

No. 843,129.

PATENTED FEB. 5, 1907.

N. K. BOWMAN.
MAIL DELIVERER.

APPLICATION FILED JUNE 11, 1906.

FIG. 1.

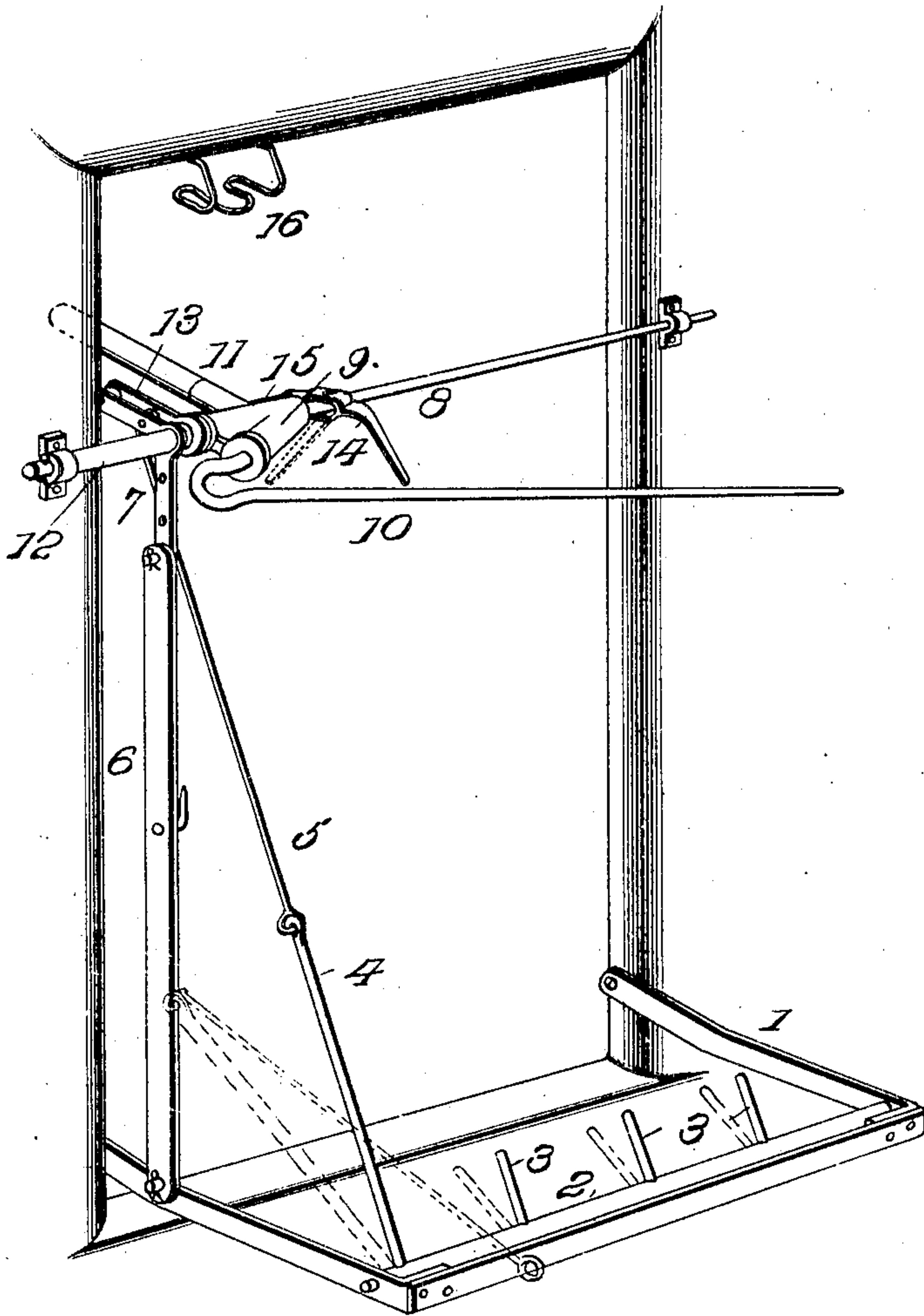


FIG. 2.

