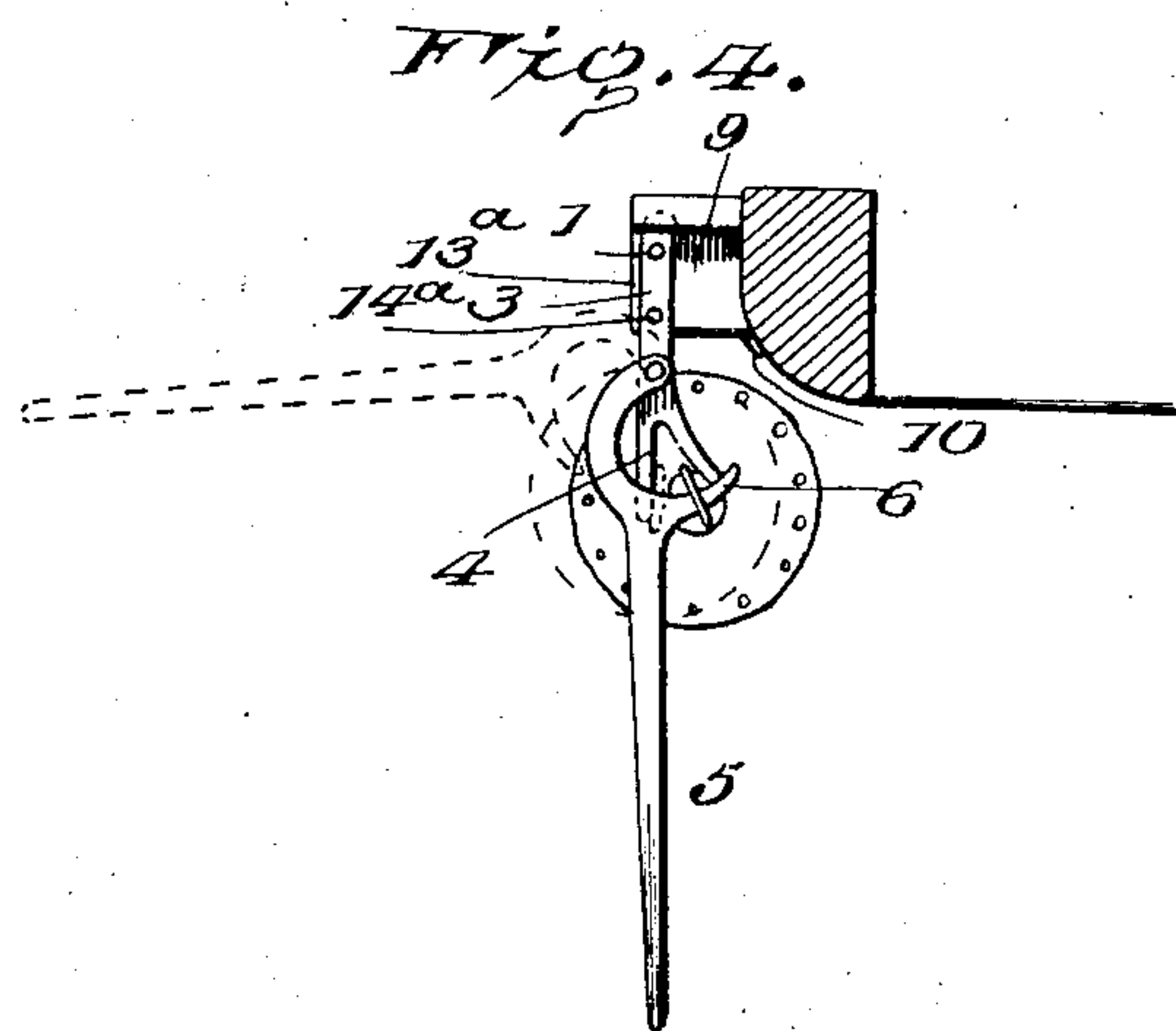
