

APPLICATION FILED JAN. 9, 1908.

3 SHEETS—SHEET 1.



A. A. Hammond.

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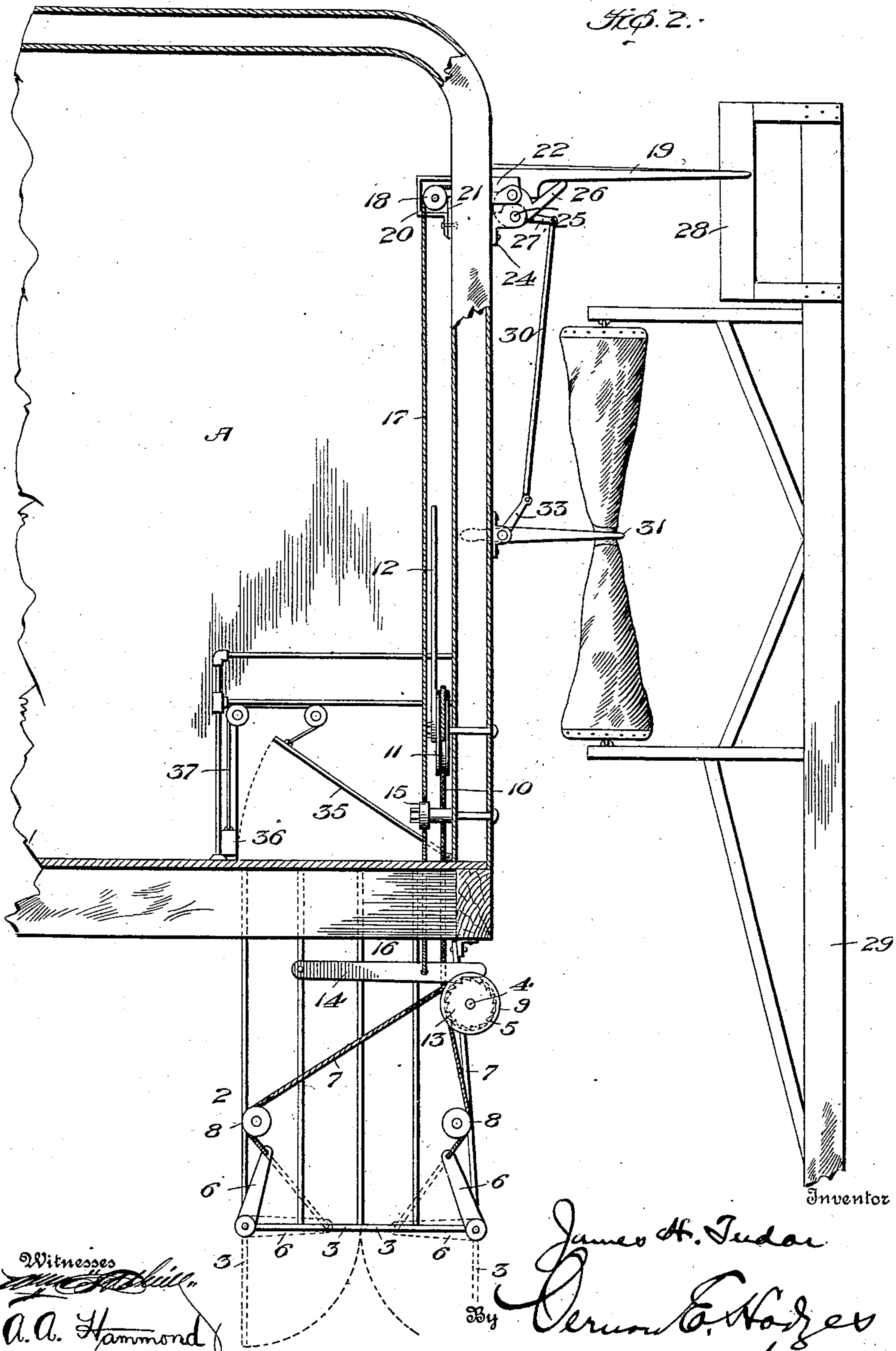
James H. Tudor
Ernest E. Hodges
his Attorney

J. H. TUDOR.
MAIL DELIVERING APPARATUS.
APPLICATION FILED JAN. 9, 1909.

914,899.

