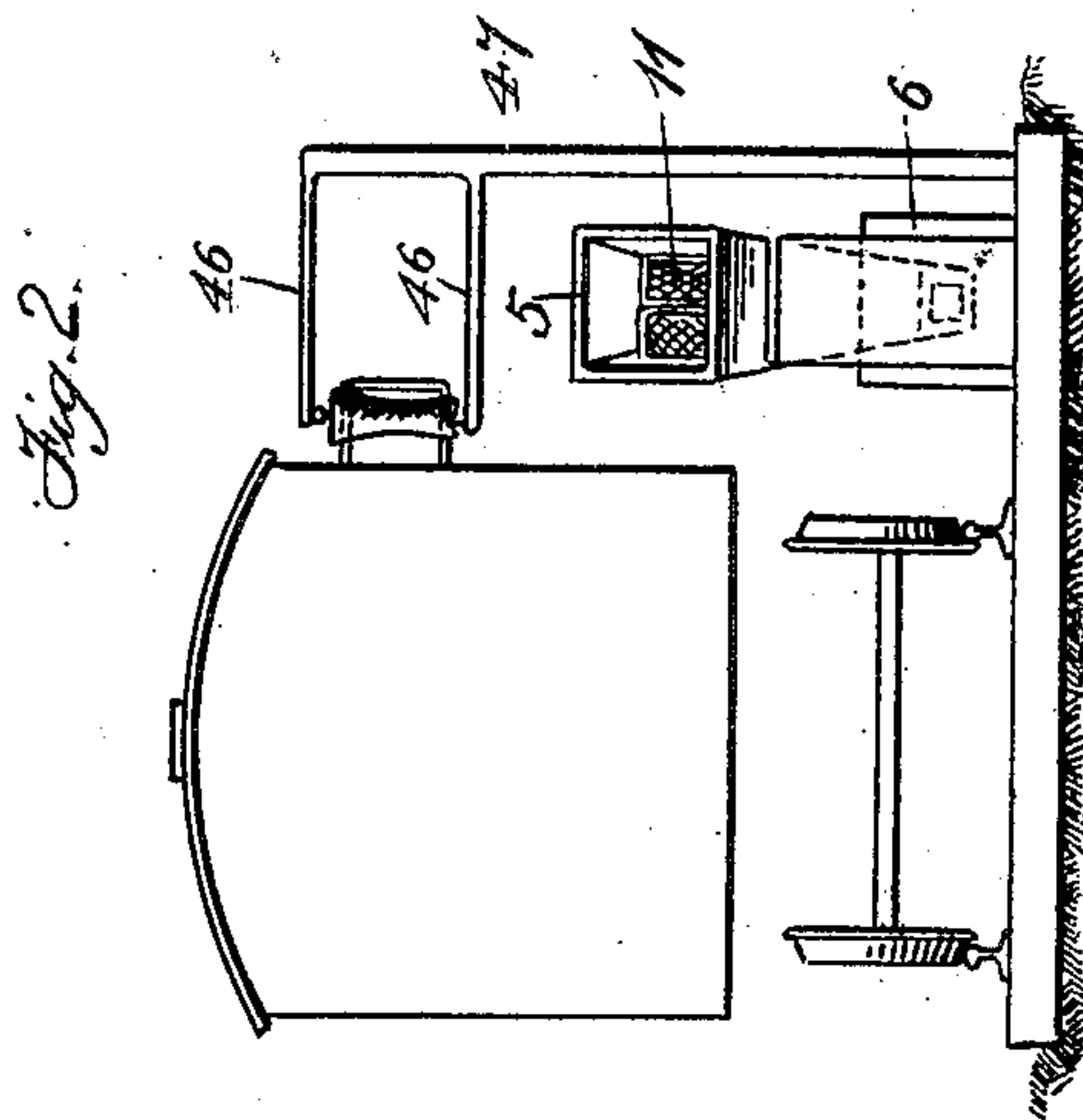