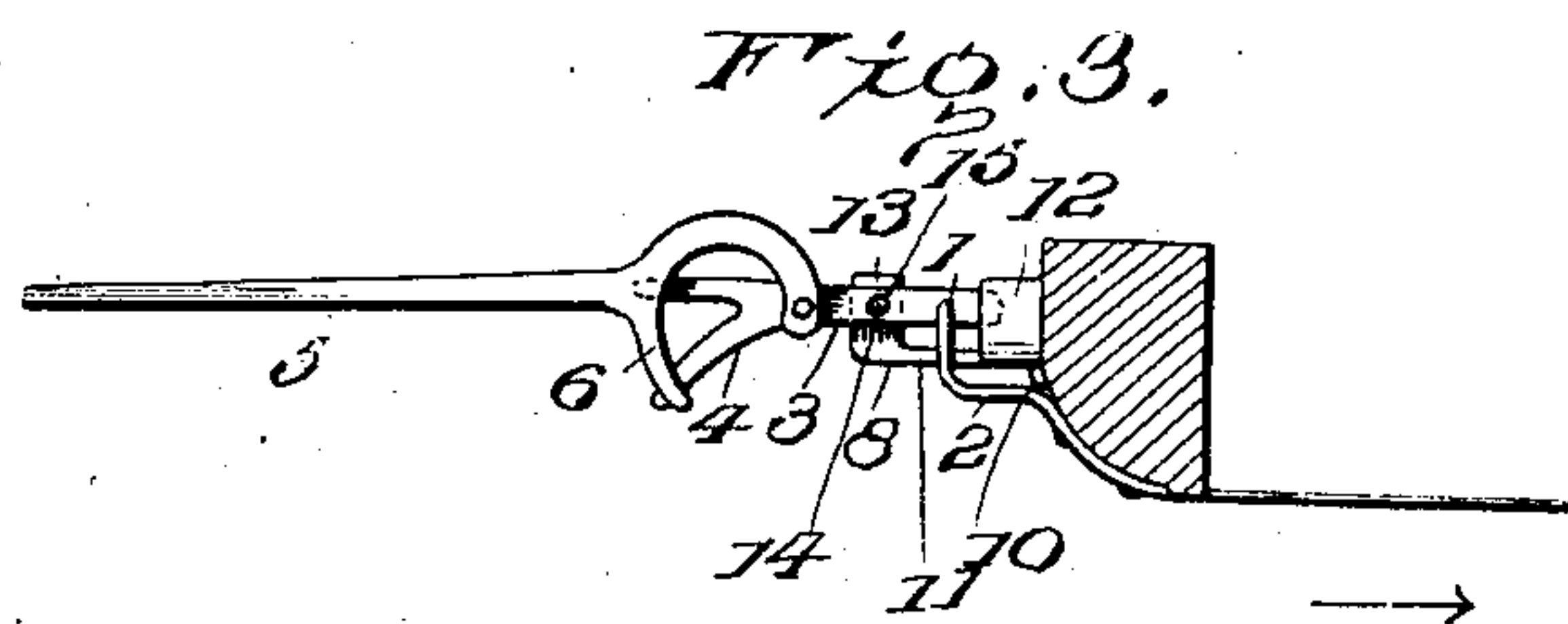
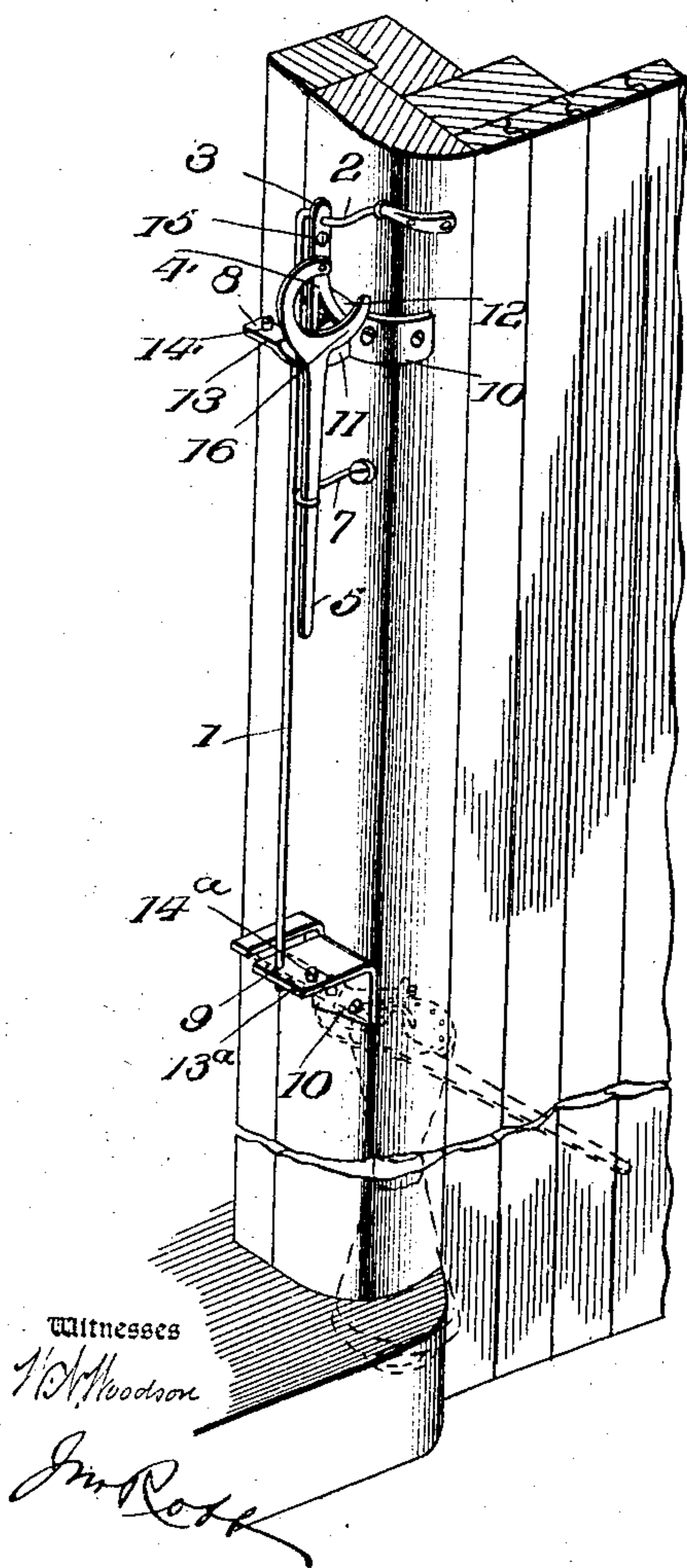