Patented Mar. 9, 1909.
3 SHEETS—SHEET 2.

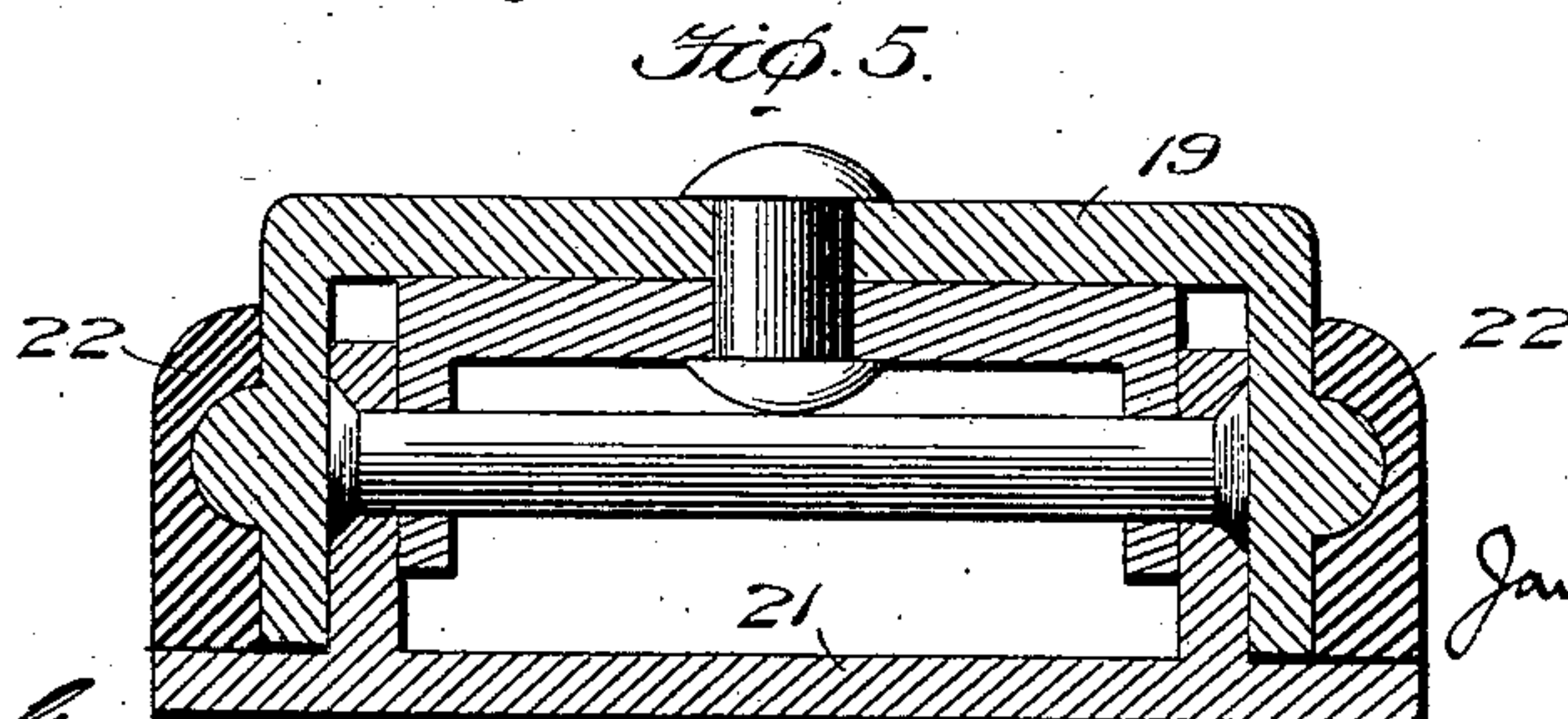
