

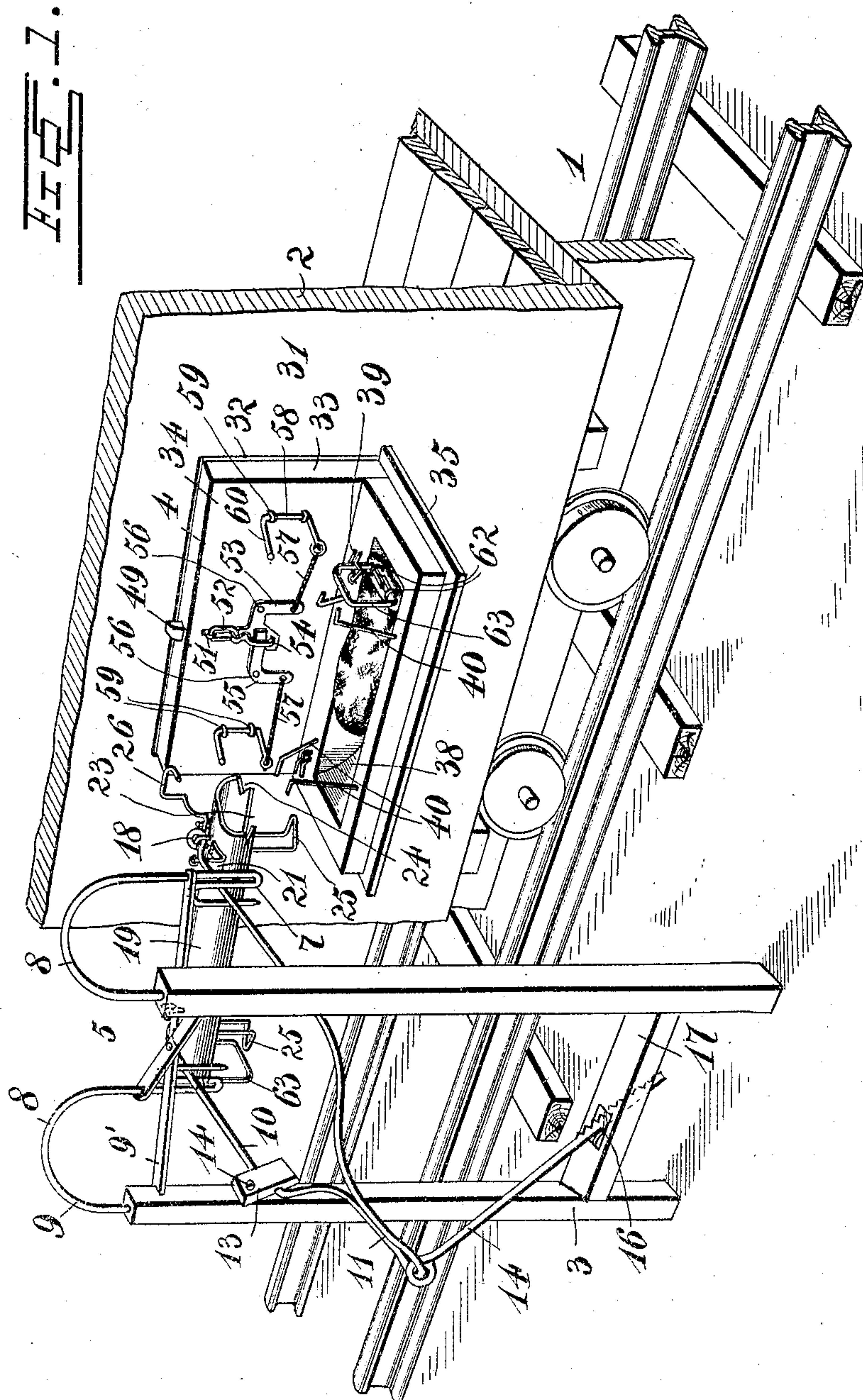
No. 775,517.

PATENTED NOV. 22, 1904.

W. D. BRIGGS.  
MAIL BAG DELIVERER.  
APPLICATION FILED AUG. 18, 1904.

NO MODEL.

