

J. L. ADAM.
MAIL BAG HANDLER.
APPLICATION FILED APR. 30, 1909.

944,651.

Patented Dec. 28, 1909.

2 SHEETS—SHEET 1.

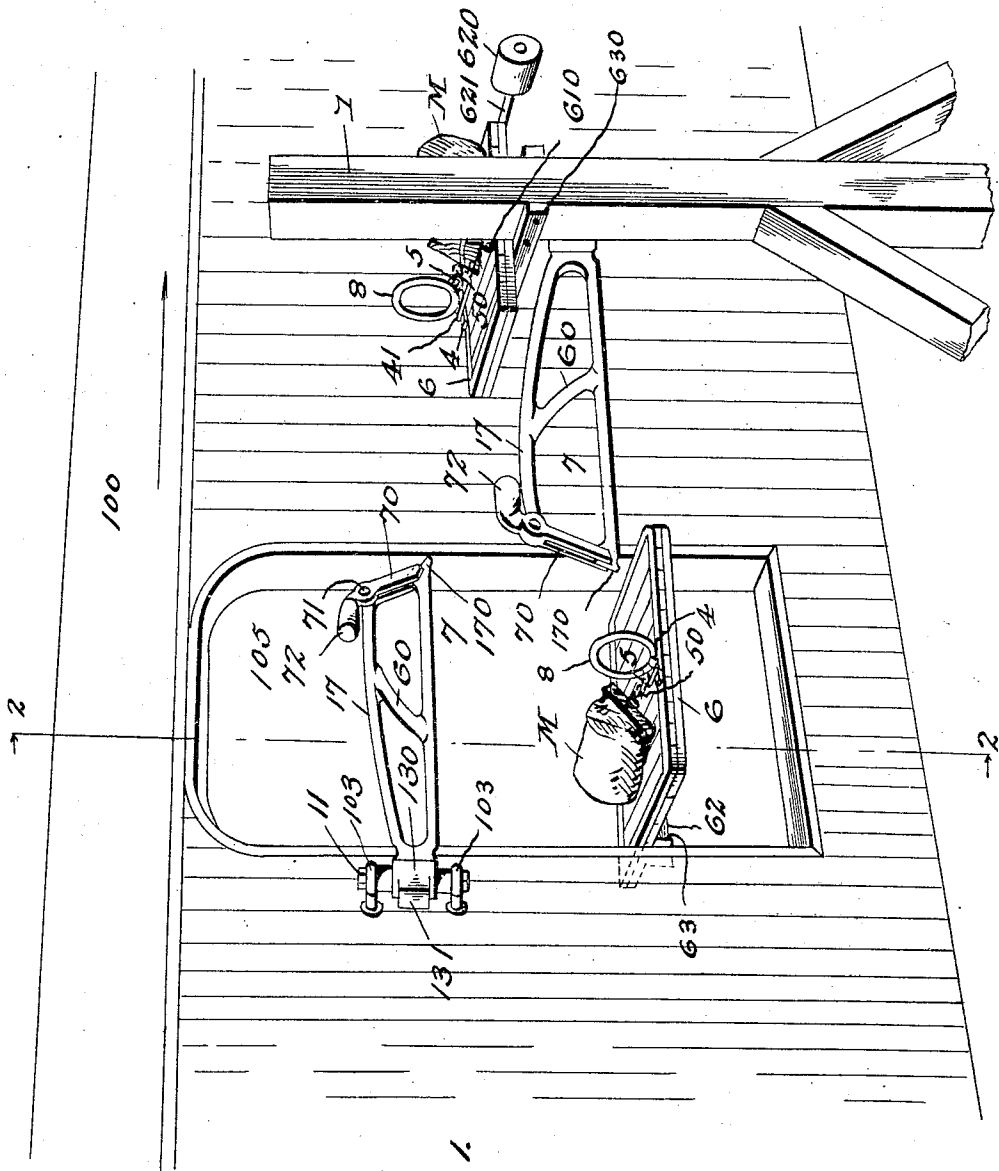


FIG. 1.

