

No. 808,646.

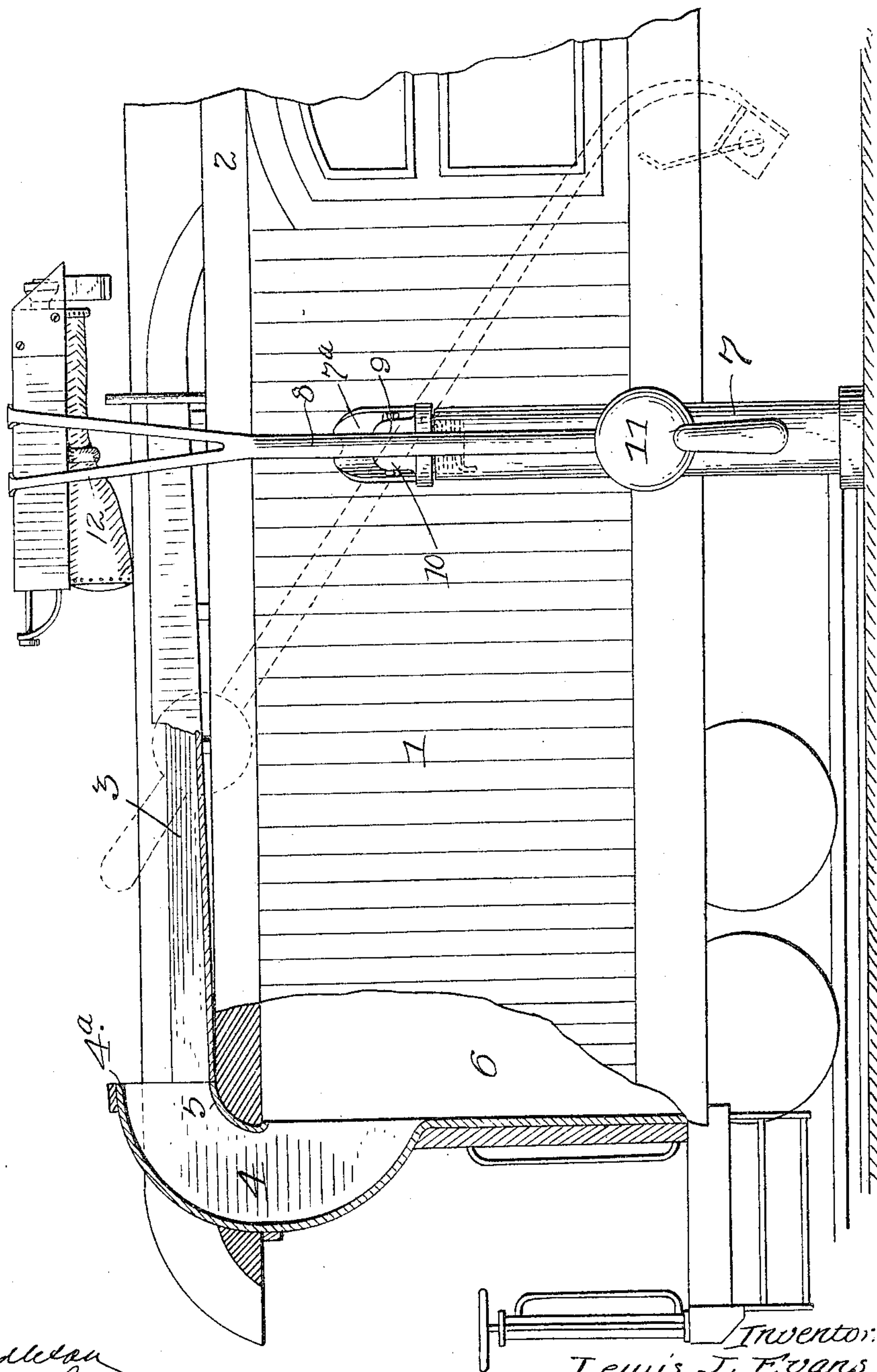
PATENTED JAN. 2, 1906.

L. J. EVANS.  
MAIL BAG CATCHER.

APPLICATION FILED APR. 12, 1905.

3 SHEETS—SHEET 1.

Fig. 1.