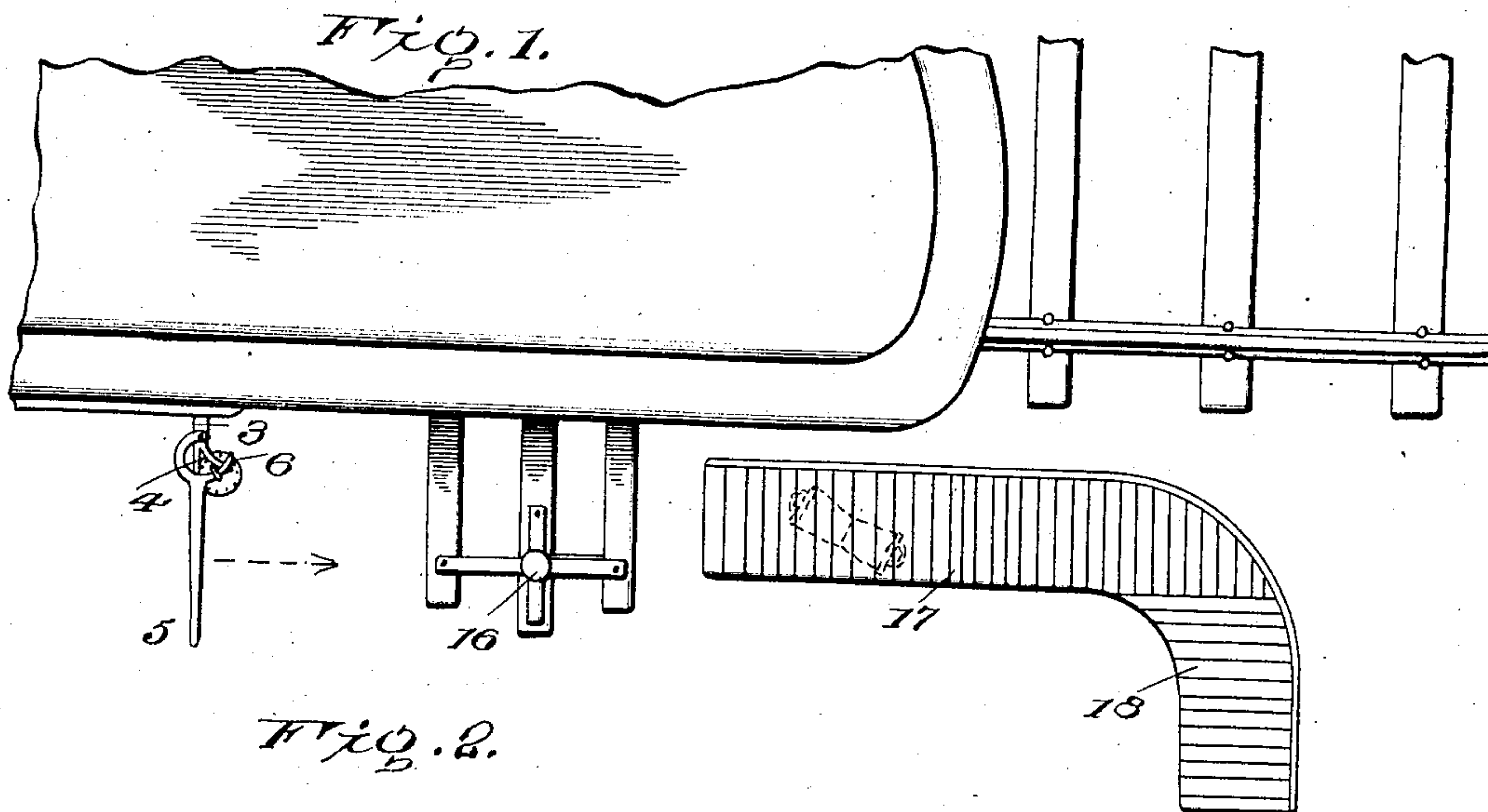