WITNESSES:
C. A. Davis.
G. M. Copenhagen.

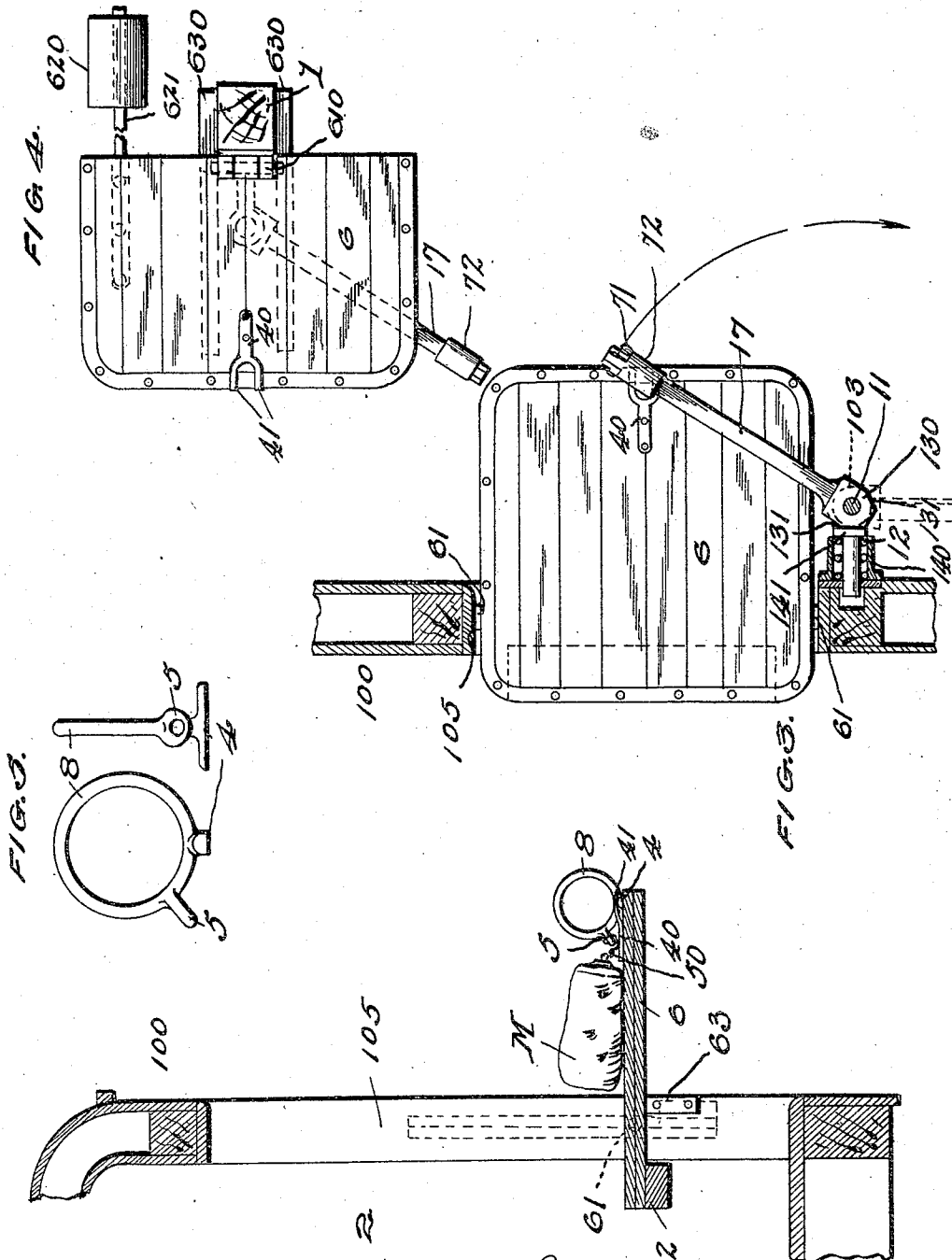
John L. Adam, INVENTOR,
by
Collamer & Co., Attorneys.

