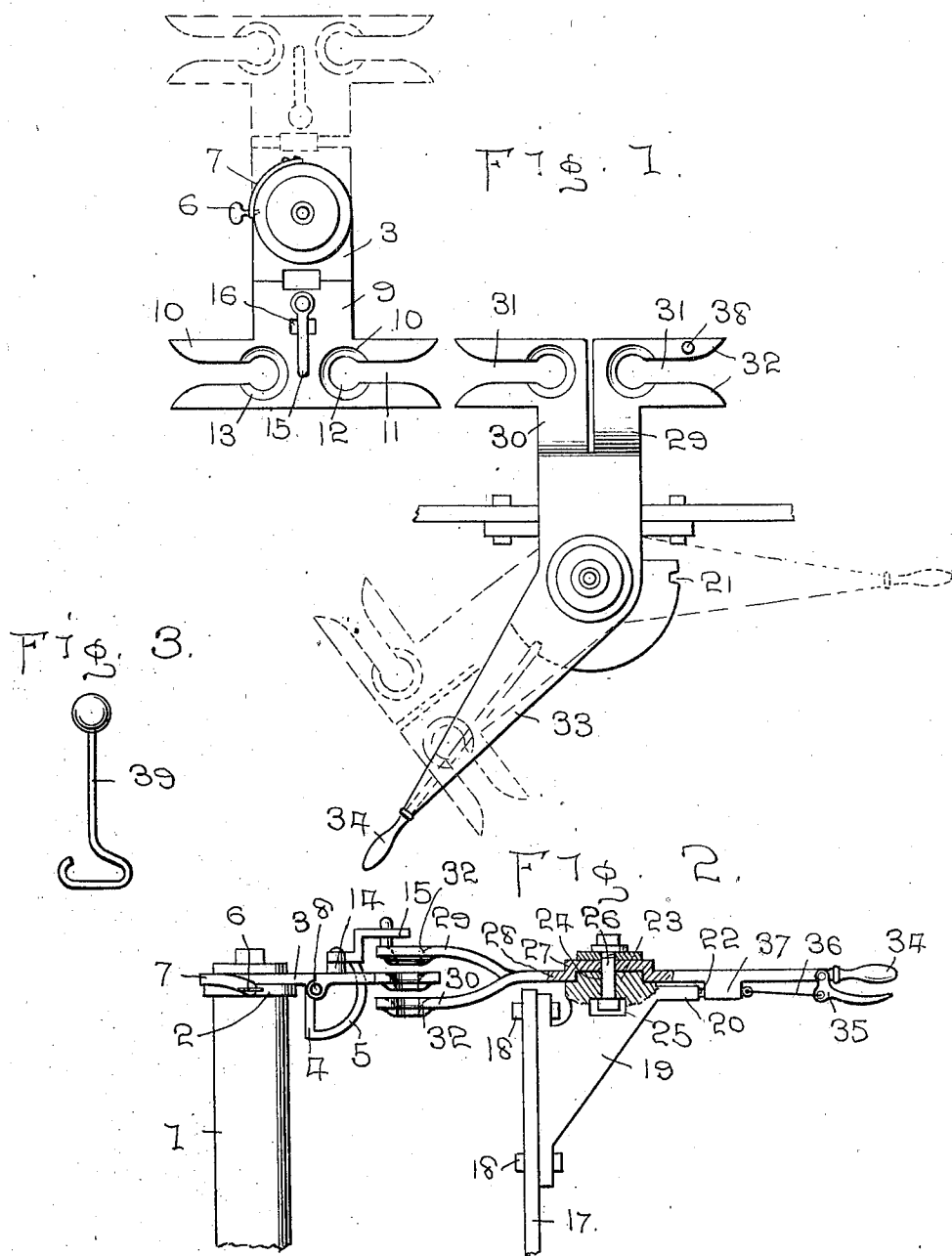


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 MAIL CATCHER AND CRANE.
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MAIL CATCHER AND CRANE.

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To all whom it may concern:

Be it known that I, JOHN HICKE, a subject of the King of Hungary, and a resident of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Mail Catchers and Cranes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to mail catchers and cranes and has for an object to provide a catcher which may be positioned between the tracks and set to cooperate with the crane carried upon a car traveling in either direction.

Another object is to provide a crane adapted to be carried upon the car to co-act with the catcher projecting from a post or other suitable support between the tracks.

A further object is to provide a crane to be carried by a car, said crane to be of such form and secured in such manner that it may be locked in position to cooperate with the catcher or may be swung into the car and locked in this latter position.

