

No. 724,943.

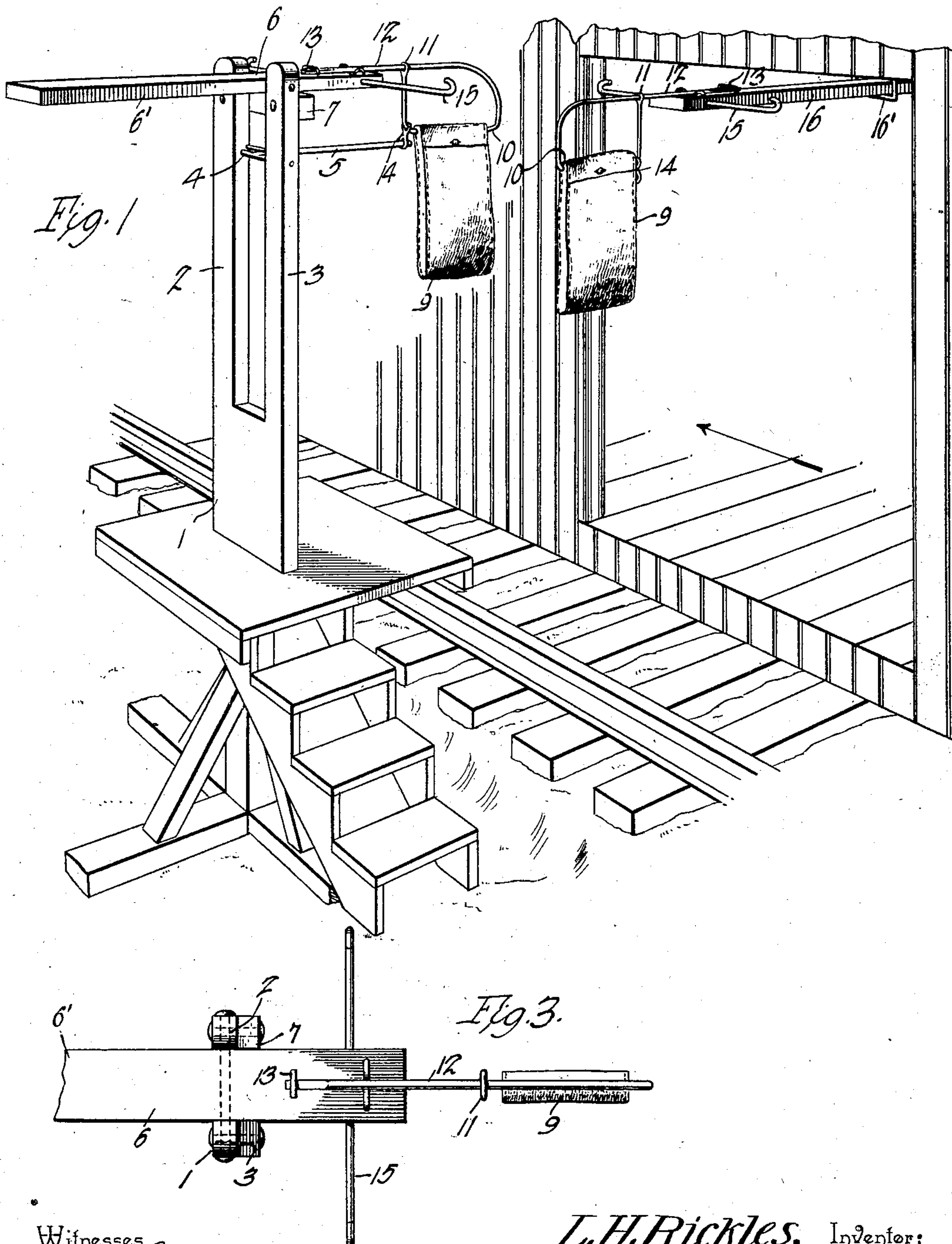
PATENTED APR. 7, 1903.

L. H. RICKLES.  
MAIL CRANE.

APPLICATION FILED JAN. 12, 1903.

NO MODEL.