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Edward N. Sartou

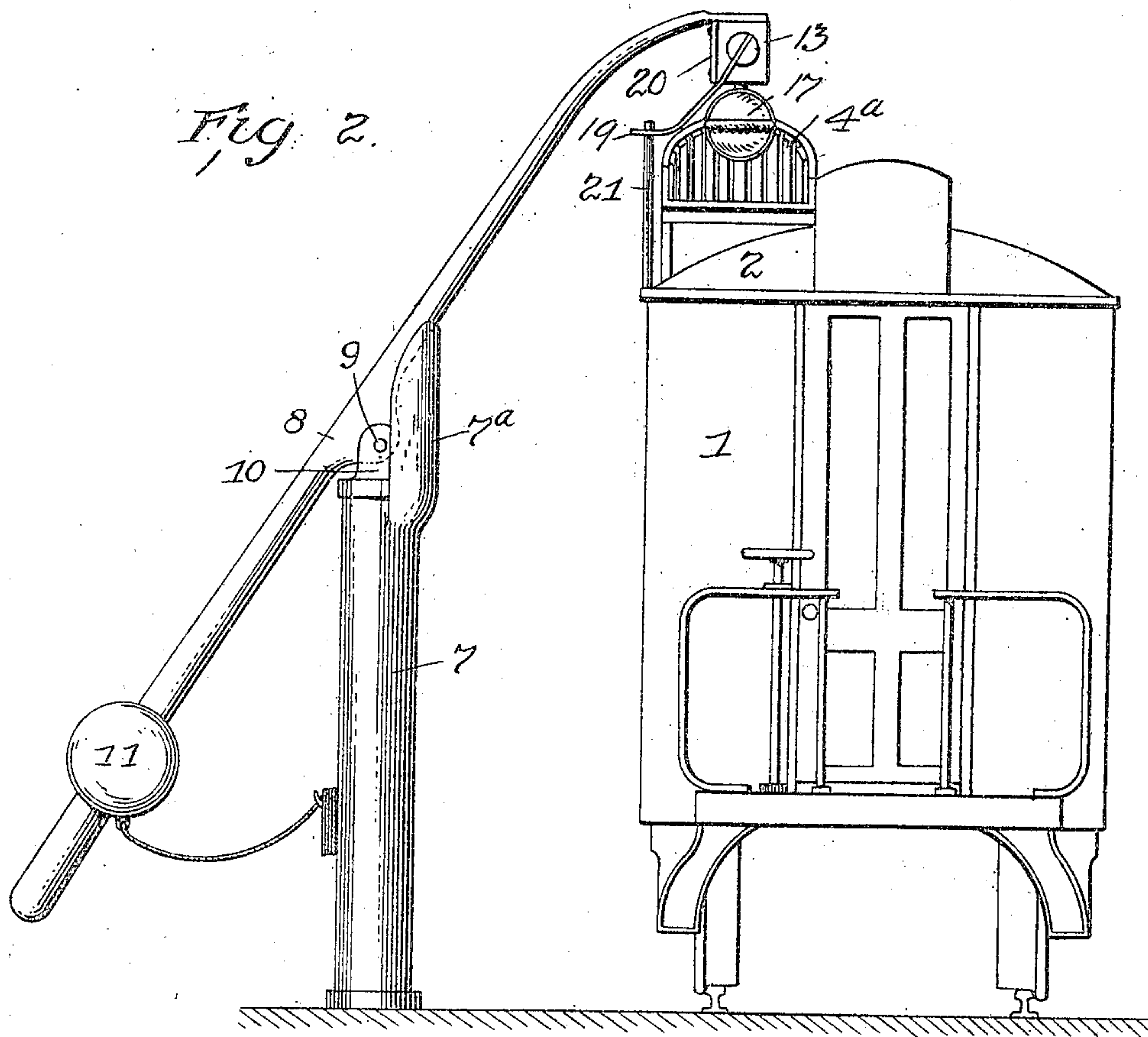
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Lewis J. Evans  