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2 SHEETS—SHEET 2.



WITNESSES:
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FIG. 2

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UNITED STATES PATENT OFFICE.

JOHN L. ADAM, OF NEW ORLEANS, LOUISIANA.

MAIL-BAG HANDLER.

944,651.

Specification of Letters Patent.

Patented Dec. 28, 1909.

Application filed April 30, 1909. Serial No. 493,084.

To all whom it may concern:

Be it known that I, JOHN L. ADAM, a citizen of the United States, and resident of New Orleans, Orleans parish, State of Louisiana, have invented certain new and useful Improvements in Mail-Bag Handlers; and my preferred manner of carrying out the invention is set forth in the following full, clear, and exact description, terminating with claims particularly specifying the novelty.

This invention relates to railway rolling stock, and more especially to that class of devices known broadly as mail bag delivery and specifically as catchers and cranes; and the object of the same is to provide a device on the car adapted to cooperate with another on a post at the station for an interchange or transfer of mail bags or packages.

In U. S. Patents numbered 926,226 '7 and '8 issued to me June 29, 1909, I cover broadly the principle and specifically the details of a mail bag or freight transfer device of this general type excepting that holding arms and catching hooks are employed therein.

The present invention contemplates the utilization of the same general principle of operation whereby the catcher engages the object caught and then swings on its supporting pivot, but in connection therewith I here use a tilting or basculated platform which in its horizontal position supports the bag to be caught and then automatically assumes an upright position after said bag has been withdrawn from it.

The details of construction are set forth in the following specification and illustrated in the accompanying drawings, wherein—

Figure 1 is a general perspective view of the device on a car supposed to be moving to the right, with the parts in the position they assume when ready for use, and also of the parts on a post as near a station—the transfer of the mail bags being about to take place; Fig. 2 is a vertical section through the side of the car at its doorway and through the platform, showing the latter in full lines in the same position as in Fig. 1, and in dotted lines in the position it assumes after the bag has been removed; Fig. 3 is a horizontal section through the car and its doorway and the catching arm, the full lines showing the latter in position ready to catch a bag, and the dotted lines showing its position after the bag at the post has been caught; Fig. 4 is a horizontal section

through the post at the station, showing a plan view of its platform when let down; and Fig. 5 shows side elevation and edge view of the bag holder.

In the drawings the numeral 100 designates the car having a doorway 105 as usual, and adjacent the same eyes 103 project outward from the car body and in them is journaled an upright shaft 11. The latter carries a cam 130 having cam faces 131, and from the cam projects horizontally a catching arm or hook 7 which by preference has an upper member 17 connected with the hook body by a stop 60. To the outer end of said member at 71 is pivoted a catch 70 whose tip is held in normal engagement with the tip 170 of the hook by a weight 72 at the upper end of the catch in rear of its pivot as seen. The numeral 140 designates a housing mounted on the car body between the eyes 103 and containing an expansive spring 12 which forces a plunger 141 normally outward and into engagement with the cam 130 or its faces 131 which are so disposed that when either is engaged by the plunger it will hold the body of the catching arm in a position oblique to the wall of the car. A similar hook is mounted in similar bearings on each post 1 disposed at the side of the roadway adjacent stations or other points where a transfer of mail bags is to take place, excepting only that the hooks on the posts are disposed in a plane below those on the cars as will be clear from an inspection of Fig. 1.

It will be obvious that when not in use the hooks on the posts or on the cars can be turned aside and out of the way, and that when in use their cam faces 131 permit them to be set to the proper position to effect a transfer of mail bags in whichever direction the car is moving.