3 SHEETS—SHEET 1.



Witnesses

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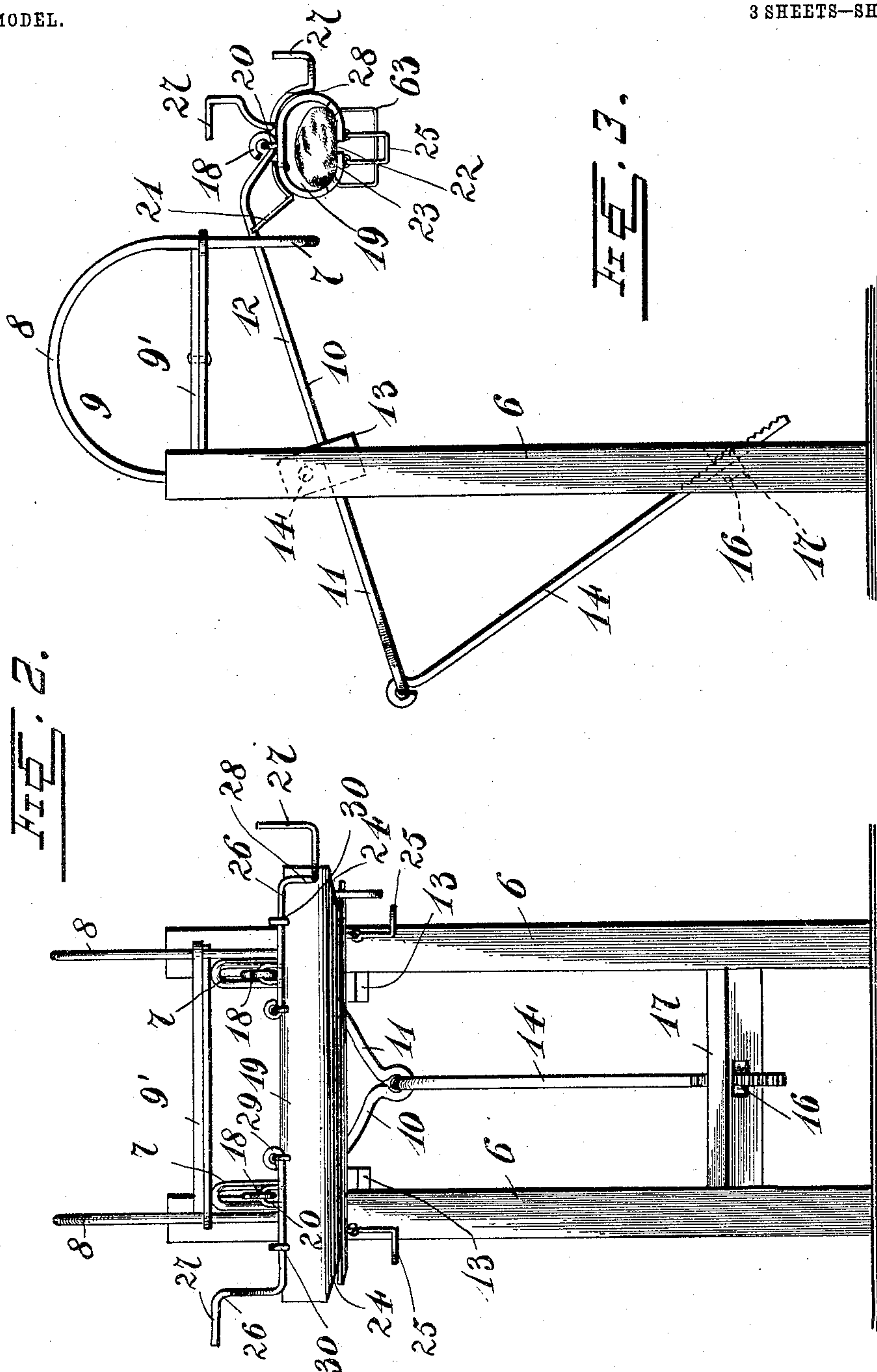
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3 SHEETS—SHEET 2.