3 SHEETS—SHEET 1.



Witnesses  
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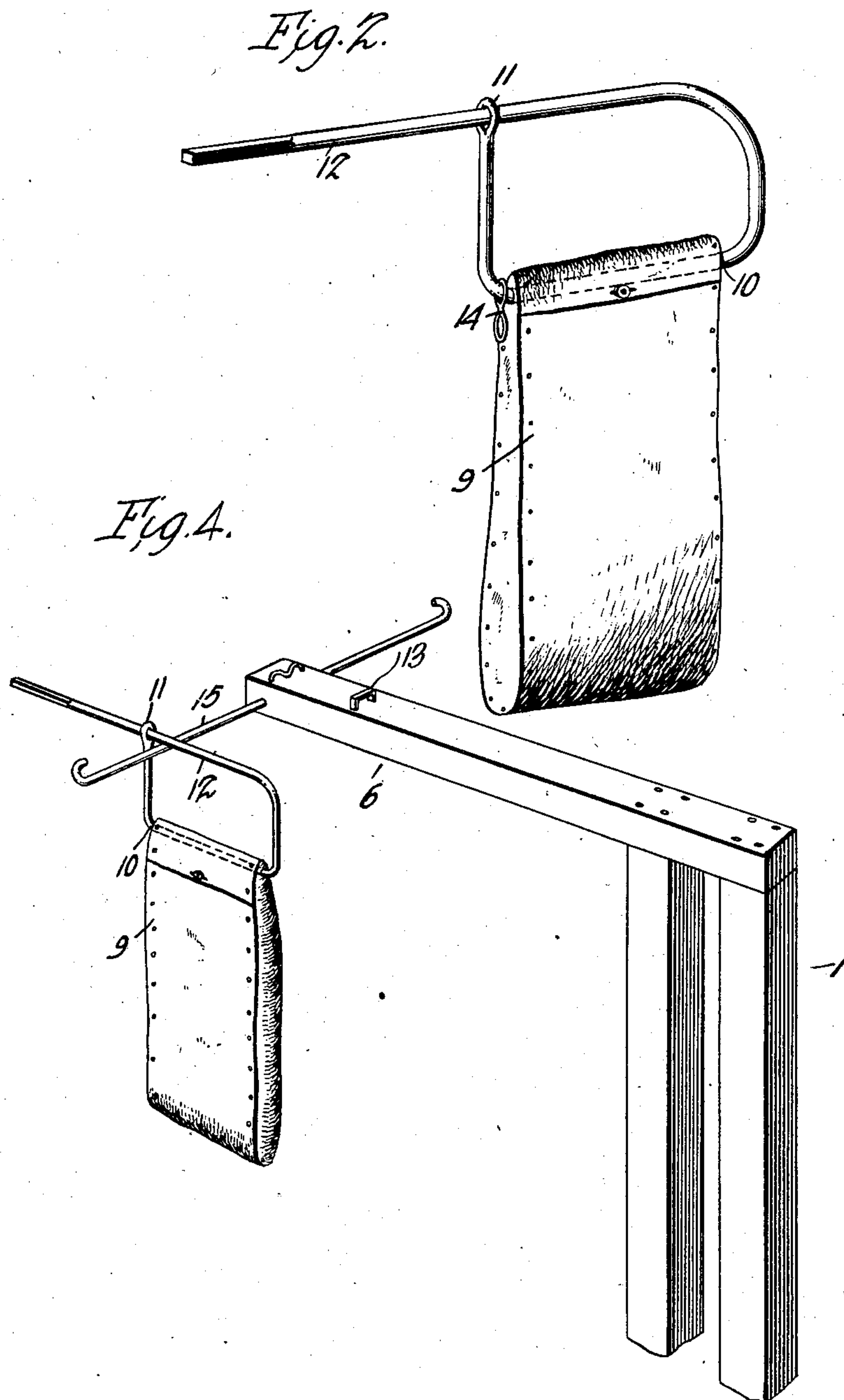
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3 SHEETS—SHEET 2.



Witnesses  
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3 SHEETS—SHEET 3.

Fig. 5.