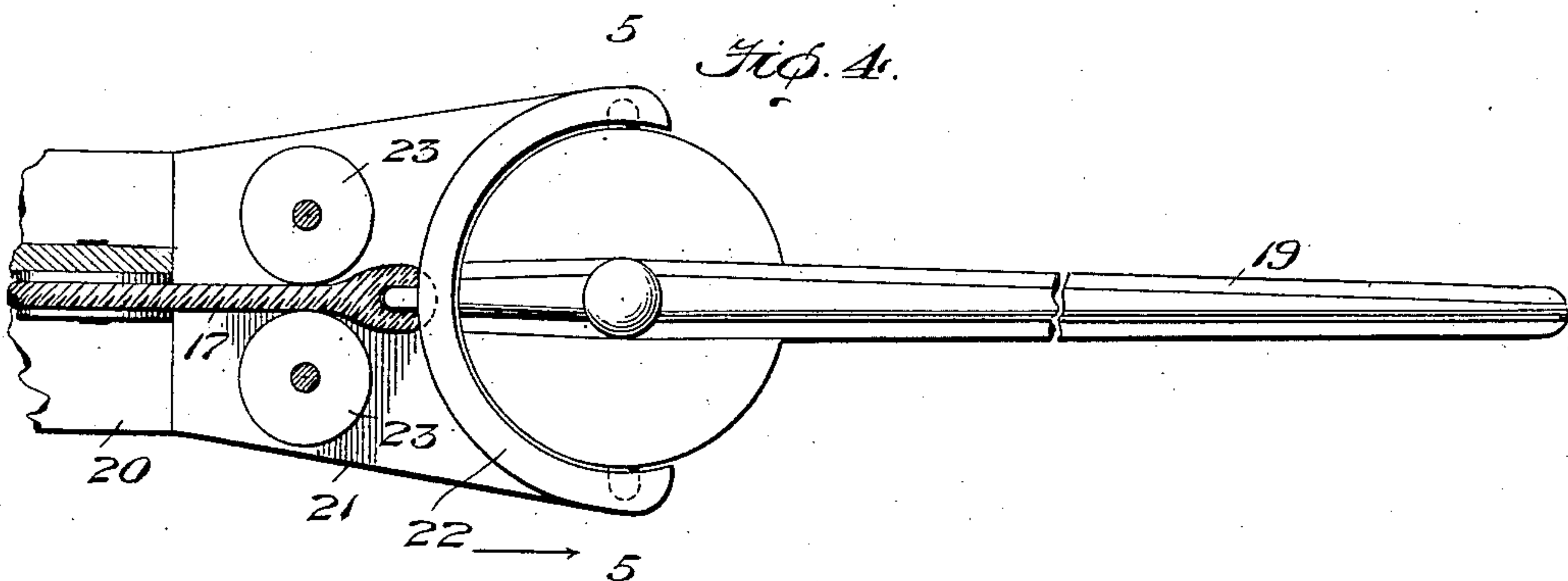
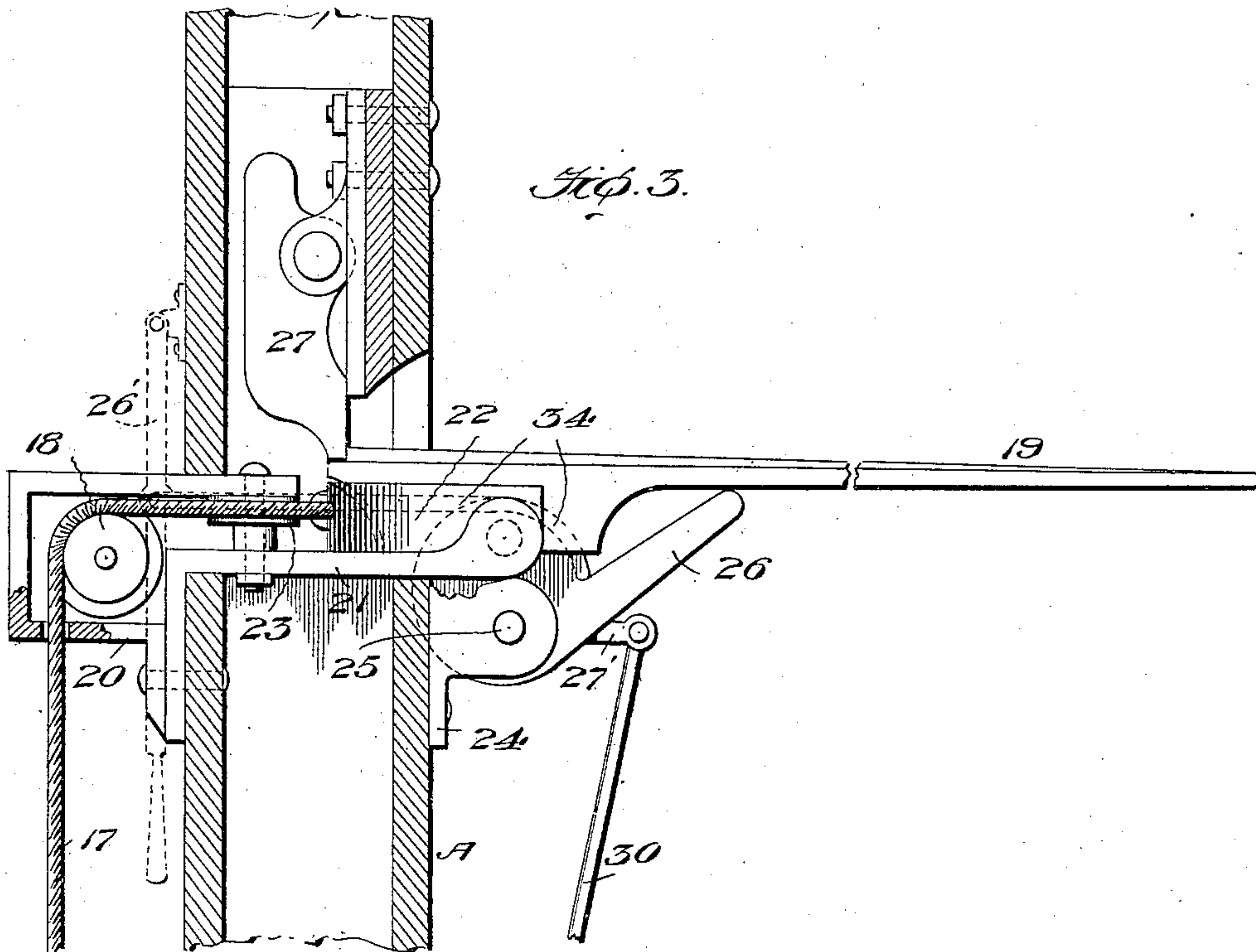
Fig. 2.