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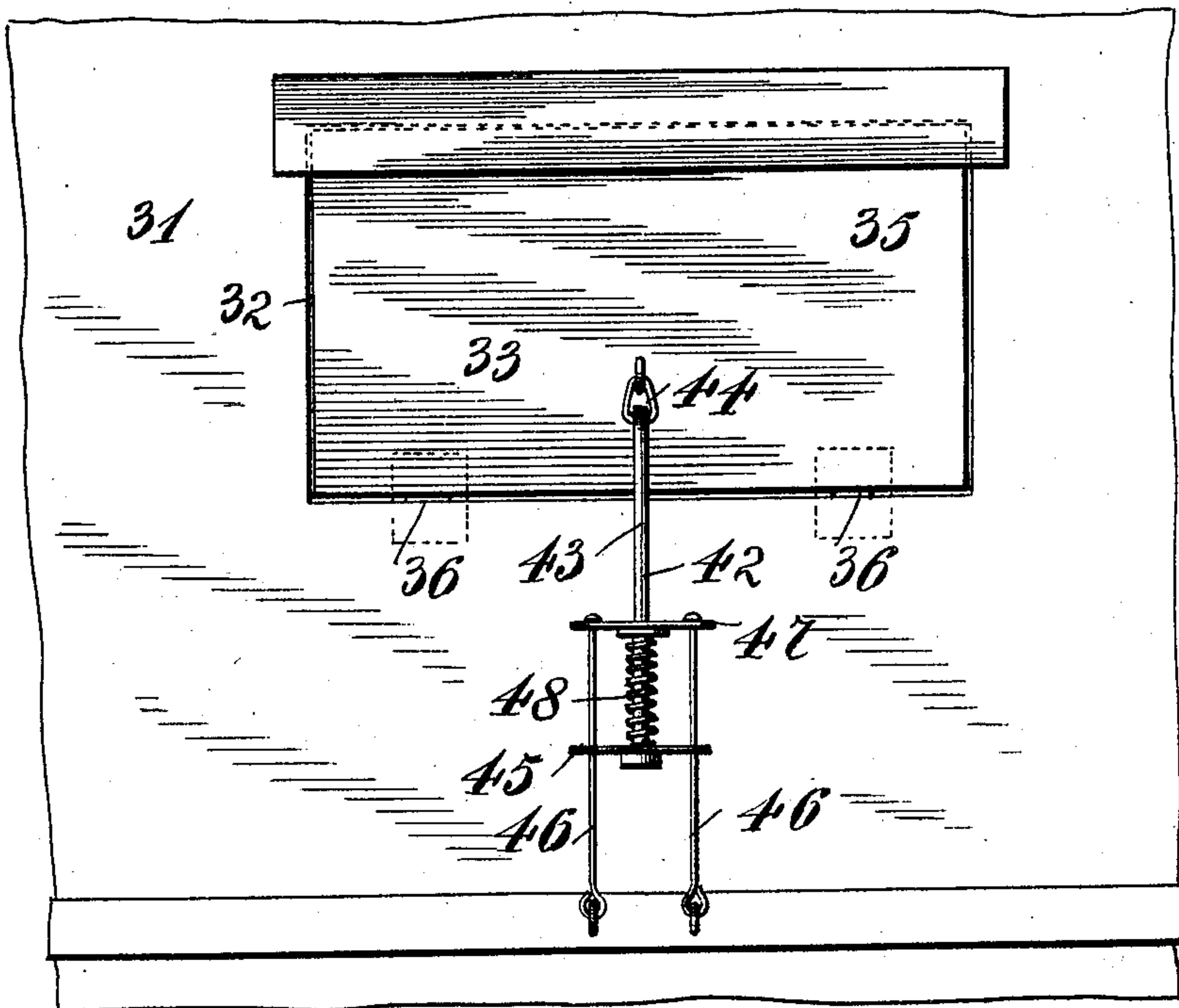