No. 786,260.

PATENTED APR. 4, 1905.

N. K. BOWMAN.
MAIL BAG DELIVERER.
APPLICATION FILED JULY 7, 1904.



Inventor

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UNITED STATES PATENT OFFICE.

NEWTON K. BOWMAN, OF NORTH LAWRENCE, OHIO.

MAIL-BAG DELIVERER.

SPECIFICATION forming part of Letters Patent No. 786,260, dated April 4, 1905.

Application filed July 7, 1904. Serial No. 215,630.

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-Bag Deliverers, of which the following is a specification.

This invention embodies a novel means adapted to be applied to cars for supporting and delivering mail-bags therefrom while the car is in motion; and the essential object in view is to obviate the necessity of throwing the bags from the train as it passes a station, which is an uncertain method of delivery and which is also disadvantageous owing to the fact that the bags are subjected to a great amount of wear, much more than incident in the practical use of my invention.

Generally describing, the invention comprises a delivery-arm mounted upon the car, which is designed to support the bag preparatory to its delivery, and this arm is adapted to be tripped automatically as the train is moving in order to drop the mail-sack at a predetermined point, the sack being received by suitable means disposed at one side of the track over which the train passes.

The delivery-arm is peculiarly mounted, whereby same may be disposed in operative position, supporting the sack preparatory to delivery and not projecting from the car, or quickly operated, so as to be extended outwardly from the car in a position wherein it may be tripped to release the sack, and when not being used it may be readily thrown down and locked in a position convenient but unobstructive.

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 essential and characteristic features of the invention are susceptible of modification, still the preferred embodiment of the invention is illustrated in the accompanying drawings, in which—

Figure 1 is a plan view, parts broken away, the delivery device being shown projected

from the car ready to be tripped. Fig. 2 is a perspective view showing the delivery device out of operative position. Fig. 3 is a plan view, the delivery-arm being shown extended rearwardly in the position assumed thereby when disposed upon the upper bracket. Fig. 4 is a view similar to Fig. 3, the delivery-arm being extended from the car preparatory to tripping thereof, the supporting-arm resting upon the lower bracket.

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.

In mounting the delivery means upon the car a vertical guide-bar 1 is utilized, and this bar is secured by suitable means to the forward jamb of the door-opening usually provided in the common structure of mail-cars. The bar 1 is extended horizontally at its upper end, as shown at 2, the delivery devices being mounted upon the horizontal portion 2 of the bar when not in use, being disposed in the length of the vertical bar 1, however, when in operative position. Suitable means are provided for holding the delivery means proper when out of use and in operative position, and such means will be described more fully hereinafter.