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Witnesses
A. A. Hammond

Inventor
James H. Tudor
By *Vernon E. Hodge*
his Attorney

UNITED STATES PATENT OFFICE.

JAMES H. TUDOR, OF LEXINGTON, KENTUCKY, ASSIGNOR OF ONE-FOURTH TO L. M. MOORE,
OF LEXINGTON, KENTUCKY.

MAIL-DELIVERING APPARATUS.

No. 914,899.

Specification of Letters Patent.

Patented March 9, 1909.

Application filed January 9, 1909. Serial No. 471,509.

To all whom it may concern:

Be it known that I, JAMES H. TUDOR, a citizen of the United States, residing at Lexington, in the county of Fayette and State of Kentucky, have invented certain new and useful Improvements in Mail-Delivering Apparatus, of which the following is a specification.

My invention relates to an improvement in mail delivering apparatus, and the object is to provide means for discharging mail from a moving train. A receptacle is provided on the car, the bottom of which is opened by a tripping mechanism, which is actuated by coming in contact with an obstruction which is provided for releasing it.

The invention consists of certain novel features of construction and combinations of parts which will be hereinafter described and pointed out in the claims.

In the accompanying drawings—Figure 1 is a view in side elevation showing my invention applied to a car and certain parts of the car broken away to disclose certain parts of the mechanism; Fig. 2 is an enlarged side elevation partly in section of a portion of the car; Fig. 3 is a detail of the tripping arm and cooperating parts; Fig. 4 is a top plan view of the tripping arm and plate and Fig. 5 is an enlarged cross section on the line 5, 5 of Fig. 4.