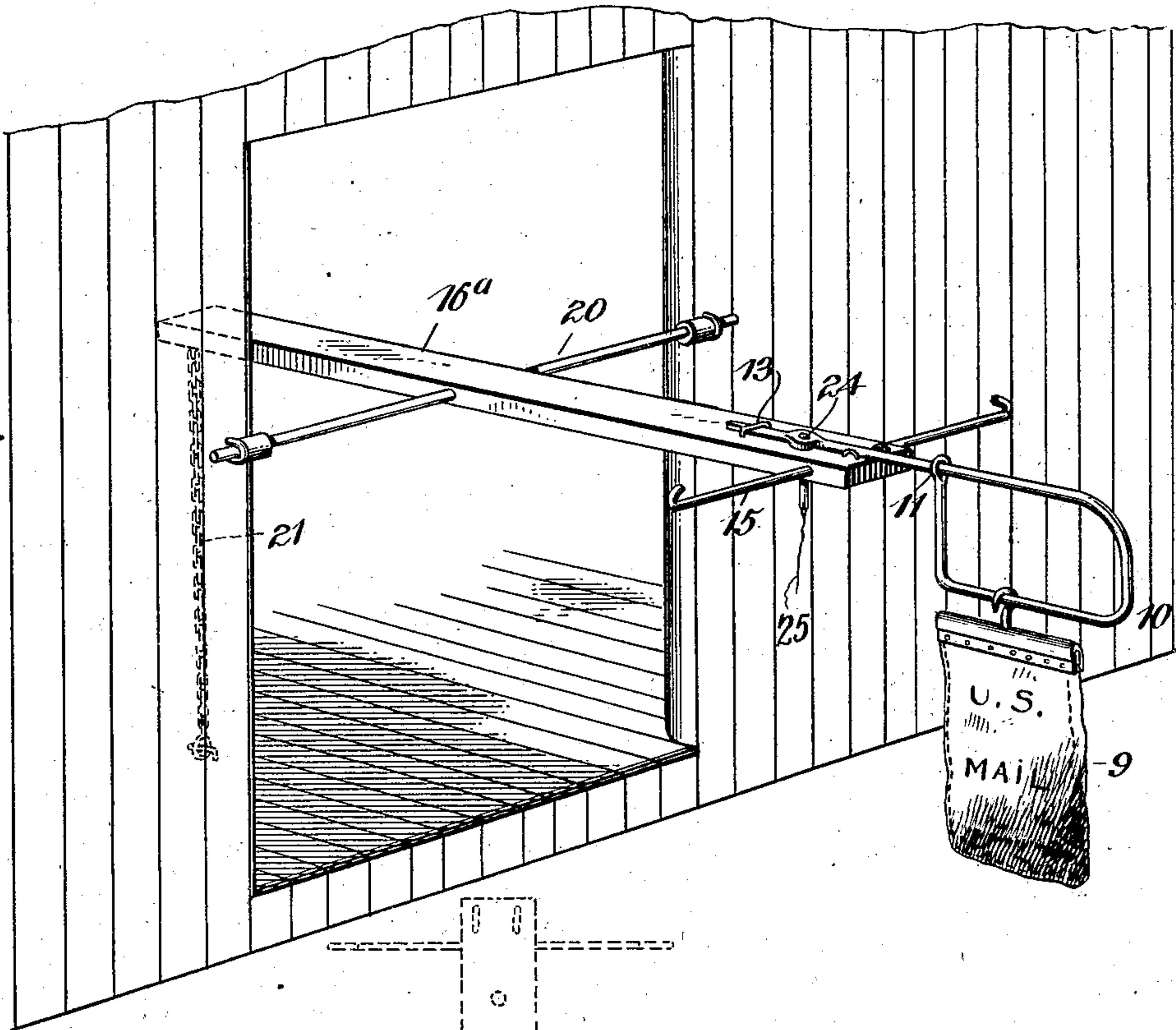


Fig. 7.