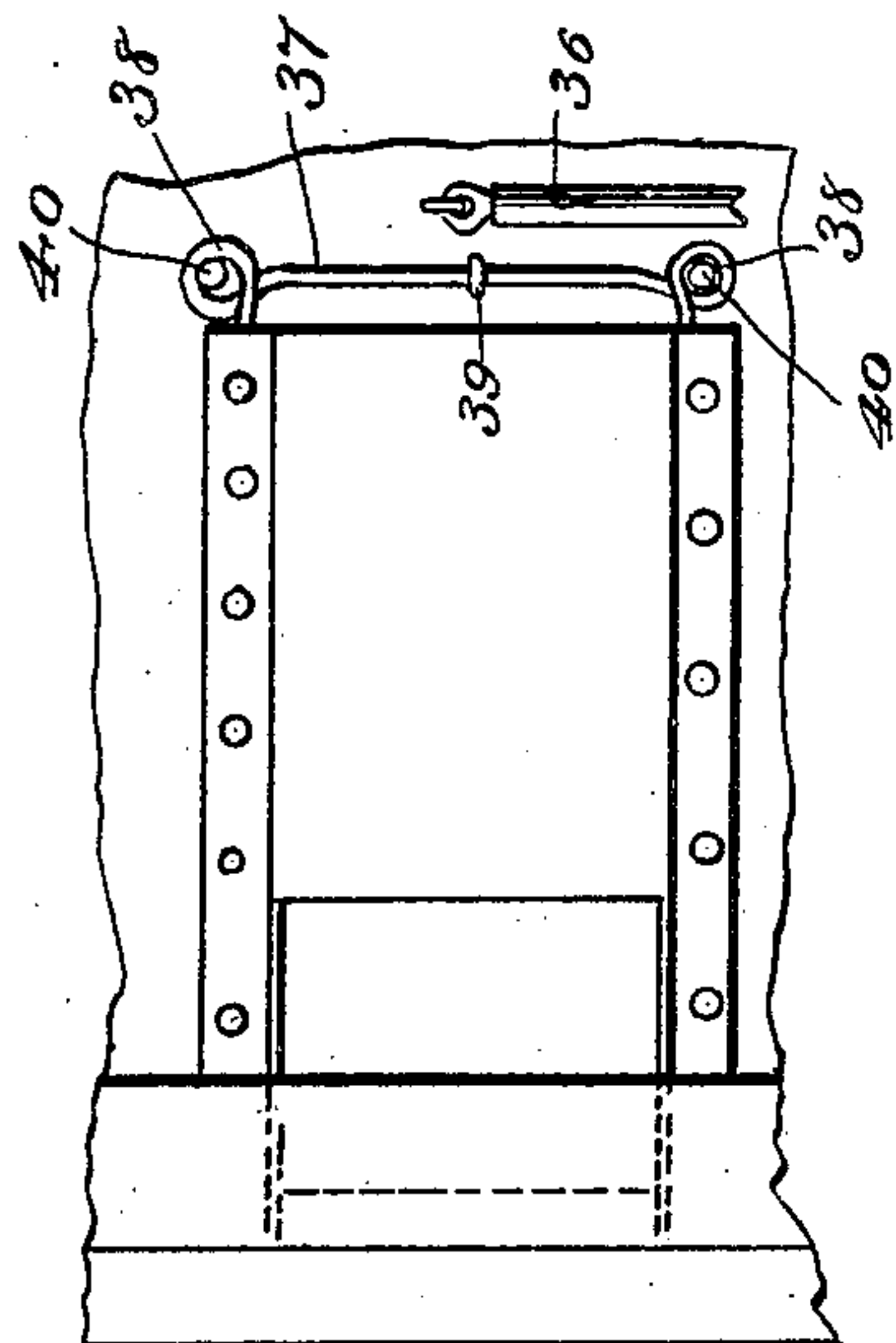
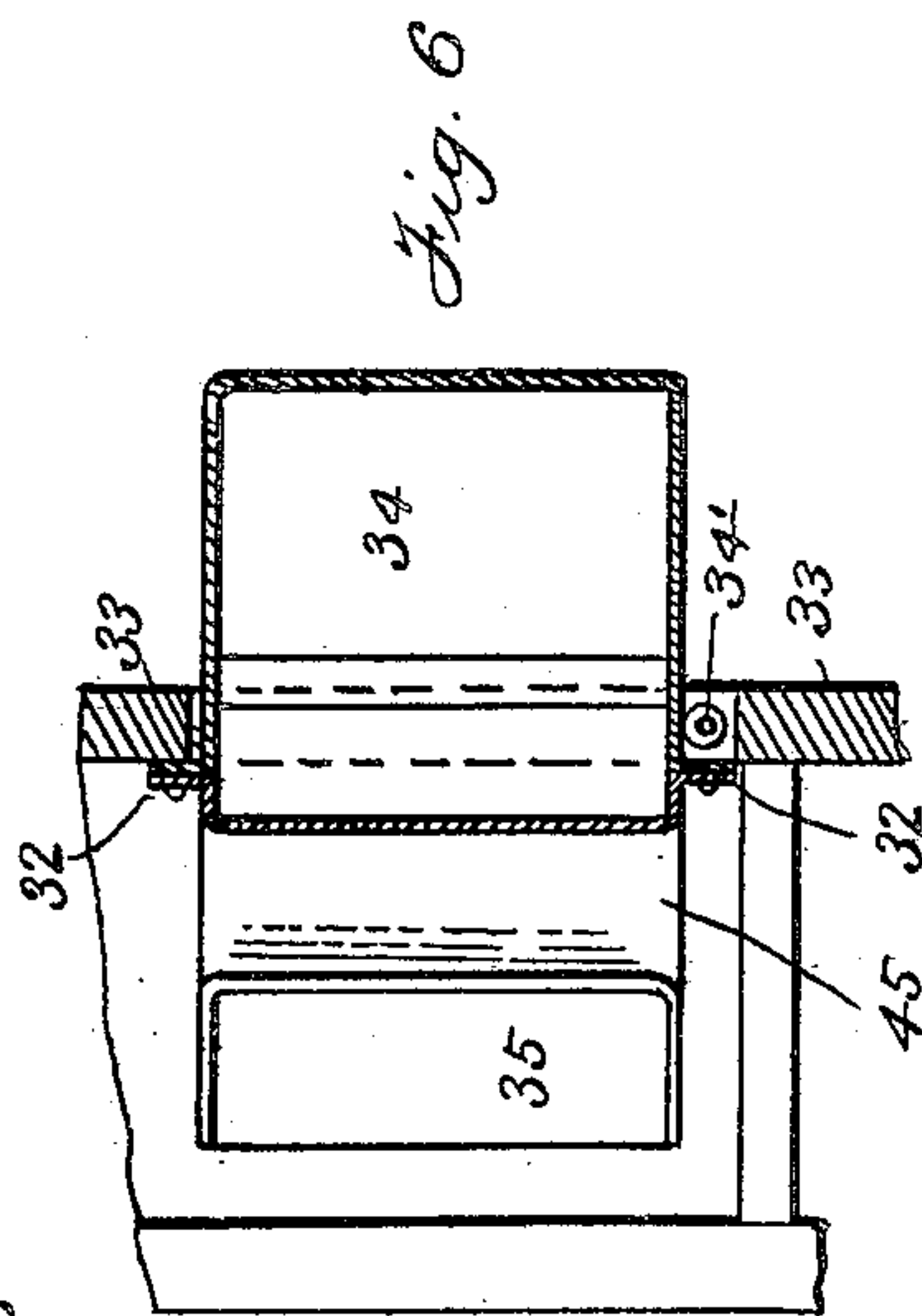
