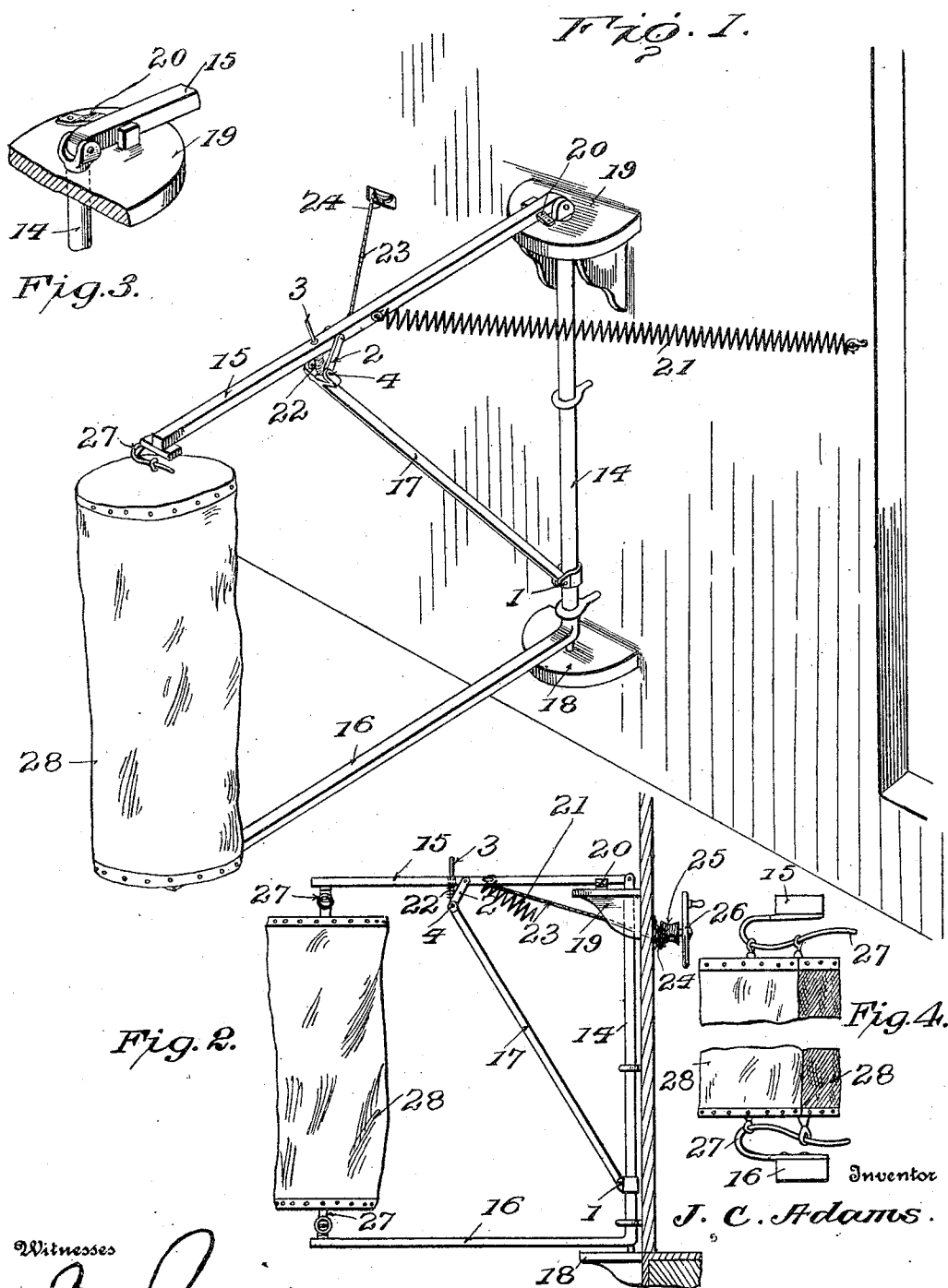


J. C. ADAMS.
RAILWAY MAIL CRANE.
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934,987.

Patented Sept. 28, 1909.



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN C. ADAMS, OF CHARLESTON, ILLINOIS.

RAILWAY MAIL-CRANE.

934,987.

Specification of Letters Patent. Patented Sept. 28, 1909.

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To all whom it may concern:

Be it known that I, JOHN C. ADAMS, citizen of the United States, residing at Charleston, in the county of Coles and State of Illinois, have invented certain new and useful Improvements in Railway Mail-Cranes, of which the following is a specification.

This invention supplies a novel device intended more particularly for delivering mail bags or like containers holding matter to be delivered from moving trains, which in operation is effective, capable of being easily manipulated, and which when moved to an operative position becomes automatically locked and held securely in such position until delivery is effected when the crane automatically returns to a normal or given position.

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

Figure 1 is a perspective view of a mail crane embodying the invention; Fig. 2 is a side view thereof; Fig. 3 is a perspective view of the upper bracket and a portion of the crane; and, Fig. 4 is a front view showing the spring arms for supporting the mail bag or container.