A, represents a portion of a car which is provided with an opening through the floor thereof and along the side of the car, and beneath this opening is a metal box 2, which is constructed in any suitable manner and is provided with a hinged bottom consisting of two swinging doors 3, 3 which are adapted to swing from the sides of the box toward the middle.

A shaft 4 is supported from the body of the car and along the front of the box 2, and is provided with winding drums 5, 5. Arms 6 are connected to the doors 3 at each end of the box and connected to the arms are chains or ropes 7, 7, which are adapted to pass around pulleys 8, 8 on the ends of the box to the winding drums 5, 5. A pulley 9 is journaled to the shaft 4, and connected to the pulley is a chain or rope 10, which passes around a grooved wheel 11 mounted on one

side of the car. A lever 12 is connected to the wheel 11 for rotating it to cause the shaft 4 to rotate for winding up the chains upon the drums 5, 5 for closing the bottom of the box. A ratchet wheel 13 is mounted on the shaft 4, and a pawl 14 pivoted on one end of the box is adapted to engage the ratchet wheel for holding the shaft against rotation and retaining the bottom of the box in closed position. A lever 15 is pivoted to one side of the car and connecting the lever and pawl is a chain 16. A chain 17 connects the free end of the lever 15 extending upwardly over a pulley 18 journaled in a frame 20 on the wall or side of the car. An opening is formed through the frame of the car through which the frame 20 extends, and pivotally mounted upon the frame is a plate 21.

Pivotally mounted upon the plate is a trip arm 19. A yoke 22 is pivotally connected to the trip arm 19, and connected to the yoke is the chain or cable 17. The cable or chain after passing over the pulley 18 passes between rollers 23 mounted in the frame 20 before it is connected to the yoke 22. This connection of the trip arm permits of the pawl being raised when the arm is struck, causing it to swing upon the frame 20 carrying the yoke 22, which draws the chain 17 upward, causing the pawl to be raised from engagement with the ratchet wheel 13 through the lever 15 and chain 16. As the trip arm is swung rearward to the moving train and is drawn out of contact with the dog 27 pivoted to the frame or side of the car, which dogs are adapted to engage the inner end of the arm when in upright position, it will swing downwardly alongside the car, due to its pivotal connection with the plate 21, and the yoke 22 will return to its normal position allowing the pawl to be released. When the trip arm 19 is actuated causing the pawl to be drawn from engagement with the ratchet wheel 13 the shaft 4 will revolve due to the weight of the doors 3 and the mail sacks resting thereupon, causing them to swing downward and discharge the contents of the box, or the mail sacks, into a receptacle C provided for their reception alongside the track.

An upright or frame 28 is connected to a

post 29 of the mail crane, which is placed alongside the track in the usual manner and is adapted to come in contact with the trip arm for actuating it.

5 A shaft 25 is journaled in brackets 24, 24, and mounted on the shaft is a lever 26, which is beneath the arm 19. A crank arm 27 is mounted on the shaft 25, and connected to the crank arm is a rod 30. A catcher arm 31
10 is mounted across a door 32 of the car, and a crank arm 33 is connected to the catcher arm, and connected to the crank arm is the rod 30. As the operator places the catcher
15 arm in position to catch the sack from the crane along the track, the rod 30 is actuated through the crank arm 33, which in turn rotates the shaft 25, causing the lever 26 to
20 raise the trip arm 19 and bring it into position to be operated by the upright or frame 28. Another means for setting the trip arm in position would be by having a chain or
25 cable 34 connected to the lever 26 and passing between suitable pulleys to a lever 26' in the car, where the mail clerk could pull upon the chain causing the lever to be operated for
raising the trip arm and bring it into its proper position.

A swinging door 35 is hinged to one side of the car and is connected to weights 36 by
30 ropes 37, whereby it is raised and lowered. The door is adapted to close the opening in the bottom of the car.