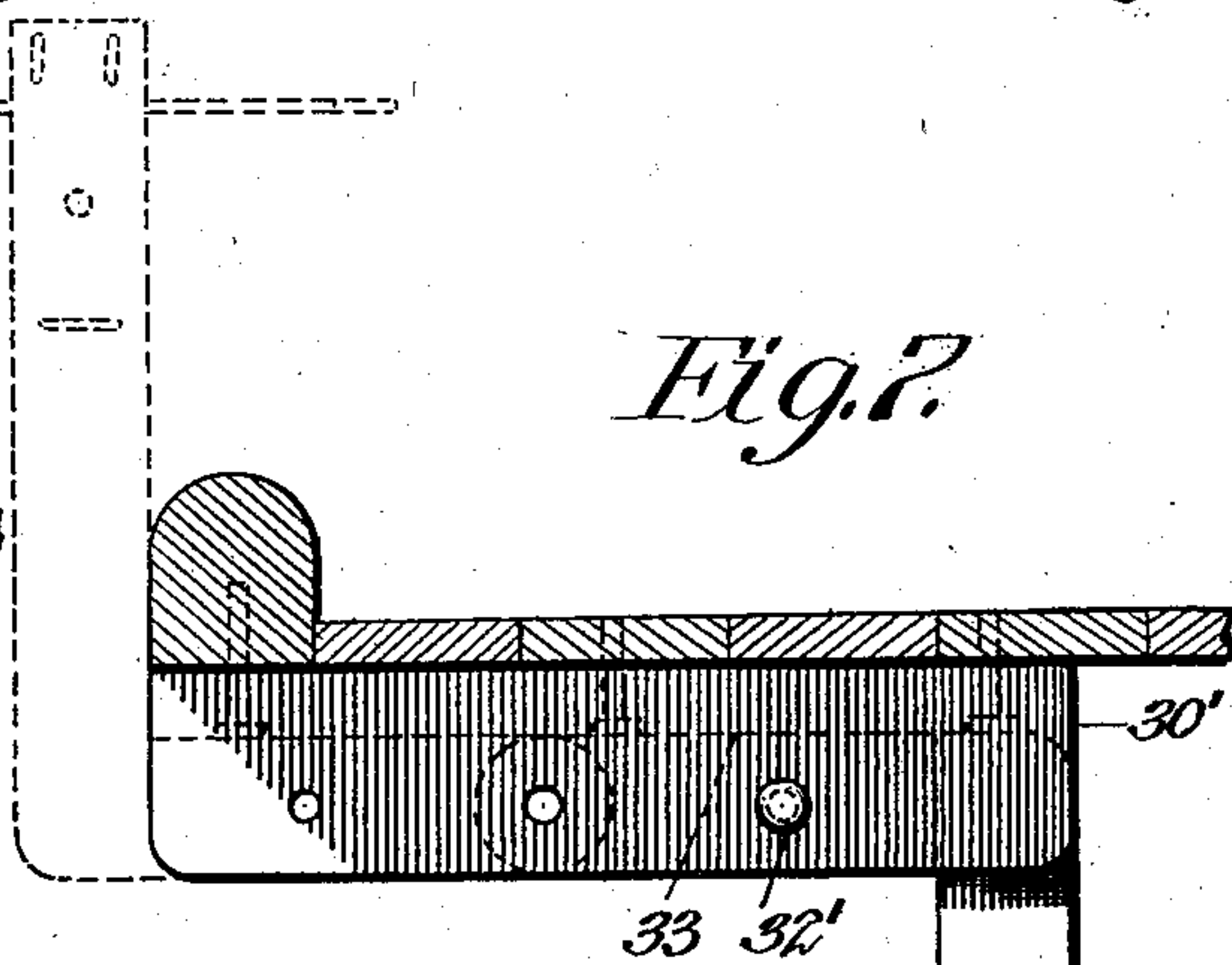


Fig. 6.