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 crane mounted upon the car for holding the sacks in position for delivery consists of a post 14, an upper arm 15 and a lower arm 16. A brace 17 is interposed between the lower portion of the post 14 and the arm 15. The brace 17 is pivoted at its lower end to the post 14 at 1 and its upper end is connected by link 2 to the arm 15. A guide pin 3 is pivotally connected to the parts 17 and 2, at 4 and passes through a vertical opening in the arm 15 and receives a spring 22 which is of the expansible type and confined between the arm 15 and the joint 4 formed between the parts 2 and 17. The arms 15 and 16 have a slight vertical play. The arm 16 is supported in its lowest position by means of a bracket 18. The upper arm 15 is likewise limited in its downward movement by a bracket 19. The post 14 is mounted in the brackets 18 and 19 so as to turn and thereby admit of the crane fold-

ing close against the side of the car or swinging across the door for convenience in placing the sacks in position for delivery.

A spring actuated catch 20 is mounted upon the bracket 19 and limits the movement of the crane when swung outward about at a right angle to the side of the car to hold the sacks in position for delivery. A contractile spring 21 is interposed between the arm 15 and the side of the car and serves to swing the crane against the side of the car when released of the weight of the sack. The catch or stop 20 is adapted to be depressed when the arm 15 is riding thereover and springs upward after the arm is passed thereover and engages with a side thereof to hold the crane extended against the tension of the spring 21. When the arm 15 is relieved of the weight of the sack or container the spring 22 presses the arm 15 upward a distance to clear the catch or stop 20 after which the crane is folded against the side of the car by the action of the spring 21. For swinging the crane outward, a cord, chain or like connection 23 is attached to the arm 15 and passes around a guide pulley 24 provided at a side of the car some distance from the post 14 and has its opposite end attached to a windlass 25 upon which it is adapted to be wound, said windlass being provided with a hand-wheel 26 for convenience in rotating said windlass when it is required to wind the connection 23 thereon.

The attaching means for retaining the sacks in place consist of hooks 27 which are arranged transversely of the respective arms and are attached thereto by one member. The other member of each hook 27 is free and curves and is resilient. The hooks while possessed of a spring action are nevertheless sufficiently stout to retain and support the sacks or retainers. The hooks 27 face in the same direction which is opposite to the direction of movement of the train, thereby permitting the sacks 28 to slide or become readily disengaged therefrom when arrested in their movement by impact with the catcher or parts thereof against which the sacks strike.

The sack or container 28 holding the matter to be delivered is attached at its lower ends to the inner or free members of the spring hooks 27, the crane having first been swung so as to extend across the doorway of the postal car to admit of the sack or sacks being conveniently attached to the

crane. After the crane has been supplied with the sack or container to be delivered it is swung outward preferably by operating the windlass 25. As the crane swings outward the tension of the spring 21 increases and when the crane is in proper position it is held by the catch or stop 20. As the train approaches the station and passes thereby, the sack or container 28 is stripped from the spring hooks 27 by any of the usual types of catchers arranged to arrest the forward movement of said sack. When the arm 15 is relieved of the weight of the sack or container suspended therefrom, the spring 22 comes into play and throws said arm 15 upward a distance to clear the stop 20 after which the spring 21 swings the crane against the side of the car, said crane being held in folded position by means of a suitable catch positioned so as to engage therewith.

Having thus described the invention what is claimed as new is:

1. In means for delivering mail, a crane mounted to swing horizontally and comprising relatively movable and stationary arms having means for engagement with a sack, means normally tending to hold the crane folded, a stop adapted to engage the movable arm of the crane and hold both arms extended, and means for throwing the movable arm upwardly when released from the weight of the sack.

2. In means for delivering mail, a crane mounted to swing horizontally and comprising relatively movable and stationary arms having means for engagement with a sack, a spring normally tending to hold the crane folded, a spring actuated stop adapted to engage the movable arm of the crane and hold both arms extended against the tension of said spring, and means for throwing the movable arm upwardly when released from the weight of the sack.

3. In means for delivering mail, a crane comprising a movable arm adapted to be

held lowered by the weight of a sack suspended therefrom, a spring for throwing said arm upward when relieved of the weight of the sack, means normally tending to hold the crane folded and a stop to engage with the crane and hold the same extended against the action of said folding means.

4. In means for delivering mail the combination of a swinging crane, means for holding the crane folded and means for swinging the crane outward into operative position, said means consisting of a windlass and a flexible connection, the latter having its ends attached to respectively the crane and the windlass and deflected intermediate of its ends.

5. In a railway mail crane comprising a vertical post and a horizontal arm, a brace pivotally connected at its lower end to the post, a link pivotally connecting the upper end of the brace to the arm, and a pin having connection with said brace and having a sliding connection with the said arm.

6. In a railway mail crane comprising a vertical post and a horizontal arm having pivotal connection with said post, a stop arranged in the path of the arm to engage therewith and hold the same in operative position, means normally tending to fold said arm, the latter when weighted by the mail matter to be delivered being held in engagement with said stop, and means for automatically disengaging said arm from the stop when relieved of the weight of the mail matter carried thereby to permit the automatic folding of the arm by the means coöperating therewith.

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

JOHN C. ADAMS. [L. s.]

Witnesses:

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