The delivery means above mentioned comprises, essentially, a supporting-arm 3, pivoted to the bar 1 at a point adjacent one end of said arm, the opposite end of the arm 3 being provided with spaced members 4, formed by bifurcating the arm 3, preferably. A delivery-arm 5 is pivoted at its inner end to the supporting-arm 3 approximately intermediate the ends of the latter, and this delivery-arm is designed to support the mail-sack preparatory to delivery thereof from the train. A supporting extension 6 is projected laterally from the delivery-arm 5, and the loop of the mail-sack receives the extension 6 when the said sack is in proper supported position upon the delivery-arm 5. In order to more rigidly support the delivery-arm upon the supporting-arm 3, the said delivery-arm is pivoted upon the upper side of the supporting-arms, and the extension 6 rests upon the end portions of the spaced members 4 when the sack is supported by the said ex-

tension 6, the loop of the sack being received between the spaced members 4. When the device is not in use, the supporting-arm 3 is disposed upon the horizontal portion 2 of the bar 1, extending downwardly therefrom. To hold the arms 3 and 5 from displacement from the position above indicated, a lock device in the form of a hook 7 is projected from the car below the portion 2 of the bar 1, and said hook is designed to engage the delivery-arm 5 to positively hold the said arm in its vertical position out of use.

When the device is being used, the supporting-arm 3 coöperates with upper and lower brackets 8 and 9, respectively, attached to the door-frame adjacent the bar 1, the upper bracket being utilized to support the delivery device in initially disposing the sack thereon, whereas the lower bracket 9 is utilized to hold the delivery device projected from the car preparatory to tripping of the delivery-arm 5 to effect release of the bag and delivery thereof. Both of the brackets 8 and 9 are of a special form and are similar in general structure. Said brackets are attached to the door-frame by means of plates 10, and the upper bracket 8 has a rearwardly-projecting extension 11, provided at its front end with an engaging member 12 and at its rear end with a supporting member 13, the latter being spaced somewhat from the former in order to admit of free vertical movement of the supporting-arm 3 along the vertical guide-bar 1. The engaging member 12 is adapted to engage the rear end of the supporting-arm 3 to rigidly hold said supporting-arm in a horizontal position when said arm is resting upon the supporting member 13. The supporting member 13 is in a plane slightly lower than the engaging member 12, so that the arm 3 will assume a horizontal position. A lug 14 projects upwardly from the supporting member 13 and is adapted to pass through the opening 15 in the supporting-arm 3 adjacent the point of pivotal support of said arm, and the lug 14 coöperates to prevent any lateral pivotal movement of the supporting-arm when the said arm is mounted upon the upper bracket 8. The supporting-arm having been properly engaged with the parts of the bracket 8 projects rearwardly from the door-frame or approximately in line with the side of the car, and though the arm 3 is rigidly positioned the delivery-arm 5 is adapted for free pivotal movement thereon. The arm 3 having been properly engaged, the delivery-arm 5 is operated so as to admit of disposal of the loop of the sack between the spaced members 4, said arm 5 being pulled inwardly or toward the car in the above operation. The loop of the sack having been disposed between the spaced members 4, the extension 6 of the delivery-arm is forced through the loop by a pivotal movement of said arm, and the sack is thus supported upon said extension. The delivery device should

remain in its supported position upon the upper bracket after the sack has been disposed thereon until the train approaches the station or point of delivery of the mail therefrom, at which time the delivery device is lowered to the lower bracket 9. The bracket 9 is provided also with a supporting extension 13^a and an engaging extension 12^a, the latter above the plane of the former. The extension 12^a of the lower bracket, however, is located upon the inner side of the supporting extension 13^a in order to admit of disposal of the supporting-arm 3 in a position thereon in which it will project laterally from the car. A lug 14^a projects upwardly from the supporting extension 13^a of the bracket 9 and is designed to pass through the opening 15 of the supporting-arm to coöperate therewith in the same manner as described with reference to the coöperation of the lug 14 of the upper bracket and the arm 3. Care should be exercised, of course, in lowering the supported bag or sack from the upper bracket to the lower bracket; but when the delivery device is properly positioned upon the lower bracket the delivery-arm 5 extends outwardly from the car in such a manner as to be readily tripped by a post 16 or similar device at the side of the track over which the car passes.