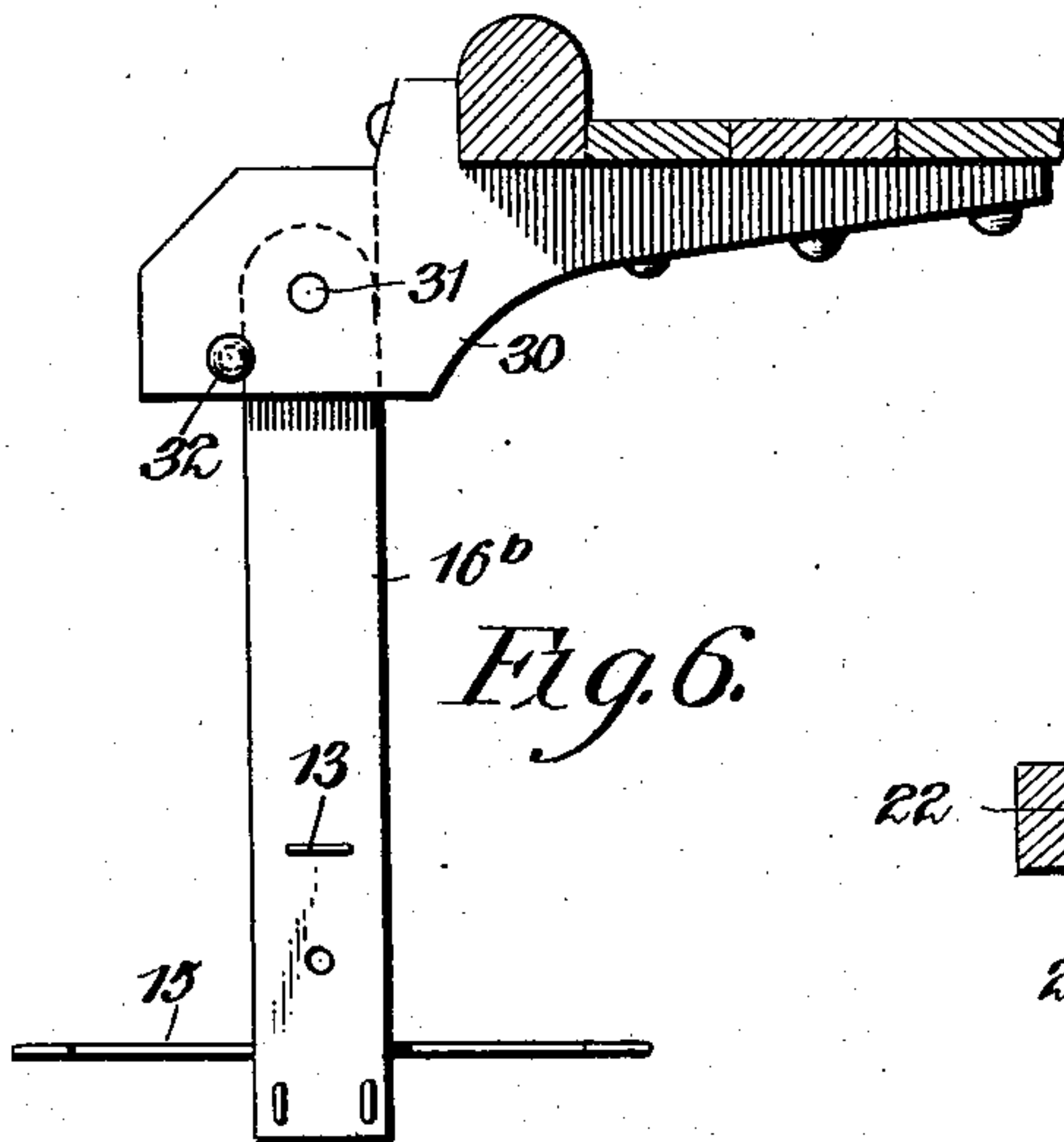
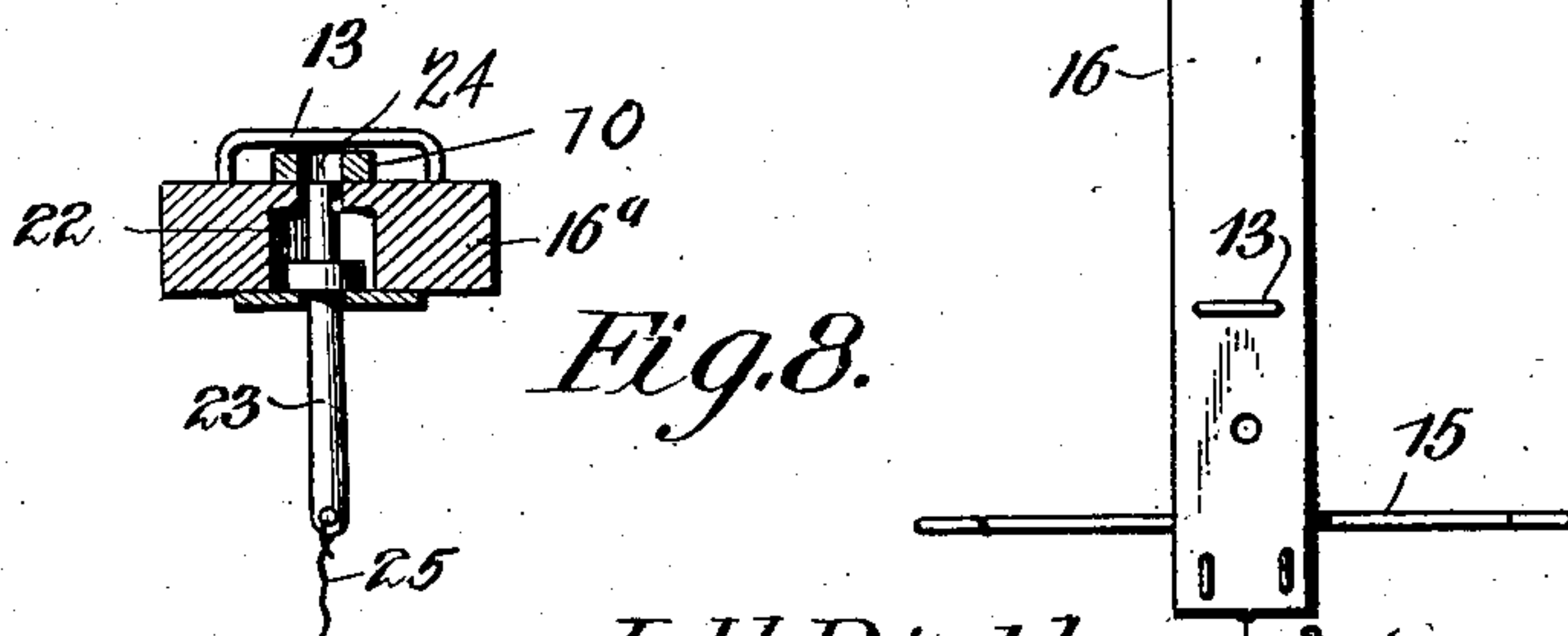