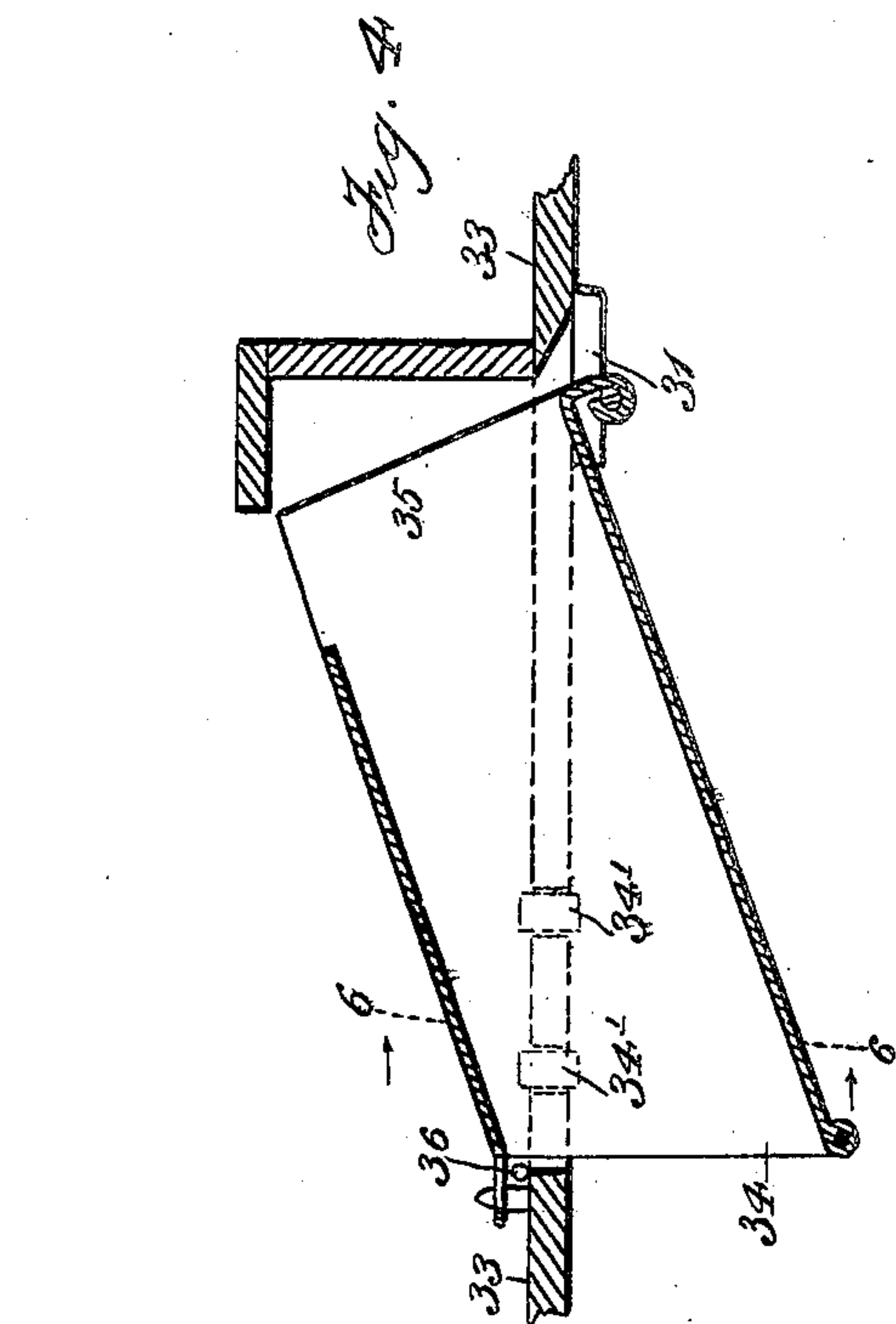
Inventor
Daniel W. Millsaps
By J. L. Duffie
Attorney