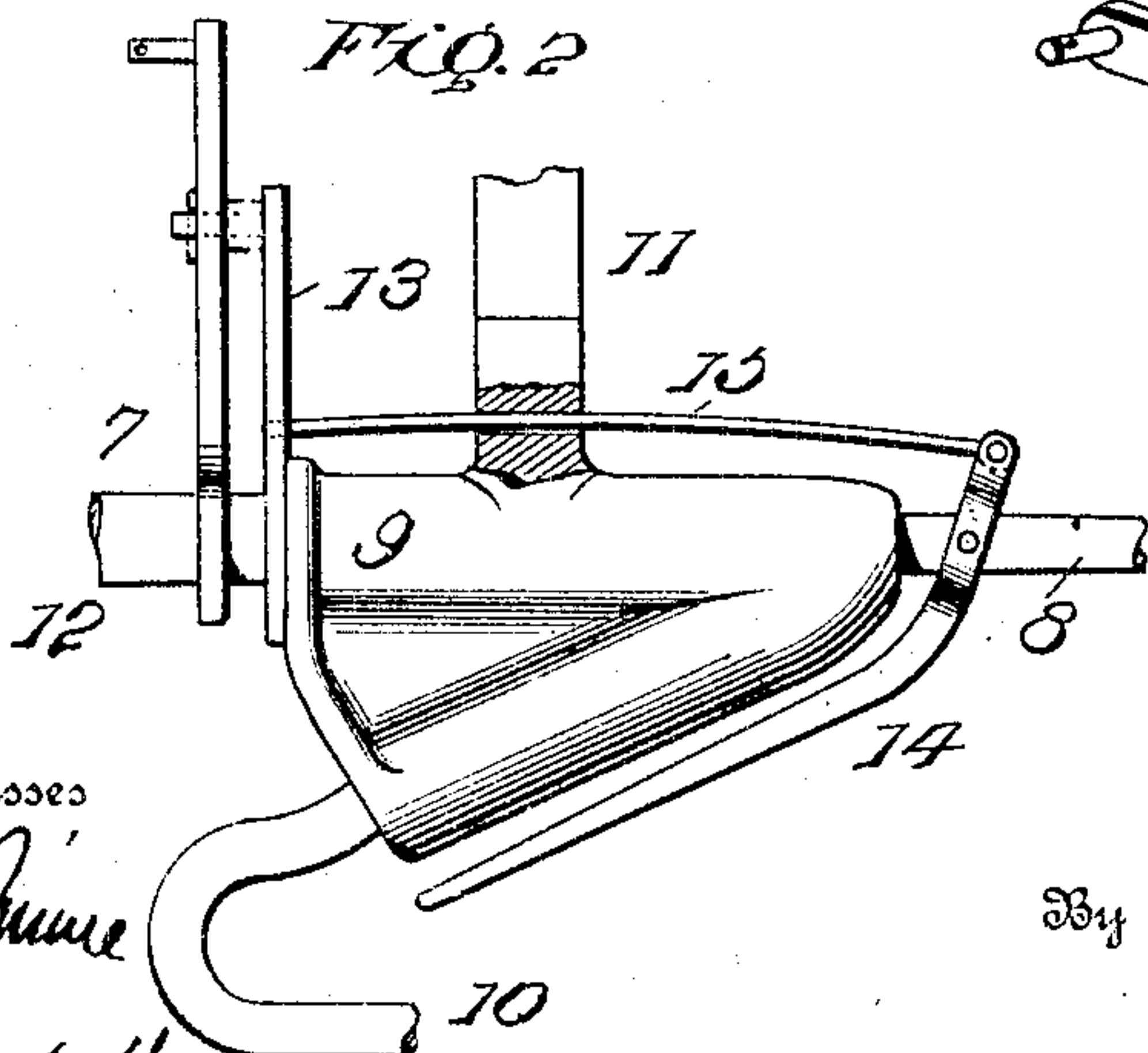