In actual operation, the delivery device being disposed upon the horizontal portion 2 of the bar 1 and out of operative position, to place the mail-sack thereon the delivery-arm is grasped and the supporting-arm 3 is lowered to the upper bracket 8 and positioned upon this bracket, as before set forth, in such a manner as to extend rearwardly therefrom. The sack is now disposed so as to be suspended from the supporting extension 6 of the arm 5, the suspending-loop of the sack being disposed between the spaced members 4 of the supporting-arm 3. The above having been accomplished, as the train approaches the point of delivery of the mail the delivery device is lowered to the lower bracket 9 and disposed thereon. When upon the lower bracket 9, the delivery device projects laterally from the car, and as said car passes the post 16 at the side of the track the delivery-arm 5 is struck by the post, being moved rearwardly, the supporting-arm 3 being held rigid because of the interlocking coöperation of the lug 14^a. The tripping movement of the delivery-arm causes the extension 6 to be carried rearwardly, also, away from the spaced members 4, and the rearmost of said spaced members engages the loop of the sack to disengage said loop from the extension and release the sack.

Any suitable means may be utilized to receive the sack when delivered from the train, and such means preferably consists of a suitable platform 17 to one side of the track, which platform is curved in its length, being provided with a curved deflecting side 18,

which directs the sack to the platform of the station or elsewhere, as the case may be. The platform 17 would be situated some distance beyond the post 16, which trips the delivery-arm, since the impetus of the mail-sack will be sufficient to carry same to the said platform.

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

10 1. In a mail-sack deliverer, the combination of a movable supporting-arm, a delivery-arm adapted for horizontal movement and supported by the supporting-arm, a bracket projected from the support and cooperating to
15 position the delivery-arm, sack-supporting means carried by the delivery-arm, and means carried by the supporting-arm for effecting disengagement of the mail-sack from the delivery-arm.

20 2. In a mail-sack deliverer, the combination of a supporting-arm provided at its outer end with spaced members, a delivery-arm pivoted for horizontal movement upon the supporting-arm, and a supporting member projected
25 from the delivery-arm and cooperating with the spaced members of the supporting-arm.

3. In a mail-sack deliverer, the combination of a supporting-arm, a delivery-arm pivoted for horizontal movement upon the supporting-arm, a supporting member projected from the delivery-arm to carry the mail-sack, and means
30 carried by the supporting-arm for effecting disengagement of the mail-sack from the supporting member of the delivery-arm.

35 4. In a mail-sack deliverer, the combination of a vertical and horizontal adjustable supporting-arm, a delivery-arm movably mounted on said supporting-arm, and sack-supporting means carried by the delivery-arm.

40 5. In a mail-sack deliverer, the combination of a guide-bar having vertical and horizontal portions, a supporting member adjustable upon the vertical and horizontal portions of the guide-bar, a delivery-arm pivoted to the
45 supporting-arm, and a sack-supporting extension projected from the delivery-arm.

50 6. In a mail-sack deliverer, the combination of a car, a vertical guide-bar, a supporting-arm mounted upon said guide-bar, a delivery-arm pivoted to the supporting-arm, and a

bracket projecting from the car and cooperating with the supporting-arm to properly position the same.

7. In a mail-sack deliverer, the combination of a car, a supporting-arm mounted upon the car, a bracket projected from the car, a supporting member extending from the bracket to support the supporting-arm, an engaging member projected from the bracket and cooperating with the supporting-arm, and a delivery-arm pivoted to the supporting-arm. 55

8. In a mail-sack deliverer, the combination of a car, a supporting-arm pivoted between its ends to the car, a bracket projected from the car, an engaging member extended from the bracket and cooperating with the inner end of the supporting-arm, a supporting member projected from the bracket and cooperating with the supporting-arm, and a delivery-arm pivoted to the outer portion of the supporting-arm. 60

9. In a mail-sack deliverer, the combination of a car, a supporting-arm pivoted to the car, a delivery-arm pivoted to the supporting-arm, sack-supporting means carried by the delivery-arm, and means for preventing pivotal movement of the supporting-arm when the delivery-arm is in operative position. 65

10. In a mail-sack deliverer, the combination of a car, a supporting-arm pivoted to the car at a point between its ends, a bracket projected from the car, a supporting member projected from the bracket and cooperating to hold the supporting-arm in operative position, an engaging member cooperating with the inner end of the supporting-arm, a lug projected from the supporting member and engaging the supporting-arm to prevent pivotal movement thereof, spaced members extended from the outer end of the supporting-arm, a delivery-arm pivoted to the supporting-arm between its ends, and a sack-supporting extension projected from the delivery-arm. 80

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

NEWTON K. BOWMAN. [L. S.]

Witnesses:

UNA C. BOWMAN,
JOHN POLLOCK.