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3 SHEETS—SHEET 2.



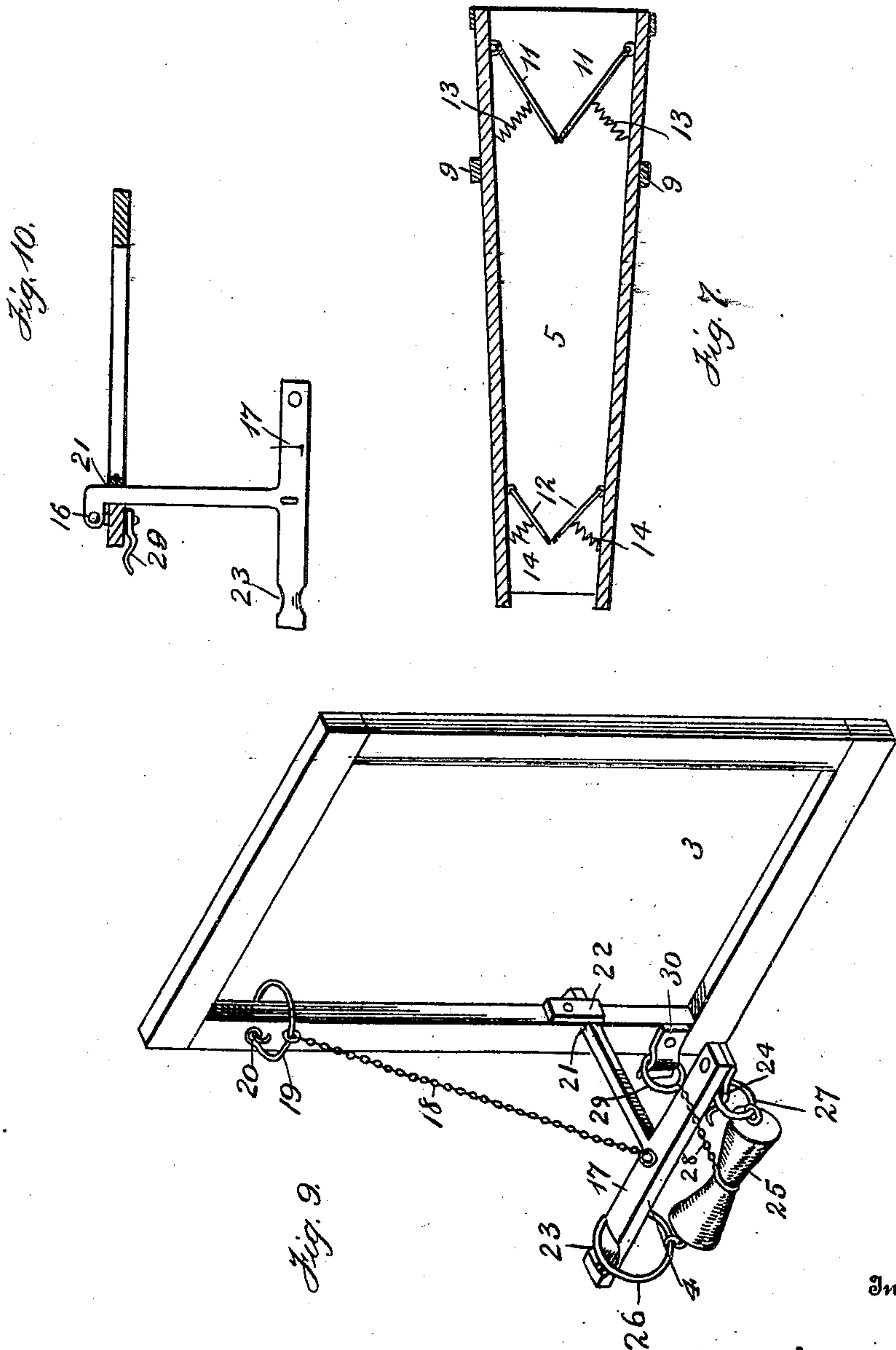
Witnesses
J. L. Orraud
R. P. Duffie, Fig. 5