In connection with the above described catching arms I preferably employ a hinged or basculated platform for delivering the bag or bags which are to be transferred, and there is one of these platforms hinged to each post and one hinged within the doorway of each mail car—their construction being only slightly different as explained below. Essentially each consists of a flat platform or body 6 adapted to stand either horizontal or vertical. That on the car is pivoted at points 61 within the doorway and its rear or inner end 62 is weighted so that when the platform is relieved of its

load it will automatically rise to a vertical position practically parallel with the walls of the car so that it shall not interfere with the closing of the car door. Stops 63 in the doorway prevent the platform from being turned down farther than to a horizontal position, where it is held automatically by the weight of one or more mail bags M. The platform body 6 at the post is the same, excepting that it is hinged at 610 thereto and its weight 620 is carried by an arm 621 as best seen in Fig. 4—this weight holding the platform normally vertical and against the post when the bag is withdrawn. From the post project two horizontal stops 630 on which the platform rests when it is in use. The details of construction of these delivery platforms are not important, further than that it is essential that preferably both and certainly the one on the car shall rise automatically to a vertical position when relieved of its load, so as to be out of the way when a transfer of mail bags is not to take place. As shown in Fig. 1, the platform on the post is so located that the catching arm on the car will pass above it, while the platform on the car is so located that it will pass just beneath the catching arm on the post—otherwise the construction of these platforms may be the same in essentials while differing in details as required.

In Fig. 5 is best illustrated the bag holder which I employ in connection with the hook 7. The same consists of a ring 8 at one side of which is a smaller ring or eye 5 standing in a plane at right angles thereto, and adjacent this eye is a cross piece secured to the ring on a line parallel with its axis and forming two short bars 4. Upon each platform is secured a flat spring 40 whose free end at the outer edge of the platform is split into fingers 41 adapted to straddle the ring and engage frictionally over the bars 4 so as to hold said ring upright as best seen in Fig. 1. A strap or chain 50 connects the eye with the mail bag M, and it is quite obvious that there could be several bags or other articles which are to be transferred and all connected by one or more chains with said eye. The ring is of such size that when standing in upright position as seen in Fig. 1 its axis shall be substantially in the path of the tip of the hook—that on the platform at the post opposite the tip of the hook on the car, and that on the platform on the car opposite the tip of the hook on the post.

With the above construction of parts and the car moving in the direction shown by the arrow in Fig. 1, it will be clear that at the moment of impact the tip of the hook 7 on the car enters the ring 8 on the post and that of the hook on the post enters the ring on the car, both catches 70 yielding against their counterweights 72 to admit the rings which strike the stops 60, after which the

catches resume the positions shown. Further progress of the car then draws the rings from beneath the fingers 41 of the springs 40, tightening quickly on the chains 50 and carrying the bags along with the rings, the hooks swing from their full line positions to their dotted line positions in Fig. 3 as the car passes the post, the springs 12 yielding to permit, the bags are dragged off their platforms and suspended in midair by their straps or chains where they swing to and fro for a few times until they come to rest, and the platforms when relieved of their weights automatically rise to vertical positions and out of the way; and after the transfer has taken place the agents at the station and in the car respectively can readily detach the rings from the hooks and then disconnect the bags from the straps or chains. Thus it will be seen that in the transfer the first action which takes place is the impalement of the rings on the forwardly projecting hooks, the next is the turning of the latter on their axes and the twisting of the bars of the rings from out from under the spring fingers, meanwhile the hooks swing to a position at right angles to the line of travel and eventually to the rear of such position while the rings become locked on the hooks by the catches, and finally the drawing of the rings from beneath their supporting fingers tightens the chains and drags the bags off their platforms which latter (one or both) then automatically assume a vertical position. It will be clear that one or more bags could be delivered from the car to the post, or the reverse, without there necessarily being an exchange of bags; or in order that the rings may not accumulate in the car or at any station, there could be a transfer of rings whether they had bags attached to them or not. It will be clear also that each ring could carry more than one bag or other articles, and by preference, I connect them with it by means of short straps or chains.