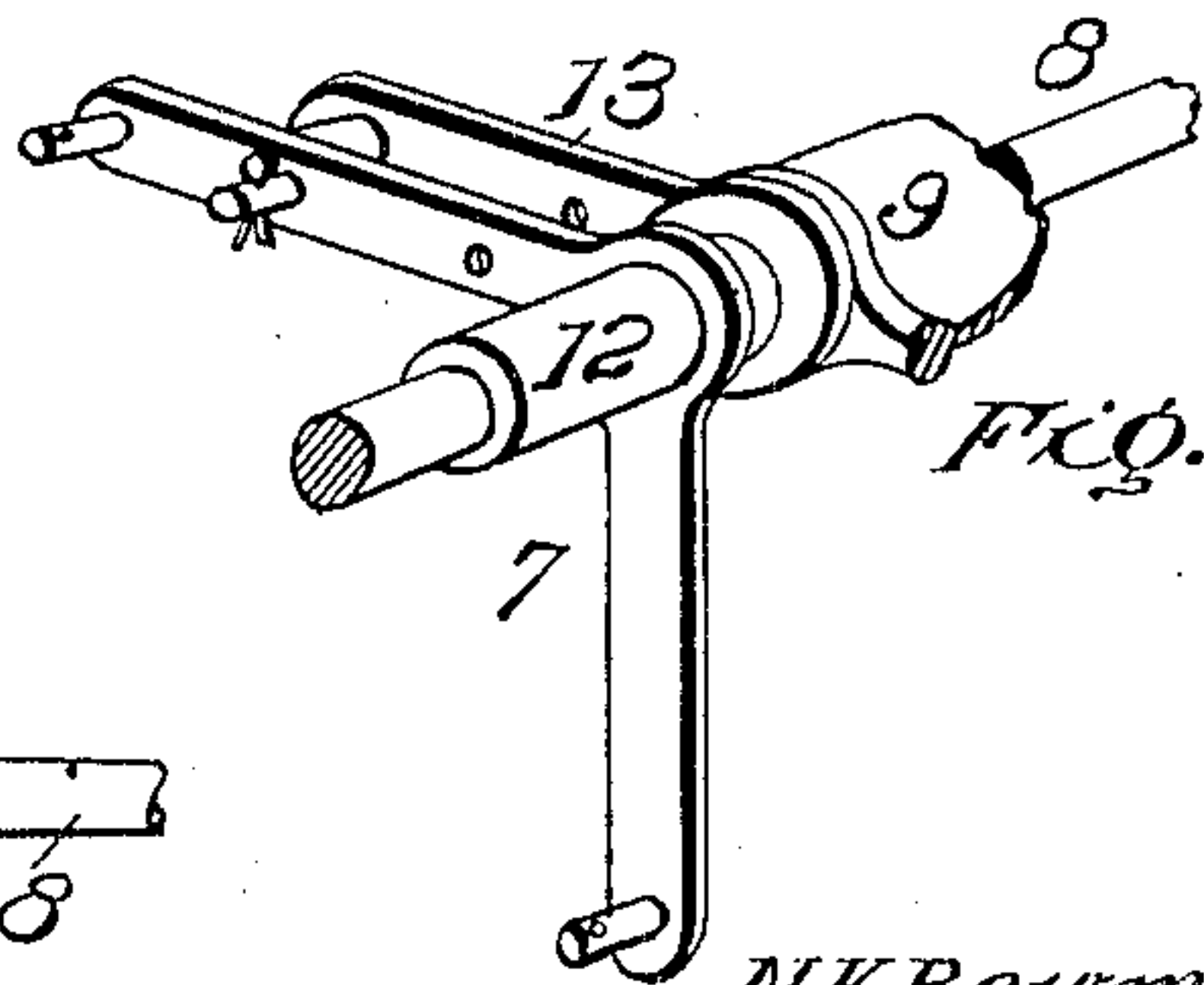