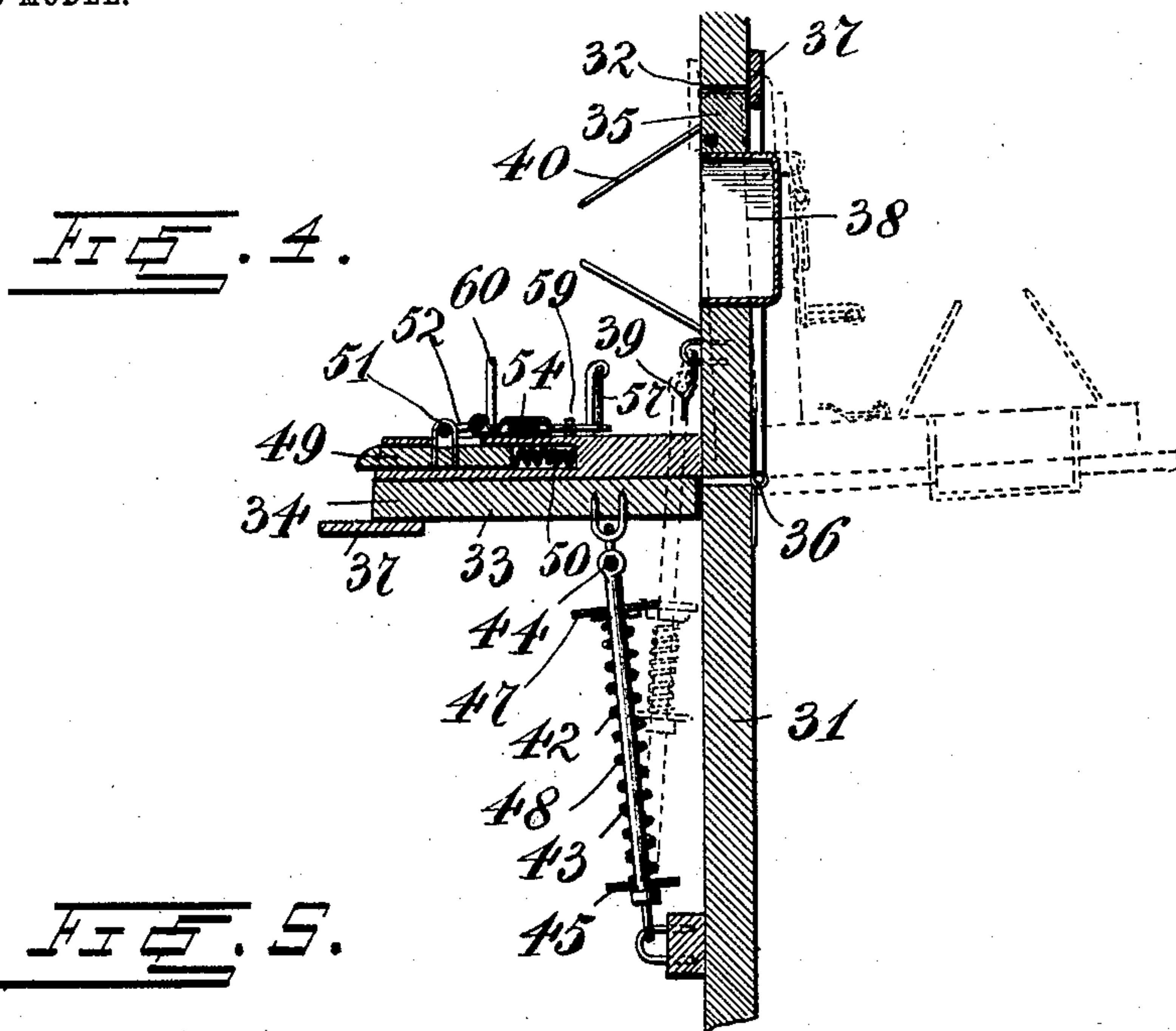
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NO MODEL.