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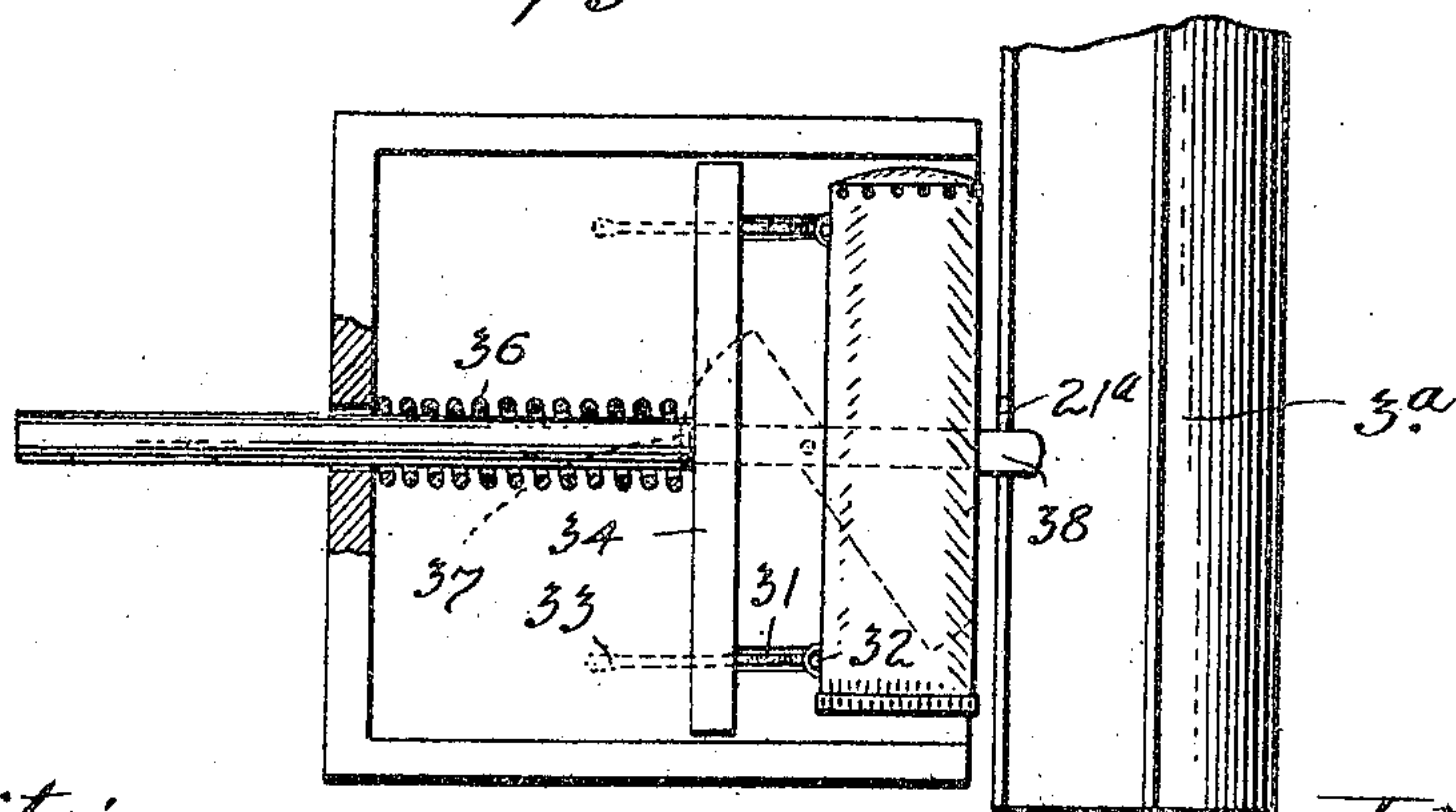
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3 SHEETS—SHEET 2.