More or less slight changes might be made in the form and arrangement of the several
35 parts described without departing from the spirit and scope of my invention, and hence I do not wish to be limited to the exact construction herein set forth, but:—

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

1. In an apparatus for delivering mail, the combination with a car, of a box mounted
45 on the car, doors on the box, tripping mechanism, means connecting the tripping mechanism and doors and means for oscillating the tripping machine whereby the doors are opened.

2. In an apparatus for delivering mail, the
50 combination with a car, of a delivery box mounted on the car, doors on the box, means for closing the doors of the box, a trip arm, means connecting the trip arm and doors and means for oscillating the trip arm
55 whereby the doors are opened.

3. In an apparatus for delivering mail, the combination with a car, of a delivery box
60 mounted on the car, doors on the box, a shaft, means connecting the shaft and doors, means for operating the shaft for closing the doors, a trip arm, means connecting the trip arm and shaft and means for operating the trip arm whereby the shaft is operated

thereby releasing the doors and permitting them to open. 65

4. In an apparatus for delivering mail, the combination with a car, of a delivery box
70 mounted thereon, doors on the box, a trip arm, means connecting the trip arm and doors whereby the doors are actuated upon the operation of the trip arm, and means for setting the trip arm in position to be operated.

5. In an apparatus for delivering mail, the combination with a car, of a delivery box
75 mounted thereon, doors on the box, a trip arm pivotally mounted on the car, means connecting the trip arm and doors and means for operating the arm whereby the doors are opened. 80

6. In an apparatus for delivering mail, the combination with a car, of a delivery box
85 mounted on the car, doors on the box, a frame, a trip arm pivotally mounted on the frame, a secondary frame for operating the arm, and means connecting the trip arm and doors.

7. In an apparatus for delivering mail, the combination with a car, of a box, doors on
90 the box, a frame, a trip arm mounted on the frame and having a pivotal and oscillating movement, and means connecting the doors and arm.

8. In an apparatus for delivering mail, the combination with a car, of a box mounted
95 on the car, doors on the box, a shaft, means connecting the shaft and doors, a lever connected to the shaft for operating the shaft to close the doors, pawl and ratchet connection for holding the shaft against rotation, a trip
100 arm pivotally mounted on the car, a yoke pivotally connected to the trip arm, and means connecting the yoke with the pawl for releasing the shaft and permitting the doors to open upon the operation of the trip
105 arm.

9. In an apparatus for delivering mail, the combination with a car, of a box mounted
110 thereon, doors on the box, a trip arm pivotally mounted on the car, a yoke pivotally connected to the trip arm, means connecting the yoke and doors, and means adapted to engage the trip arm for holding it in operative position.

10. In an apparatus for delivering mail, the combination with a car, of a box mounted
115 thereon having doors, a trip arm, means connecting the trip arm and doors, a catcher arm, a lever adapted to engage the trip arm, means connecting the lever and catcher arm
120 whereby the trip arm is brought to operative position when the catcher arm is brought into position to catch the mail sacks.

11. In an apparatus for delivering mail, the combination with a car, of a box, doors
125 on the box, a trip arm, means connecting the

trip arm and doors, a dog for holding the arm in position and means for operating the arm whereby the doors are opened.

12. In an apparatus for delivering mail, the combination with a car, of a box, doors on the box, a pivotal and oscillating trip arm, a dog for holding the arm in operative position, means connecting the arm and doors, and means for operating the arm

whereby it is oscillated releasing it from engagement with the dog and thereby permitting the doors to open.

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

J. H. TUDOR.

Witnesses:

HOWARD GUNN,
WM. O. LEE.

It is hereby certified that in Letters Patent No. 914,899, granted March 9, 1909, upon the application of James H. Tudor, of Lexington, Kentucky, for an improvement in "Mail-Delivery Apparatus," errors appear in the printed specification requiring correction, as follows: In line 47, page 2, the word "machine" should read *mechanism*, and in line 79, same page, the word "operating" should read *oscillating*; and that the said Letters Patent should be read with these corrections therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 6th day of April, A. D., 1909.

[SEAL.]

C. C. BILLINGS,
Acting Commissioner of Patents.