Fig. 8.



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# UNITED STATES PATENT OFFICE.

LOUIS H. RICKLES, OF ATTALLA, ALABAMA, ASSIGNOR OF ONE-HALF  
TO JAMES M. MORAGNE, OF GADSDEN, ALABAMA.

## MAIL-CRANE.

SPECIFICATION forming part of Letters Patent No. 724,943, dated April 7, 1903.

Application filed January 12, 1903. Serial No. 138,721. (No model.)

*To all whom it may concern:*

Be it known that I, LOUIS H. RICKLES, a citizen of the United States, residing at Attalla, in the county of Etowah and State of Alabama, have invented a new and useful Mail-Crane, of which the following is a specification.

The invention relates to certain improvements in mail-bag catching and delivering devices, and has for its principal object to provide a simple and economical form of mechanism for supporting a mail-bag at a station and in similar manner supporting a bag from a mail-car, each of the mail-bag supports being provided with a catcher for engaging the mail-bag carried by the other without regard to the direction in which the train is moving.

A further object of the invention is to provide an improved form of mail-bag support whereby the bags may be caught and delivered without injury, and, further, to provide an automatic station mechanism which will be moved out of operative position as soon as the mail-bag is removed therefrom.

With these and other objects in view the invention consists in the novel construction and arrangement of parts hereinafter described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that various changes in the form, proportions, size, and minor details of the structure may be made without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawings, Figure 1 is a perspective view of the invention, showing a mail-car as about to pass the crane and to exchange bags therewith. Fig. 2 is a perspective view, on an enlarged scale, of the mail-bag detached. Fig. 3 is a plan view of the station-crane. Fig. 4 is a perspective view of a slightly-modified view of the station-crane. Fig. 5 is a perspective view illustrating a slight modification of the invention. Figs. 6 and 7 are detail views illustrating further modifications of the means for supporting the crane-arm carried by the mail-car. Fig. 8 is a sectional elevation of the mail-car crane-arm shown in Fig. 5.

Similar numerals of reference are employed

to indicate corresponding parts throughout the several figures of the drawings.

In the drawings, 1 designates a standard secured firmly in place at its base and bifurcated at its upper end to form two uprights 2 3, between which is pivoted a bar 4, from a central point of which there extends a rod 5.