FIG. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

NEWTON K. BOWMAN, OF NORTH LAWRENCE, OHIO.

MAIL-DELIVERER.

No. 843,129.

Specification of Letters Patent.

Patented Feb. 5, 1907.

Application filed June 11, 1906. Serial No. 321,280.

To all whom it may concern:

Be it known that I, NEWTON K. BOWMAN, a citizen of the United States, residing at North Lawrence, in the county of Stark and State of Ohio, have invented certain new and useful Improvements in Mail-Deliverers, of which the following is a specification.

This invention appertains to means for delivering mail from moving trains to stations or other desired points along the route of a railway and for taking up mail therefrom, both operations being adapted to be effected simultaneously or independently of each other.

The invention is designed most especially as an improvement on the apparatus disclosed in an application filed by me March 9, 1906, Serial No. 305,114, for a like invention and in which the deliverer is connected to the catcher in a way to be tripped by the mail taken up by the train, so as to effect automatic discharge of the mail from the car.

The present invention materially simplifies the structure and dispenses with a number of parts, thereby reducing the cost of manufacture and installation and lessening the chances for derangement, so that less cost is involved in maintaining the device in working condition.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and accompanying drawings.

While the invention may be adapted to different forms and conditions by changes in the structure and minor details without departing from the spirit or essential features thereof, still the preferred embodiment is shown in the accompanying drawings, in which—

Figure 1 is a perspective view of a mail-delivery apparatus embodying the invention, the dotted lines showing the position of the deliverer when released. Fig. 2 is a plan view of a portion of the catcher, the supporting-rod being broken away and illustrating the reversible connection and its

relation to the catcher. Fig. 3 is a perspective view of the catcher-head and reversible connection, the parts being separated.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The deliverer for discharging mail from the car consists of a frame 1, which is mounted so as to swing toward and from the opening in the side of the car through which the mail has ingress and egress. The movable deliverer is provided with mail-engaging means mounted to permit automatic discharge of the mail when released from restraining influence. The mail-engaging means consists, essentially, of a rock-shaft 2, from which pins 3 extend in a direction to support the mail when suspended therefrom. An arm 4 projects from the rock-shaft 2, and a link 5 connects said arm with the catcher and is adapted to be tripped under certain conditions to effect automatic discharge of the mail at the required station or point along the line of railway. The frame or deliverer is connected with the catcher by means of a bar 6, whereby both the catcher and deliverer swing outward and inward. A reversible connection 7 is interposed between the bar 6 and catcher to admit of adapting the parts to be connected according to the relative location of the catcher and deliverer, either upon one side or the other of the mail-car, or when turned to adapt the apparatus to the direction of travel of the car without turning the latter.

The catcher, which may be of any type, design, or structure, comprises a supporting-bar 8, head 9, arm 10, and handle 11. The supporting-bar 8 receives the parts 9, 10, and 11 and is mounted in suitable bearings applied to the car at each side of the opening, so as to receive both a rotary and a longitudinal movement. A buffer 12 is interposed between one of the bearings and the catcher-head or other stop, so as to sustain and neutralize the shock and danger incident to the impact when the catcher receives a mail-bag or other package suspended from a crane or arm at one side of the track. An arm 13

projects laterally from the catcher-head 9 and may form a part thereof or be connected thereto in any manner. A reversible connection 7 is mounted upon the supporting-bar 8 and consists of a bell-crank and is adapted to have either arm connected to the arm 13 and to the bar 6, according to the relative location of the catcher and deliverer.