*Fig. 6.*



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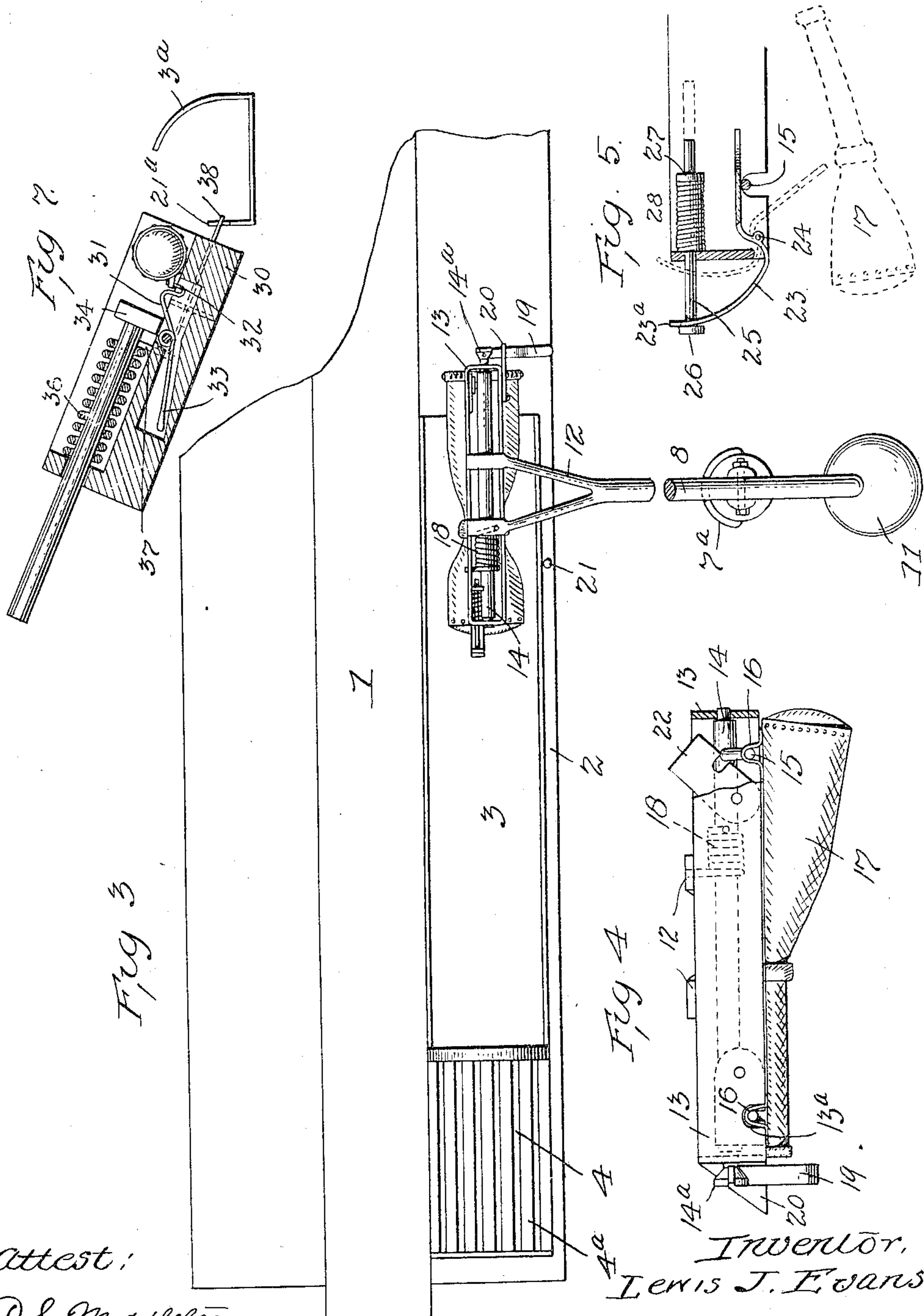
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APPLICATION FILED APR. 12, 1905.

3 SHEETS—SHEET 3.



Attest:

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Edward N. Lorton

INVENTOR.  
LEWIS J. EVANS.

By *John Middleton Donaldson* Attorney



# UNITED STATES PATENT OFFICE.

LEWIS J. EVANS, OF RIVERSIDE, NEW YORK, ASSIGNOR OF ONE-FOURTH TO COE TYLER AND THREE-EIGHTHS TO JOHN M. DAVIDGE, BOTH OF BINGHAMTON, NEW YORK.

## MAIL-BAG CATCHER.

No. 808,646.

Specification of Letters Patent.

Patented Jan. 2, 1906.

Application filed April 12, 1905. Serial No. 255,136.

*To all whom it may concern:*

Be it known that I, LEWIS J. EVANS, a citizen of the United States, residing at Riverside, New York, have invented certain new and useful Improvements in Mail-Bag Catchers, of which the following is a specification.

My present invention relates to improvements in mail-bag catchers for railway mail-service.