3 SHEETS—SHEET 3.



Witnesses  
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# UNITED STATES PATENT OFFICE.

WARREN D. BRIGGS, OF SPRINGCREEK, PENNSYLVANIA.

## MAIL-BAG DELIVERER.

SPECIFICATION forming part of Letters Patent No. 775,517, dated November 22, 1904.

Application filed August 18, 1904. Serial No. 221,286. (No model.)

*To all whom it may concern:*

Be it known that I, WARREN D. BRIGGS, a citizen of the United States, residing at Springcreek, in the county of Warren and State of Pennsylvania, have invented certain new and useful Improvements in Mail-Bag Deliverers; and I 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.

My invention relates to improvements in mail-bag deliverers for railways; and it consists in the peculiar construction, combination, and arrangement of devices hereinafter fully described and claimed.

The object of my invention is to provide upon railway-cars and at railway-stations simple and efficient means for automatically picking up and depositing mail-bags as moving cars or trains pass said stations.

The above and other objects, which will appear as the nature of my invention is better understood, I attain by the construction illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of the apparatus embodying my invention. Fig. 2 is a front elevation of that portion of the apparatus mounted at a railroad-station. Fig. 3 is an end elevation of the same. Fig. 4 is a vertical sectional view through the side of a car, showing the mail-door in its closed position in full lines and in its opened position in dotted lines; and Fig. 5 is an elevation of the inner side of the car-wall, showing the mail-door mounted therein.

Referring to the drawings by numerals, 1 denotes a portion of the railroad-track, 2 a car mounted upon trucks which run upon said track, and 3 a stationary frame mounted alongside of said track. Upon said car and said frame are mounted coacting parts 4 and 5 of my improved mail-bag-delivery apparatus.

Upon said frame 3, which may be of any suitable construction, but which preferably comprises two vertical posts 6, are mounted vertically-disposed guides 7, formed, preferably, by bending metal rods 8 upon themselves, as clearly shown in Fig. 1 of the draw-

ings, said rods 8 being curved, as shown at 9, and secured to the upper portions of the posts 6 in any suitable manner. If desired, said rods may be strengthened by diagonal or crossed braces 9', which connect said rods and posts. Mounted to swing vertically upon said posts 6 is a frame 10, which is preferably formed by bending a heavy piece of metal rod upon itself at its center to form a rearwardly-projecting arm 11 and two forwardly-projecting arms 12, which are adapted to swing in guides 7. As shown, the mounting of said frame 10 is effected by securing the inner ends of the arms 12 in blocks 13, which are pivoted, as shown at 14, upon the inner faces of the posts 6, so that by raising and lowering the rearwardly-projecting arm 11 the forward ends of the arms 12 may be swung vertically in their guides. The swinging frame 10 may be secured in an adjusted position by any suitable means; but I preferably provide an adjusting-link 14, the upper end of which is pivotally engaged with the rear end of the arm 11 and the lower end of which is adjustably secured, as shown at 16, to a cross-bar 17, connecting the posts 6. The adjustable connection 16 may be of any suitable form; but I preferably form the lower end of the link or rod 15 with a series of notches or teeth which are adapted to engage the sides of an opening formed in the cross-bar 17 and through which the lower end of said link 15 extends.

Upon the outer ends of the forwardly-projecting arms 12, which are formed with eyes 18, is pivotally suspended a tubular mail-bag holder 19. As shown, said holder is suspended by providing the same upon its upper side with loops or eyes 20, which engage said eyes 18, so that said holder is permitted to swing in the vertical plane independently of the swinging movement of the frame 10. The inward-swinging movement of the holder is limited by one or more stop-plates 21, secured upon the upper side of the holder and formed with bifurcated rear ends which are adapted to engage the arms 12, as seen in Fig. 3 of the drawings. Said holder consists of a tubular body open at both of its ends and formed upon its under side with a longi-



itudinally-disposed slot or opening 22. At each end of said holder upon its under side is formed a V-shaped opening or cut-away portion 23, the smaller end of which opens into the slot 22. At the large end of said V-shaped opening are formed slots or recesses 24 for a purpose presently explained.

Upon the under side of the holder 19 adjacent to each of its ends is a mail-bag-engaging hook or device 25, which is here shown in the form of a metal rod bent upon itself to form a hook and having its ends mounted in staples or eyes provided upon the under side of the holder and upon opposite sides of the slot 22. Said hooks on the opposite ends of the holder project in the opposite direction and are adapted to engage mail-bags carried upon the apparatus 4, which is mounted upon the car, one of said hooks picking up the mail-bag when the car travels in one direction and the other of said hooks picking up the bag when the car travels in the opposite direction.

Upon the upper side of the holder 19 adjacent to each of its ends is an outwardly and forwardly extending trip device 26. As shown, said trip device consists of a rod bent, as shown, to form a vertically-disposed arm 27 and a horizontally-disposed curved portion 28, which is adapted to rest upon the upper side of the holder 19 and which has its inner or rear end pivotally mounted, as shown at 29. By mounting the trip in this manner it may be swung up over the top of the holder in an inoperative position, and in its lowered or operative position it is supported by a stud or the like 30; but one of said stops is normally in its operative position, according to the direction in which the car 2 travels.