What is claimed as new is:

1. In a mail bag catcher, the combination with an upright rotary shaft, means for retarding its rotation, and a hook projecting radially from it; of a bag holder comprising a ring adapted to be impaled by said hook, means for releasably supporting the ring in upright position, and a flexible connection between the ring and bag.

2. In a mail bag catcher, the combination with an upright rotary shaft, means for retarding its rotation, a hook projecting radially from it, and a movable catch automatically closing against the tip of the hook; of a bag holder comprising a ring adapted to be impaled by said hook, means for releasably supporting the ring in upright position, and a flexible connection between the ring and bag.

3. In a mail bag catcher, the combination with eyes projecting from a support, an upright shaft journaled in them, and a spring-actuated plunger between them; of
 5 a catching arm, and a cam supporting it and mounted on said shaft, the cam having faces either of which when engaged by the plunger will hold said arm yieldingly in a position oblique to the support.

10 4. A mail bag transfer comprising a catching arm swinging in a horizontal plane, a deliverer swinging in a vertical plane, means for causing it to automatically assume a vertical position, stops for holding
 15 it in horizontal position when depressed by the weight of the bag, and a bag holder releasably carried by said deliverer, the catcher on each device being disposed in a plane just above the deliverer on
 20 the other when said deliverer stands in its horizontal position.

5. In a mail bag transfer, the combination with a catching arm swinging in a horizontal plane, and a deliverer swinging
 25 in a vertical plane, the catcher on one device being disposed in a plane just above the deliverer on the other when said deliverer stands in its lowest position; of a bag holder comprising a ring adapted to be
 30 removably supported by the deliverer and impaled by a catcher, an eye at right angles to the ring, and a flexible connection between the eye and bag.

6. In a mail bag transfer, the combination with a catching arm swinging in a horizontal plane, a deliverer swinging in a
 35 vertical plane, a weight in rear of its pivot for causing it to automatically assume a vertical position, and stops for holding it in horizontal position when depressed by the bag, the catcher on each device being
 40 disposed in a plane just above the deliverer on the other when said deliverer stands in its horizontal position; of a bag holder comprising a ring flexibly connected with the bag, and a yielding support on the deliverer
 45 releasably holding said ring upright and in the path of the catcher.

7. A mail bag deliverer comprising a

platform mounted on horizontal pivots, a 50 weight in rear of its pivots for causing it to automatically assume a vertical position, stops for holding it in horizontal position when depressed by a bag, a bag holder adapted to be impaled by a catcher, and means 55 on the lighter edge of the platform for releasably holding said bag holder upright.

8. A mail bag deliverer comprising a platform mounted on horizontal pivots in the doorway of a car, a weight in rear of
 60 said pivots for causing it to automatically rise into the plane of the car-wall, stops for holding it in horizontal position when depressed by a bag, a bag holder consisting of a ring flexibly connected with the bag, and 65 means on the lighter edge of the platform for releasably holding said bag holder upright.

9. In a mail bag deliverer, the combination with a catching hook, and a delivery 70 platform across and above which the hook moves; of a bag holder comprising a ring, a chain leading thence to the bag, a cross piece secured to the ring parallel with its axis and forming two short bars, and a flat 75 spring secured at one end to said platform and split at its other end into fingers adapted to frictionally engage over said bars to hold the ring upright.

10. In a mail bag deliverer, the combination with a catching hook, and a delivery 80 platform across and above which the hook moves; of a bag holder comprising a ring, an eye connected therewith at right angles thereto, a chain leading thence to the bag, 85 a cross piece secured to the ring parallel with its axis and forming two short bars, and a spring secured at one end to said platform and split at its other end into fingers adapted to frictionally engage over 90 said bars to hold the ring upright.

In testimony whereof I have hereunto subscribed my signature this the twenty third day of April, A. D. 1909.

JOHN L. ADAM.

Witnesses:

FRANCIS D. CHARBONNET, Jr.,
 LEONCE A. CHARBONNET.