Among the several objects which I have had in view in devising the present invention are the following: First, to produce means for which the mail-sack may be taken aboard a train no matter how swift its speed without any danger to the mail clerks; second, to enable the bag to be so received without the necessity of opening the car and subjecting the occupants to the cold blast of outside air in winter, thereby permitting the car to be kept at the proper temperature to insure the comfort and preserve the health of the mail clerks; third, to so arrange the holding and receiving or catching devices that liability of injury to the bag and its contents is reduced to a minimum and all danger of the bag being caught or jammed in the apparatus is avoided, and, fourth and finally, I have aimed to provide means of extreme simplicity, durability, and efficiency, and which will require no skill on the part of the operator, removing all possibility of accidents to either mechanism or operators due to inexperience or carelessness on the part of the mail clerk.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of a sufficient portion of a car to show the construction and mode of application. Fig. 2 is an end elevation. Fig. 3 is a partial plan view with parts in section. Figs. 4 and 5 are enlarged detail views, and Figs. 6 and 7 are detail views of a modification.

Referring by reference characters to these drawings, the ordinal 1 designates an ordinary railway mail-car. Upon the depressed part 2 of the roof, on one side, I place a mail-bag-receiving chute 3, extending longitudinally of the car. This chute, which is entirely open on its upper side, may be of any desired length, though it is only shown as extending for a portion of the length of the car, this being amply sufficient. At its rear end it communicates with a curved guideway or chute

portion 4, the bottom of the mouth 5 of which may form a continuation of the floor of the chute. At its lower end the guideway communicates through an opening in the end of the car with a suitable receiving chamber or receptacle 6, which may be constructed of or lined with yielding material, so as to receive the bag with a minimum amount of jar or shock. This chute portion 4 is preferably constructed of open-work, such, for instance, as longitudinal bars 4<sup>a</sup>.

It will be seen that supposing a car equipped with the device above described to be moving toward the right and a horizontally-supported mail-bag to be dropped upon the horizontal portion of the chute inertia will cause it to be slid instantly to the rear into the curved chute portion 4, by which it is guided down into the receiving-chamber. From this it may be removed by the mail clerk at his convenience. Obviously the operation above described will have required no action or attention on the part of the mail clerk on the car, who, during the time the bag is being taken aboard, may have continued with his regular duties without fear of injury and without being inconvenienced by the opening of a door or like opening letting in a cold blast of air.

In order to support the bag in a simple and efficient manner and insure of its being dropped upon the horizontal part of the chute without regard to the speed of the train, I provide the following mechanism: Upon a post or like support 7 at the side of the track I mount an arm or sweep 8, which is pivoted at 9 in a head or fork 10, swiveled in the upper end of the post. At its rear end the sweep may be provided with a suitable counterweight 11, while at its other end it is preferably forked as shown at 12, and provided with means for depositing or projecting the bag upon or against the horizontal portion of the chute. Such means may conveniently consist of a frame carried by the fork 12, within which is journaled a rock-shaft 14, carrying bag engaging and holding pins or hooks 15 for engaging loops or eyes 16 on the mail-bag 17. This rock-shaft is encircled by and under the tension of a coiled spring 18, which tends to rotate it in such a direction as to allow the pins 15 to depend vertically and the bag-loops to slide off therefrom into the chute on



the car. On the end 14<sup>a</sup> of the rock-shaft is pivoted a locking and releasing lever 19, which is designed for use both as a handle to enable the shaft 14 to be rocked to bring the pins into a horizontal bag-holding position and also as a holding device for preventing the shaft from being rocked by the spring until tripped at the proper time. To enable the arm to perform this function, a lug or projection 20 is provided extending from or carried by the frame 13. In this locked position the arm, which, as shown in Fig. 2, inclines downwardly toward the outer upper corner of the car, is designed to be engaged or struck by a rod, contact device, or tripper, such as a rod 21, carried by the car.

In order to enable the bag to be the more readily suspended from the pins, I prefer to so arrange and construct the parts that the rock-shaft may be set as above described and thereafter the bag applied. A convenient manner of accomplishing this is to provide the side bar of the frame 13 with a cut-away portion 13<sup>a</sup> in proximity to each pin and of a size sufficient to allow the bag loops or eyes 16 to be readily slipped onto the pins. After they have been so applied the pivoted retaining plates or bars 22 are dropped down to cover these cut-away places or openings and hold the loops on the pins. Under all ordinary conditions the bag when released will drop by gravity with sufficient quickness to cause it to enter the mouth of the chute. To make its descent more sudden, however, I may provide a pivoted depressor-bar 23, hinged to the rear end of the frame at 24. Its outer end 23<sup>a</sup> is slotted, and through the opening thus formed is passed a rod 25, having a headed end 26. The rod is guided in an opening in the frame and carries on its inner end a collar 27, between which and the frame is placed a helical spring 28, which tends to draw the rod toward the right, and hence force the depression-arm downward. The depressor-arm is held up by the same pin 15 which engages one of the bag-loops. It is shown in Fig. 5 in full lines in locked position and in dotted lines as in the act of depressing or throwing down the bag. The post 7 carries a fork 7<sup>a</sup>, which is designed to engage the sweep and hold it in the position shown in Figs. 1, 2, and 3 ready to be tripped.