In each of the side walls 31 of the car 2 is formed a longitudinally-disposed opening 32, which is adapted to be closed by a swinging door 33. Said door preferably comprises two right-angularly-disposed portions 34 and 35 of slightly less size than said opening 32 and is hinged at its angle, as shown at 36, to the lower edge of said opening, so that either one or the other of the portions 34 and 35 is adapted to close the opening 32. Both of said portions 34 and 35, which swing in a vertical plane, are formed with stop-flanges 37, which limit the swinging movement of the door. When this angle-door is in the position shown in Fig. 1, the portion 34 serves as a false door to close the opening 32 and the door proper, 35, projects laterally from the car and serves as a mail-bag support. Said portion 35 is formed with a longitudinally-disposed mail-bag pocket or recess 38 and adjacent to the opposite ends of said pocket are provided spring-catches or holders 39, which are pivotally secured upon the upper side of the portion 35. Upon said portion 35 adjacent to said catches and upon opposite sides of said pocket are pairs of upwardly-extending hooks 40,

which are adapted to engage a mail-bag supported by a holder 19. Said hooks 40 are spaced apart to permit the hooks upon the holder 19 to pass between. The angle-door is adapted to be held normally in its closed position by a spring device 42, disposed upon the inside of the wall 31 of the car. Said device 42 preferably comprises a rod 43, pivotally connected, as at 44, to the portion 34 of the door at a point eccentric to its hinge and having fixed to its lower end an apertured cross-bar 45, through the openings in which project links 46. Said links have their upper ends connected by a cross-piece 47, in which the rod 43 slides and their lower ends secured to the side of the car. Mounted upon the bar 43 between the cross-pieces 45 and 47 is a coiled spring 48, which is adapted to force the rod 43 downwardly to swing the door to its closed position. The door is adapted to be held in its open position by a latch device 49, which comprises a sliding bar mounted in an opening formed in the portion 34 of the door and forced outwardly by a spring 50. Upon said spring-actuated latch-bar 49 is an eye 51, which projects through a slot formed in the outer face of the portion 34. Said eye is connected by a link 52 to one end of a bell-crank lever 53, which has formed upon said end a loop or bail 54, through which one end of a similar bell-crank lever 55 extends. Said bell-crank levers are pivoted, as at 56, and have their opposite ends connected by cord or other flexible connections 57 to the lower end of operating-levers 58, which are mounted, by means of eyes 59, to swing in a horizontal plane upon the outer face of the portion 34 of the door. The upper portions of said levers are formed with downwardly-projecting arms 60, which project into the path of the arms 27 upon the trip devices 26, carried by the mail-bag holder 19. It will be seen that when one of the levers 58 is forced outwardly and rearwardly by one of the trips 26 one of the bell-crank levers, 53 or 55, will depress the latch-bar 49 to release the door and permit the spring device 42 to swing the door to its closed position, which is shown in dotted lines in Fig. 4 of the drawings.

The mail-bags 61 used in connection with my improved apparatus are provided with eyes 62, adjacent to opposite ends of the mouths or openings, and engaged with said eyes are the partially-overlapping ends of a loop or bail 63, which is preferably rectangular in shape and made of spring metal. The mail-bag to be delivered by the passing car to the railway-station is placed longitudinally in the pocket 38 of the portion 35 of the car-door, with its bail 63 disposed at right angles and supported by one of the spring-catches 39. Said mail-bag is placed in this position while the door is in its closed position, and when the latter is secured in its open position said bail of the mail-bag will project in a vertical



plane and will lie in the path of the depending hook upon the mail-bag holder 19. The mail-bag to be picked up by the moving car is placed longitudinally in the proper end of the tubular holder 19, with the bail 63 of said holder engaging the recesses 24 formed therein and projecting downwardly in a vertical plane and in the path of the hooks upon the portion 35 of the door.