Inventor
Daniel W. Millsaps
By J. S. Duffie
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3 SHEETS—SHEET 3.



Witnesses
F. L. Ourand,
R. R. Duffie,

Inventor
Daniel W. Millsaps
By John S. Duffie
Attorney

UNITED STATES PATENT OFFICE.

DANIEL W. MILLSAPS, OF LUMBERTON, NORTH CAROLINA.

MAIL-BAG DELIVERER AND RECEIVER.

No. 914,442.

Specification of Letters Patent.

Patented March 9, 1909.

Application filed July 22, 1908. Serial No. 444,805.

To all whom it may concern:

Be it known that I, DANIEL W. MILLSAPS, a citizen of the United States, residing at Lumberton, in the county of Robeson and State of North Carolina, have invented certain new and useful Improvements in Mail-Bag Deliverers and Receivers, of which the following is a specification.

My invention has relation to new and useful improvements in mail-bag delivering and catching apparatus, and has as one of its many objects to produce such a device as will be efficient in operation, thus lessening the number of mail-bags destroyed, at present, by the use of inefficient devices being employed for that purpose.

Men with brains have been experimenting for years to solve the problem of how mail-bags shall be delivered from trains running at a great speed. Every year thousands of mail-bags are destroyed by being drawn under the wheels of fast-flying trains by suction and literally ground to pieces. At the best the mail-bags get the roughest kind of handling and much of the mail becomes damaged.

The solution of the problem of safely delivering and catching mail-bags has been a considerable source of trouble and annoyance to the Postoffice Department; but at last I believe a device has been constructed, as herein described and claimed, that will deliver the mail to the ground and will receive the mail on board a mail-car without chance of injury to said mail-bag or its contents and without chance of the destruction of the same.

I have tested my device thoroughly and have found it to work with great efficiency, not missing the mail-bag used for the purpose of experiment a single time, said mail-bag also being uninjured in any respect.

With these and other objects in view, my invention consists of the novel construction and arrangement of parts as are hereinafter described in the following specification, illustrated in the accompanying drawings forming a part thereof, and particularly pointed out in the claims hereunto appended.

In the drawings:—Figure 1 is a side elevation of a railroad car, in connection with my delivering and catching apparatus. Fig. 2 is an end view of my improved apparatus one of the chutes being removed. Fig. 3 is a sectional view taken on the line 3—3 of Fig. 1, showing the receiving apparatus on the car,

out of operation. Fig. 4 is a sectional view of the receiving apparatus, in position to receive a mail-bag from the arms of the post whereto it is suspended. Fig. 5 is a view of the receiving apparatus, in a receiving position, viewed from the inside of the mail-car. Fig. 6 is a cross sectional view of the receiving apparatus on the line 6—6 of Fig. 4. Fig. 7 is a longitudinal, horizontal sectional view, of one of the chutes employed, disclosing the spring-held gates embodied therein. Fig. 8 is a vertical cross sectional view of the box into which the mail-bags are shot, parts of the chutes being broken away. Fig. 9 is a perspective view of the car-door, together with the T-arm, disclosing the manner of suspending a mail-bag therefrom. Fig. 10 is a horizontal, cross sectional view, showing the manner in which the T-arm is pivoted on the inside of said mail-car.

Referring more particularly to the accompanying drawings, my invention is described as follows:—The necessary mail-car 1, mounted on the track 2, has extending outwardly therefrom, just to one side of the car-door 3, the T-arm 4, said T-arm being for the purpose of holding a mail-bag in position so that it may be shot into the mouth of one of the chutes 5, as the train passes said chutes. The mail-bag on being caught by one of the chutes is conducted thereby into the lock-box 6, where it is safely held against theft, and protected from the elements. Said lock-box has in each of its end walls, openings sufficiently large to receive the small ends of said chutes 5, said chutes being supported and held substantially in position by means of the brace or cable 7, and being held against sudden jar by the braces 8, the upper ends of which are secured to the collars 9, of said chutes, their lower ends being nailed or bolted to the outwardly extending portions of the ties 10. Pivotaly connected to each of the side walls of said chutes are the gates 11 and 12, which are held in a normal position by means of springs 13 and 14. When said mail-bag is shot into the mouth of said chutes, it comes into contact with said gates 13 and 14, the resistance offered thereby substantially breaking its momentum. A portion 5¹, of the lower section of said chutes is cut away to allow water to drain therefrom in preference to passing into the lock-box. Secured in each of the lower edges of the lock-box, which are opposite the inner openings in said

chutes are headed springs 15, against which the mail-bag strikes on entering the lock-box preventing any damage being done to the same. When it is desired to remove the mail-bag from said lock-box, the door 6¹, swinging on hinges 6², is opened, it first being necessary to unlock the lock securely holding the door in closed position.