A further object is to provide a catcher and crane adapted to co-act with each other, said crane adapted to collect the mail bag off the catcher and at the same time deliver another mail bag from the car onto said catcher, and,

A still further object is to provide a catcher and crane of the above stated character which may also be provided with mechanism to hold the catcher in proper position during the snatching of the bag therefrom and the delivering of another bag thereto and also means for automatically releasing said catcher after the completion of the above described operation to allow the catcher to drop into inoperative position.

Other objects and advantages will be hereinafter set forth and pointed out in the specification.

In the accompanying drawings which are made a part of this application, Figure 1 is a top plan view of the catcher and crane in operative position, just before the crane reaches its position opposite the catcher. Fig. 2 is a side elevation of the catcher and crane as the crane is opposite the catcher,

and, Fig. 3 is a detail plan view showing the preferred form of hooks used in connection with the catcher and crane.

Referring to the drawings in which similar reference characters represent corresponding parts throughout the several views, 1 represents a post, upon which the catcher is secured near the upper end thereof. Upon the upper end of the post 1 is rotatably secured the ring 2 having the projection 3 from which extends a downwardly directed arm 4, having the outwardly and upwardly curved finger 5 integral therewith and projecting from the lower end thereof. The ring 2 is locked in position by means of the locking-pin 6 carried by the spring 7 secured to the post 1.

Pivotaly connected to the vertical arm 4 by means of the pin 8, is the plate 9 having the oppositely extending slotted arms 10, said arms being slotted inwardly, as shown at 11, said slots terminating in the circular enlarged portions 12. The upper faces of the arms 10 are depressed, as shown at 13, around the circular apertures 12, the purpose of which will later appear.

Carried upon the plate 9 is the upwardly extending pin 14, having loosely mounted near its upper end the V-shaped arm 15, against the under face of the short portion of which is adapted to press the upper end of the curved finger 5, which extends through the opening 16 within the plate 9. By means of this arrangement the hinged plate 9 is held in extended position on a plane with the extension 3. The reversed position of the catcher is illustrated in Fig. 1 by dotted lines.

Secured to the inside of the framework of the car by means of bolts or other securing means 18, is the bracket 19 extending toward the opposite side of the car. Integral with the upper portion of the bracket 19 is the semicircular latch-plate 20, the purpose of which will later appear. The latch-plate 20 extends in a horizontal direction from the bracket and is provided along its edge with the latch openings 21, adapted to receive the latch or locking-pin 22. The upper end of the bracket 19 is in circular form having the reduced rounded upper portion 23, through which extends the passage 24 communicating with the large opening 25. Within the large opening 25 is positioned the head of the bolt 26, which extends through the passage 24 and through a similar passage with-

in the rounded portion 27 of the crane. Upon the upper threaded end of the bolt 26 above the circular portion 27 of the crane are secured suitable washers and nuts to hold the crane thereon. The circular portion 27 is positioned at the center of the crane and extending outwardly in one direction is the portion 28, the extremity of which is split centrally forming the fingers 29 and 30. The finger 29 is curved upwardly and then horizontally, while the arm 30 is curved downwardly and then horizontally. The arms 29 and 30 are then directed outwardly at right angles to their horizontal portions and slotted inwardly, as shown at 31. The inner ends of the slots are enlarged and in circular form, as shown at 31'. The outer ends of the slots widen gradually from a short distance of said outer ends, forming the rounded guides 32 for said slots, the purpose of which will be later described. The enlarged inner ends of the slots 31 and the portion immediately surrounding said rounded openings, are depressed as shown at 32 in a manner similar to the inner ends of the slots 11. The slots 31 are adapted to be brought directly over the slots 11, at times.

Extending from the portion 27 at a slight angle to the portion 28, is the handle carrying portion 33 having a handle 34 upon its free reduced end. Pivotaly connected to the handle carrying portion 33 adjacent the handle 34, is the lever 35 having secured thereto a cord or cable 36 connected with one end of the latch 22, which is slidably secured within the lug 37 carried by the portion 33. The latch 22 is adapted to be engaged in the notch 21, as previously described, and may be, if desired, resiliently held in such engagement by a suitable spring, as will be clearly understood.

As the crane is swung upon the pivot-pin 26 it may be swung within the car, as shown in dotted lines in Fig. 1, when not in use and the lever 35 released from against the handle 34 to allow the latch 22, by the action of its spring, to be engaged within the proper notch 21 to lock the crane in this position. When it is desired to use the crane in connection with the catchers along the track, the lever 35 is pressed against the handle 34 to withdraw the latch 22 from the notch 21 and the crane is then swung upon its pivot until the portion 28 extends through the car door, or other opening, at about right angles. The lever 35 is then released and the latch 22 engages within the directly opposite notch 21 to lock the crane securely in extended position.