With the parts constructed and arranged as above described the depressor-arm occupying the position shown in dotted lines in Fig. 5 will contact with the top edge 4<sup>a</sup> of the chute. The result of this is that the sweep, which is nearly counterbalanced by the weight 11, will be slightly tilted, so as to disengage it from the fork, when it will immediately swing around into a position parallel with the railroad and with its bag-supporting end in position to receive a fresh mail-bag.

Under some conditions it might be found desirable to cause the bag to be projected laterally or diagonally into the chute instead of vertically. Means for accomplishing this is shown in Fig. 6 and 7. In this form I make the chute 3<sup>a</sup> to have a laterally open side port for the bag on the inclined bottom of a frame or guide 30. Retaining devices 31 are pivoted in this bottom and have hooked ends 32 for engaging the eyes of the bag and cams or inclines between such ends and the pivots. The retaining devices are caused to normally assume the position shown in Fig. 7 by suitable means, such as the weighted arms 33. A flange 34, suitably guided in the frame and placed under the tension of a powerful spring 36, is normally held retracted and in the position shown in Figs. 6 and 7 by an arm, abutment, or stop 37, carried on the end of the swinging lever 38, which is designed to be struck by the rod or contact device 21<sup>a</sup>, carried by the car. The result of such contact is that the lever is swung into the position shown in dotted lines in Fig. 6 and the plunger thrown forward by the spring. Its first movement causes it to act on the cam-surfaces of the retaining devices, depressing them and releasing the bag, which is at once thrown by the continued movement of the plunger into the chute.

Having thus described my invention, what I claim is—

1. In a mail-bag catcher the combination with the car having a chute on the roof thereof provided with an open side and having a part extending within the car, of a bag having a permanently-attached suspending-loop near each end, a rock-shaft having projections designed to engage said loops, and tripping means whereby said shaft is rotated by the car to release the bag, substantially as described.

2. In combination a car, a bag-receiving chute carried thereby, a bag having suspending-loops at or near each end, a supporting device having retaining devices for engaging said loops, and means actuated by the passage of the car for releasing the loops from said retaining devices, substantially as described.

3. In combination a car, a bag-receiving chute carried thereby, a bag having suspending-loops near each end, a pivotally-supported sweep, a pair of retaining devices carried at the end of said sweep for supporting the bag, and means tripped by the passage of the car for actuating said retaining devices, substantially as described.

4. The combination with a car having a bag-receiving device, of a bag-supporting device comprising a pivoted sweep, a frame carried on the outer end thereof, a rock-shaft journaled in said frame, bag-retaining devices carried by said rock-shaft, means for holding said rock-shaft with said retaining



devices in bag-holding position, and tripping means actuated by the passage of the car for tripping said rock-shaft, substantially as described.

5 5. The combination with a car having a bag-receiving device, of a post at the side of the track, a sweep pivoted on said post to swing vertically and horizontally, a fork carried by the post for holding the sweep ele-  
10 vated, bag-retaining means carried by said sweep, and means for automatically releasing the bag and disengaging the sweep from the fork, substantially as described.

15 6. The combination with a car having a bag-receiving device, of a bag-holding device comprising a suitable frame, a rock-shaft journaled therein, bag-retaining pins carried by said rock-shaft, a spring exerting tension on said shaft, a bag-depressing lever pivoted  
20 in the frame and adapted to be held elevated

by one of said pins, a spring for exerting tension on said depressing-lever, a locking-lever for holding said rock-shaft against rotation, and means tripping said locking-lever, substantially as described.

25 7. In a bag-holding device, a frame, a rock-shaft journaled therein, projections on said rock-shaft adapted to engage loops at the ends of a bag, tripping means for holding said shaft with said projections extending hori-  
30 zontally, and pivoted retaining devices in proximity to said projections for holding the loops thereon, substantially as described.

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

LEWIS J. EVANS.

Witnesses:

HENRY E. COOPER,  
L. B. MIDDLETON.