I will now proceed to describe the T-arm and the method of connecting a mail-bag thereto and disconnecting a mail-bag therefrom. The inner end of said T-arm is bent at right-angles to its main portion, it being pivotally connected to the inner wall of said car at 16. The cross piece 17, of said arm is either formed or secured to the outer end thereof. Substantially connected to said cross piece at its center is a chain 18, or its equivalent, said chain extending slantingly upward being connected to a ring 19, passes through a hole 20, cut through the frame of said car-door. A recess 21, is cut in the inner edge of one of the uprights of the car-door, wherein the T-arm fits when in a delivering position. Said arm is held in this position by means of a turn-button 22. The cross piece 17, has cut near one of its ends in its upper face a recess 23, and has secured to its under face at its opposite end a flat-spring 24.

Secured to either end of the mail-bag 25, are suitable rings of any desired size 26 and 27. Said ring 26, passes over one end of the cross piece 17, and is engaged by said recess 23. The ring 27, is engaged by the flat-spring 24. To prevent sidewise movement of the mail-bag, a chain 28, is secured to the center thereof, said chain having a ring 29, fastened to its other end, said ring being held in engagement by a flat-spring 30, secured to the outer surface of the frame of said car-door. When the mail-bag is engaged by the mouth of one of the chutes the ring 26, slips from said cross piece, the ring 27, slips from engagement with the flat-spring 24, said ring 29, slips from engagement with flat-spring 30, the mail-bag, rings and chain all passing into the mouth of one of the chutes, down into said lock-box.

Having described the delivering mechanism, I will now proceed to describe the receiving apparatus of my device:—The car has cut in one or both of its side walls, a sufficient distance above the T-arm to prevent interference therewith, a hole sufficiently large to allow my receiving apparatus to be installed therein. Said apparatus is pivotally mounted to blocks 31, secured to the outside of the side wall of said car. It is constructed of separate pieces of sheet iron, or other suitable metal, riveted or welded together, as shown at the line A—A, of Fig. 3, leaving the flanges 32, for the purpose of coming into contact with the inside of the said wall 33, of said car. The receiver is

provided with a mouth 34, where the mail-bag enters when it is caught by the receiving device on the car. There is a rear opening 35, in this device, through which passes the mail-bag in order that it may enter the car. This apparatus may assume two positions. It may be either in or out of receiving position. When it is in receiving position (Figs. 4, 5 and 6) the prop 36, is hanging normally at the side of the car and the wire hasp 37, having loops 38, is caused to hug the wall of said car by means of the turn-button 39, said loops 38, encircling pegs 40, in the car wall. When the apparatus is out of operation, (Fig. 3) the prop 36, is placed in engagement with said hasp, thus pressing the outer wall 41, of said receiver, firmly against the inwardly projecting portion 42, of said car wall 33. Rollers are journaled in suitable bearings in the car wall 33, whereon the lower wall of the receiving device travels while assuming different positions.

A stop wall 43, having the extension 44, secured or formed thereto and further provided with a shelf 45, is constructed just in rear of the opening 35, of said receiver, for the purpose of breaking the force of said mail-bag, or in other words, to prevent the same from flying around in the car. The mail-bag to be caught by said receiver is placed between the arms 46, of the upright 47, in substantially the same manner as most mail-bags are suspended. I reserve the right to suspend a mail-bag from said upright 25, in the same manner as a mail-bag is suspended from said T-arm.

The operation of my delivering and receiving apparatus is briefly explained as follows:—Mail-bags are suspended from the arms 46, of the upright and from the T-arm 4, of the mail-car, respectively, as described. The mail-car on passing the chutes, is caused to deposit therein the mail-bag suspended from the T-arm thereof. The mail-bag suspended from the arms of the upright 47, is received by the receiving apparatus on said car in substantially the same manner as just described, with the exception that the bag delivered, is delivered while being suspended in a horizontal position, and that received by the car is held in a vertical manner. Thus the operation of both of the mechanisms of my device, though they may be operated separately, work just as efficiently and without interference with one another, simultaneously.