6 designates an arm also pivoted between the uprights 2 3 above the rod 5 and extending parallel therewith.

7 is a brace or supporting-bar for the arm, secured to the uprights between the rod 5 and arm 6 and extending at right angles thereto and substantially parallel with the track. The inner portion of the arm 6 is weighted, as at 6', so that when the arm is released by the removal of a mail-bag from its outer end the arm will assume an approximately vertical position.

9 represents the mail-bag, of any desired construction, and which in accordance with my invention is provided with a loop consisting of a small rod or wire extending along and secured to its upper edge or end, as at 10, and at one upper corner or edge of the bag is bent upward at right angles to the part 10, its extreme upper end being formed into an eye 11. At the other end of the portion 10 of the said rod the latter is bent upward at substantially right angles to the part 10 and again inward to form the extension 12, which extends through and beyond the eye 11 and parallel with the part 10. The upper face of the arm 6 is provided with a pair of spaced lugs, between which the extended portion 12 of the mail-bag rod is passed, and the inner end of the said portion 12 being preferably squared extends just under a squared staple 13. The rod or the mail-bag is provided with a ring 14 at the corner below the eye 11, through which the inner end of the pivoted rod 5 passes when the mail-bag is in position to be caught or taken by the passing train, as shown in Fig. 1, and holds the crane-arm in horizontal position against the tendency of the counterweight 6'.

15 represents the catcher bar or rod, secured to the inner end of the arm 6 and extending at right angles thereto, also sloping outward or forward and at substantially equal distances from the opposite sides thereof, the



ends of the said catcher-bar being upturned to form hooks, as shown.

16 designates a bar supported by a loop 16' at the top of the car-door frame to permit the mail clerk to project and withdraw the arm, as desired. The outer end of the arm 16 is constructed and equipped to catch and deliver a mail-bag in the same manner as the arm 6, there being no means necessarily, however, in this case to engage the ring 14.

In use the mail-bag to be taken and carried away by the moving train will be placed in position on the station-crane, consisting of the standard 1 and the arm 6 and their equipments, and when so placed will be arranged so that the end of the catcher-rod 15, directed toward it from the sliding bar of the car, will pass through the loop formed by the bent rod connected with the upper end of the mail-bag. The mail-bag to be delivered at the station will be likewise suspended in position, as shown in Fig. 1, on the outer end of the arm 16. As the car moves forward from the position represented in Fig. 1 the projecting ends of each of the catcher-rods will pass through the loops of the mail-bag it is designed it shall engage and draw it from its place and carry it along, the hooks at the ends of the catcher-rods preventing its slipping off therefrom. When the mail-bag is taken from the crane, the rod 5, engaging the ring 14 to hold down the mail-pouch, falls down out of the way, and the arm 6 being now overweighted by its counterweighted portion 6' tilts over out of the way, thus clearing the course for the passing train and avoiding all liability of accidents resulting from anything on the train striking the station-crane. The sliding bar on the car may now be drawn inward to bring the mail-bag taken by its catcher-bar to the door, when the said bag can be readily removed, as will be well understood.

The crane or arm 6 has been shown and thus far described as pivoted on the upright or standard 1; but this is not essential to catching and delivering the bags. Instead of pivoting the arm 6 upon the standard 1 it may be rigidly fixed thereon or made stationary with respect thereto, as is shown in Fig. 4.

It will be seen that my improvements render a mail-bag grab and crane very simple in construction and mode of operation and reduces its cost of manufacture and installment to the minimum.

It is obvious that other modifications than those shown in Fig. 4 may be made in the form and arrangement of parts of my invention without in any degree departing from the nature or spirit thereof.