Carried upon the outward corner of the slotted portion of the finger 29 is the releasing pin 38, which is adapted to engage against the arm 15, after the operation of collecting the mail bag from the catcher and depositing a new one thereon, to release

the catcher by sliding the finger 15 from upon the upper end of the curved arm 5, after which the horizontal portion of the catcher will swing downwardly upon its hinge 8 and thus eliminate all possibility of the catcher being engaged by a second train before it can be fully set for such engagement.

In using the above described catcher and crane, the catcher is secured to the post 1 between the tracks, as previously described. The bag to be caught by the train carrying the crane is placed upon the hook 39 shown in Fig. 3, or similar suspending member and the hook placed within the slot 11 so that the rounded head thereof rests within the depressed circular portion 13, the bag hanging upon the lower end of said securing member 39. Within the slotted portion of the arm 30 of the crane carried by the approaching car, is suspended in a similar manner by a like hook 39, the bag to be deposited upon the catcher. As the car is passing the catcher and as the crane assumes a position directly opposite the catcher, the arm 30, which travels below the arms of the catcher, comes to a position directly beneath the arm carrying the bag to be collected by the crane. The slot 31 being directly below the slot 11 the arm 30 engages the hook 39 and draws it out of the slot 11, the head of said hook dropping into the depressed circular portion 32 of said slot 31. At the same time, the arm 29, in passing over the other arm of the catcher, is forced to give up the bag suspended therefrom on account of the hook 39 from which the bag is suspended being caught within the slot 11 of the arm beneath the arm 29. As the arm 30 draws the hook 39 from within the recess or depression 13 and out of the slot 11 of the catcher, within which said hook was resting, the opposite arm of the catcher draws the hook from within the arm 29 of the crane and as the car carrying the crane moves on the head of the hook 39 drawn from within the arm 29, drops into the circular depressed portion 13 of the rear arm 10 of the catcher with the bag from the car suspended thereon. After the operation of collecting and depositing the bags is completed, the releasing pin 38 engages against the arm 15, swinging the latter upon its pivot-pin 14, thus forcing it from on the curved arm 5, allowing the hinged extension 9 to swing upon its hinge to a position practically parallel with the post 1. The weight of the bag deposited within the rear arm 10 of the catcher, assists the latter in its downward movement. After the car has passed the catcher and left the proper bag upon said catcher and collected the one therefrom, the crane may be swung within the car by pressing the latch 35 against the handle 34

(as previously described), releasing the same from its locked position and then swinging the handle 34 to bring the arms or fingers of the crane within the car. By releasing the lever 35 the latch 22 will engage within the adjacent notch 21 and lock the crane within the car, after which the bag may be taken from upon the arm 30 and the bag to be delivered to the next catcher suspended on the arm 29 of the crane. As the train approaches the next catcher the crane may be swung to the position previously described and locked in this position to co-act with the next catcher in a manner similar to that described in connection with the first catcher. The catcher may be swung to the opposite side of the post 1 for co-action with cranes carried upon trains moving on this track. The catcher is locked in this position (which position is shown in dotted lines in Fig. 1, as previously stated) between the spring 7 and locking-pin 6 in the same manner as that in which the said catcher was locked in position upon the first side of the post 1.

It will be readily seen that I have provided a catcher and crane which will be positive and accurate in operation and which will effectively co-act to deposit and collect mail bags while trains are traveling at high speed as well as when running at low speed. It will also be seen that as all of the parts of both the catcher and crane are of simple formation they will be cheap to manufacture and, should any part become worn or broken it may easily be replaced by a new one at a very small cost.

What I claim is:

1. A mail appliance comprising apparatus for supporting a mail bag between tracks, means for suspending mail bags from a moving car, said supporting means comprising oppositely extending slotted

members, one of said slotted members being adapted to support a hook carrying a mail bag, the other arm being adapted to receive and retain a hook carrying a bag to be snatched from the suspending means carried by the passing car, said suspending means being adapted to snatch the bag held by said supporting means and at the same time deposit its bag and hook in the receiving and retaining arm of said supporting means, said suspending means carried by the car being adapted to engage against a portion of said supporting means and cause the latter to drop with the new bag thereon, and means for locking said suspending means in position to co-act with said supporting means.

2. A catcher adapted to be positioned upon a support between tracks, means for securing said catcher in position toward either track, means for locking said catcher in either position, in combination with a crane carried by the car for co-action with said catcher, said crane being adapted to be positioned for coöperation with said catcher, means for locking said crane in said position, said crane being adapted to be swung out of engaging position and locked in disengaging position within the car, means for setting said catcher for coöperation with said crane, and means carried by said crane to release said catcher from its set position after coöperation with said catcher to collect mail bags therefrom and deliver mail bags thereto to allow the catcher to swing to inoperative position.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN HICKE.

Witnesses:

ISRAEL SCHNELL,
H. MÜHLSCHLEGEL.