To provide for automatic release of the mail to be delivered from the car, a trip 14 is provided and pivotally mounted upon the supporting-bar 8 and is adapted to lie in the plane of the catcher-arm 10, and supporting-bar 8. The trip has portions at or near its pivoted end to embrace opposite sides of the supporting-bar 8, and which parts come together at a point automatically opposite to the trip and have pivotal connection with a lock-bar 15, which is slidably mounted in an extension of the catcher-head 9 and in openings of the arm 13 and an arm of the reversible connection 7. The proximal arms of the parts 7 and 9 are spaced apart to receive the upper end of the link 5, through which the engaging end of the lock-bar 15 passes. When the parts are in normal position and set to admit of the trip 14 being actuated by the mail taken up by the catcher, said trip extends across the space formed between the supporting-bar 8 and catcher-arm 10, so as to be operated by the mail taken up by the catcher and effect release of the link 5, whereby the mail-engaging means is liberated and the mail supported thereby in position for delivery automatically discharged. When the catcher is swung inward, the deliverer connected therewith is simultaneously swung inward, so as not to project from the side of the car and strike an object that may extend into its path.

The catcher and deliverer are held in normal position by means of a clip 16, which is attached to a convenient portion of the car, so as to engage with the handle 11. The clip 16 is preferably constructed of wire bent into the shape substantially as shown and comprises a handle-engaging portion and attaching-arms, the latter being secured to the car by means of suitable fastenings.

The deliverer normally occupies a position within the door-opening and may swing outward in any direction. The catcher normally occupies a position approximately within the door-opening to admit of the parts being conveniently adjusted and the mail safely and readily removed from the catcher. Mail to be delivered from the car to a station or other point is suspended from the pins 3 or like devices projected from the rock-shaft 2, and which under normal conditions retain the mail in suspension until the rock-shaft is released by disengagement of the lock-bar 15 from the link 5, and which

release is adapted to be effected either automatically, as by impact of the mail with the trip or by hand. When the rock-shaft is liberated from the restraining influence of the lock-bar 15, it turns under the weight of the mail suspended therefrom and permits automatic discharge of the mail, as will be readily understood from the foregoing.

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

1. In apparatus for delivering mail from a moving car, the combination of a deliverer movably mounted to swing toward and from the car and embodying movably-related mail-engaging means, a catcher adapted to be thrown into and out of operative position, connecting means between the catcher and deliverer to effect simultaneous outward or inward movement thereof, connecting means between the mail-engaging means and the catcher, a lock-bar for engaging with said connecting means, and a trip connected with the lock-bar to effect release thereof and extended across the path of the mail to be taken up to be actuated thereby to effect release of said mail-engaging means, whereby automatic discharge of the mail is effected.

2. In apparatus for delivering mail, the combination of a deliverer said deliverer embodying a relatively movable mail-engaging means, a catcher, connecting means between said catcher and said mail-engaging means, a lock-bar for said connecting means, and a trip pivoted to the catcher and having direct connection with the lock-bar and having a portion extended into the path of the mail to be taken up to be struck thereby to effect automatic release and discharge of the mail to be delivered.

3. In mail-delivery apparatus of the character specified, the combination of the deliverer, said deliverer embodying relatively movable mail-engaging means, a pivoted catcher, connecting means between the deliverer and catcher embodying a reversible connection mounted in axial alinement with said catcher, connecting means between the mail-engaging means and the catcher, a lock-bar for holding the mail-engaging means in a given position to insure support of the mail, and a trip pivoted to the catcher and having direct connection with the lock-bar and extended into the path of the mail to be taken up to be actuated thereby to effect automatic release and discharge of the mail to be delivered from the car.

4. In combination, a swinging deliverer embodying relatively movable mail-engaging means, a pivoted catcher embodying a supporting-bar and a handle, a clip for engaging with the handle to hold it in given position, connecting means between the catcher and deliverer embodying a reversible connec-

tion mounted in axial alinement with said catcher, connecting means between the mail-engaging means and said catcher, a lock-bar for holding the mail-engaging means in given
5 position, and a trip pivoted to said supporting-bar and having direct connection with the lock-bar and having a portion extended into the path of the mail to be taken up to

effect automatic release or discharge of the mail from said mail-engaging means. 10

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

NEWTON K. BOWMAN. [L. s.]

Witnesses:

UNA C. MORROW,
JOHN POLLOCK.