In Fig. 6 is illustrated a modification of the structure wherein the mail-car crane-arm 16<sup>a</sup> is carried by a transversely-disposed rod 20, extending across the opening in the side of the car and forming a horizontal pivot for the crane-arm. In this case the rear end of the crane-arm is connected by a flexible chain

or cord 21 to a staple or other securing device on the floor of the car, as shown by dotted lines in the drawings. When a vertically-movable crane-arm of this character is employed, it is desirable to provide means for temporarily holding the mail-bag-carrying loop in position during the movement of the crane from an approximately vertical to the horizontal position, and in this case the crane-arm is provided with a transverse opening 22 for the reception of a weighted pin 23, adapted to extend up through an eye 24, formed in the extension 12 of the carrying-loop. When the crane-arm is moved out to the horizontal position, (shown in Fig. 5,) the weighted pin drops from engagement with the extended portion 12, so as not to interfere with the removal of the loop from the arm, or in some cases the pin may be provided with a connecting chain or cord 25 in order to positively move the same from engagement with the eye.

The mail-car crane-arm may be supported in a number of different ways, as illustrated in Figs. 6 and 7. In Fig. 6 a bracket 30 is secured to a part of the door-frame, the bracket being slotted for the reception of the rear end of the crane-arm 16<sup>b</sup> and said arm being held in position by a pivot-pin 31, extending through the arm of the bracket member. This construction permits of the movement of the crane-arm to the full-line position shown in Fig. 6 or to the dotted-line position illustrated in the same figure, the latter position being that assumed when the crane-arm is within the car. When the arm is moved out to operative position, a locking-pin 32 is passed through the bracket to assist in holding the crane-arm in place. In Fig. 7 is illustrated a further modification, in which the crane-arm 16<sup>c</sup> is provided with a right-angled member 33, fitting in a groove in a bracket 30' and serving to more securely hold the crane-arm in place. Fig. 7 illustrates in full lines the crane-arm in operative position outside the car and in dotted lines the position assumed within the car. The bracket is provided with a pair of openings, and the crane-arm has a small opening for the passage of a securing-pin 32', by which it may be locked in either of its two positions.

Having thus described the invention, what is claimed is—

1. In a mail-bag catching and delivering apparatus, a pair of substantially horizontal arms of which one is located at a station and the other carried by a moving car, mail-bag-carrying loops having extended portions, holding devices carried by the arms for engaging said extended portions, and catcher-arms carried by each of the crane-arms and adapted to enter the loops to remove the same from the holding devices.

2. In mail-bag catching and delivering mechanism, a crane-arm, a mail-bag-supporting loop having a laterally-extended member, means carried by the crane-arm for



engaging and supporting said member with the bag in position beyond the end of the crane, a crane-locking arm adapted to maintain the mail-bag in proper position and when released to permit the movement of the crane to inoperative position, and a catcher for engaging the loop and removing the latter from its supporting devices.

3. In mail-bag catching and delivering mechanism, the combination with a vertical standard, of a counterweighted crane-arm pivotally connected to the standard, a mail-bag-supporting loop having a laterally-extended member, a staple or socket, and a pair of guiding-lugs carried by the crane-arm for engaging said member, a pivoted locking-bar for holding the mail-bag in proper position, and when released permitting the return of the crane-arm to inoperative position, and a catcher for engaging the mail-bag loop and removing the same from its supporting devices.

4. A mail-bag grab and delivering crane comprising in its construction, an upright or standard, an arm connected to said standard, extending inward therefrom, and provided with staples or engaging means, substantially as set forth, combined with a mail-bag loop formed from a rod, adapted to be secured to the mail-bag and having an extended portion adapted to rest on the arm and to be detachably engaged by the said staples.

5. A mail-bag grab and delivering crane comprising in its construction, a movable

arm and its support, the arm being provided with staples or engaging means, substantially as described, combined with a mail-bag loop formed from a rod adapted to be secured to the mail-bag and having an extended portion detachably engaged by the said staples.

6. A mail-bag grab and delivering crane comprising in its construction an upright or standard, an arm connected to the said standard, extending inward therefrom, and provided with staples or engaging means, substantially as described, and a rod pivoted to the standard, combined with a mail-bag loop formed from a rod adapted to be secured to the mail-bag and having an extended portion detachably engaged by the said staples and a mail-bag ring adapted to be secured to the mail-bag and to be detachably engaged by the end of the said pivoted rod.

7. A mail-bag loop formed from a rod, a portion of which is bent to form a loop, the extreme end of the bent portion being bent to form an eye, the remaining portion being passed through the said eye and extended therebeyond, to form means for connecting the loop with its support.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

LOUIS H. RICKLES.

Witnesses:

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FRANK L. CATHEY.