10 The operation of the apparatus is as follows: When the parts of the apparatus are in the position shown in Fig. 1 of the drawings and the car is moved past the frame 3, the portion 35 of the car-door moves beneath the tubular holder 19 upon the frame 3. As the foremost hooks 40 pass under the rear end of the holder 19 they engage the depending bail 63 of the mail-bag in the rear end of the holder 19 and draw said mail-bag out of the same, the mail-bag falling into the pocket 38, and at the same time the foremost hook 25 upon the under side of the holder engages the upwardly-projecting bail upon the mail-bag which has been placed in the pocket 38 and draws said mail-bag out of the pocket as the train moves past. As soon as the car-door clears the holder 19 the arm 27 upon the trip device 26 will engage and operate the rear lever 58 upon the car-door, which lever will operate the spring-latch to release the door and permit the spring device 42 to swing the door to its closed position and throw the mail-bag which has been deposited in the pocket 38 into the car. The mail-bag which has been picked up by the hook upon the holder 19 is left suspended beneath the same and may be readily reached by lowering the swinging frame 10 by means of the rod 15. When the car moves in the opposite direction, the mail-bags are placed at the opposite ends of the holder 19 and the pocket 38 and the catches and trips upon the opposite ends of the same are used.

It will be seen that the device is of simple and durable construction and that it is certain in operation. The mail-bags when supported in the holder 19 are entirely projected and as soon as deposited in the pocket of the car-door are automatically delivered by the latter into the car.

50 From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

55 Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

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

1. The combination with the mail-bag-catching means carried by a car and adapted to swing vertically into and out of the same, of

a relatively fixed means for operating said mail-bag-catching means to swing the latter into the car after a mail-bag has been deposited upon it, substantially as described.

2. The combination with a mail-bag-catching means carried by a car and movable into and out of the same, of means for automatically moving said mail-bag-catching means into and out of the car after a mail-bag has been caught by the same, substantially as described.

3. The combination of a self-closing element mounted upon the car and movable into and out of the same, a mail-bag-catching means mounted upon said element, a latch device for holding said element in its opened position, and a trip device located along the track for releasing said latch device, substantially as described.

4. The combination of a mail-bag-suspending device located adjacent to a car-track, an element mounted upon a car and movable into and out of the same, a spring for closing said element, a mail-bag-catching means mounted upon said element, a spring-actuated latch for holding said element in its opened position, and a trip upon said mail-bag-suspending means for operating said spring-actuated latch to release said element, substantially as described.

5. The combination of a car having a vertically-swinging angle-door provided with a mail-bag-catching means, means for closing said door, means for holding said door in its opened position, and means for releasing said holding means, substantially as described.

6. The combination of a car having a vertically-swinging spring-closed angle-door provided with mail-bag-catching means, a spring-operated latch for holding said door in its opened position, a lever for operating said latch to release said door, and a trip located adjacent to the car-track for operating said lever, substantially as described.

7. The combination with a mail-bag-catching means carried by a car, of a tubular mail-bag holder suspended over the path of said mail-bag-catching means, substantially as described.

8. The combination of a mail-bag-catching means carried by a car, of a longitudinally-disposed tubular mail-bag holder suspended over the path of said mail-bag-catching means, and means for adjusting said holder, substantially as described.

9. The combination of a stationary frame mounted adjacent to a car-track and provided with a guide, a swinging frame pivotally mounted upon said stationary frame to swing vertically in its guide, means for adjusting said swinging frame, and a mail-bag-suspending device carried by said swinging frame, substantially as described.

10. The combination with a suitable frame disposed adjacent to a car-track, of a tubular mail-bag holder mounted to swing upon said



frame, and a stop for limiting the swinging movement of said holder, substantially as described.

5 11. The combination of a car having a laterally-projecting support, a hook upon said support, a tubular mail-bag holder suspended over the path of said support, and a mail-bag in said holder adapted to project into the path of said hook, substantially as described.

10 12. The combination with a mail-bag having a swinging bail, of a support upon a car for holding said mail-bag in horizontal position, and means upon said support for holding the bail of said bag in a vertical position, substantially as described.

15 13. The combination with a mail-bag having a swinging bail, of a laterally-projecting support upon a car adapted to hold a mail-bag, means for holding the bail of said bag

in a vertical plane, and a hook suspended adjacent to the car-track in the path of the bail of said mail-bag, substantially as described. 20

14. The combination with a mail-bag having a swinging bail, of a tubular holder suspended adjacent to a car-track and adapted to 25 receive said mail-bag, said holder having one of its ends open and provided with projections to engage the bail of said mail-bag and hold the same in a vertical plane, substantially as described. 30

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

WARREN D. BRIGGS.

Witnesses:

ALTON P. MEAD,  
DELLAH BROWN.