My device as illustrated, though it is shown in its preferred form, is thus represented for illustrated purposes only, and therefore I may claim the right to make such slight changes in the construction and arrangement of the elements thereof, as will not sacrifice any of my patentable rights, and as will not depart from the spirit of my invention.

Though I have shown the chutes square I may claim the right to make them in any shape adapted for the purpose and manufacture them of any material that may be desired.

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

1. In a mail-bag receiving and delivering device, the combination of means to receive said mail-bag, means to deliver said mail-bag, said last-mentioned means consisting of a lock-box, having chutes extending from each of its end walls, said chutes extending outwardly and upwardly and being held securely in position by means of braces and supports, a mail-car having extending from its side wall a T-arm, adapted and for the purpose of holding a mail-bag in position to be shot into the mouth of one of said chutes, substantially as shown and described.

2. In a mail-bag receiving and delivering device, the combination of means to receive said mail-bag, means to deliver said mail-bag, said first-mentioned means consisting of a receiving apparatus, pivotally mounted to blocks secured to the outer surface of one of the side walls of said mail-car, and further adapted to swing in a suitable hole cut in one of the side walls of same, said receiving apparatus constructed of separate pieces of sheet-iron, riveted or welded together, so as to leave flanges running diagonally across said receiving apparatus, said flanges being adapted and for the purpose of engaging the wall of said mail-car, means to hold said receiving apparatus in a receiving position, means to hold said receiving apparatus out of operation, an upright having two arms extending therefrom at right-angles, adapted and for the purpose of holding a mail-bag in position to be received by said receiving apparatus, substantially as shown and described.

3. In a mail-bag receiving and delivering device, the combination of means to receive said mail-bag, means to deliver said mail-bag, said last-mentioned means consisting of a lock-box, having chutes extending from each of its end walls, said chutes extending outwardly and upwardly and being held securely in position by means of braces and supports, a mail-car having extending from its side wall a T-arm, said T-arm having a cross piece formed to its outer end adapted to hold a mail-bag in position to be received by one of said chutes, substantially as shown.

4. In a mail-bag receiving and delivering device, the combination of means to receive said mail-bag, means to deliver said mail-bag,

said first-mentioned means consisting of a receiving apparatus, pivotally mounted to blocks secured to the outer surface of one of the side walls of said mail-car, and further adapted to swing in a suitable hole cut in one of the side walls of same, said receiving apparatus constructed of separate pieces of sheet-iron, riveted or welded together, so as to leave flanges running diagonally across said receiving apparatus, said flanges being adapted and for the purpose of engaging the wall of said mail-car, means to hold said mail-bag out of operation, said means consisting of a prop connected to the inner surface of said car wall, said receiving apparatus having a wire hasp looped at both ends, said loops adapted to fit over inwardly projecting pegs of said car wall, said prop engaging said wire hasp, thus pressing the outer wall of said receiving apparatus firmly against the inwardly projecting portion of said car wall, means to hold said receiving apparatus in a receiving position, consisting of a turn-button adapted to engage said wire hasp when said receiving apparatus is in a receiving position, substantially as shown and described.

5. In a mail-bag receiving and delivering device, the combination of means to receive said mail-bag, means to deliver said mail-bag, said last-mentioned means consisting of a lock-box, having chutes extending therefrom in such position to receive a mail-bag, a mail-car, a T-arm extending from one of its side walls, a cross piece forming a part of said T-arm, said cross piece having a recess cut in the upper face of said cross piece near one of its ends, a flat spring secured near its opposite end on its under face, said recess and said flat spring being for the purpose of engaging rings secured to each end of the mail-bag, to hold the same in position to be received by one of said chutes.

6. In a mail-bag deliverer and catcher, a car, a flat spring secured to the frame of said car, said spring being adapted to temporarily engage a ring secured to the end of a chain which is in turn connected to a mail-bag.

7. In a mail-bag deliverer and catcher, a receiving apparatus adapted to assume different positions, rollers journaled in suitable bearings in the side wall of the mail-car, whereon said receiving apparatus travels.

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

DANIEL W. MILLSAPS.

Witnesses:

R. R. DUFFIE,
A. B. OWDEN.