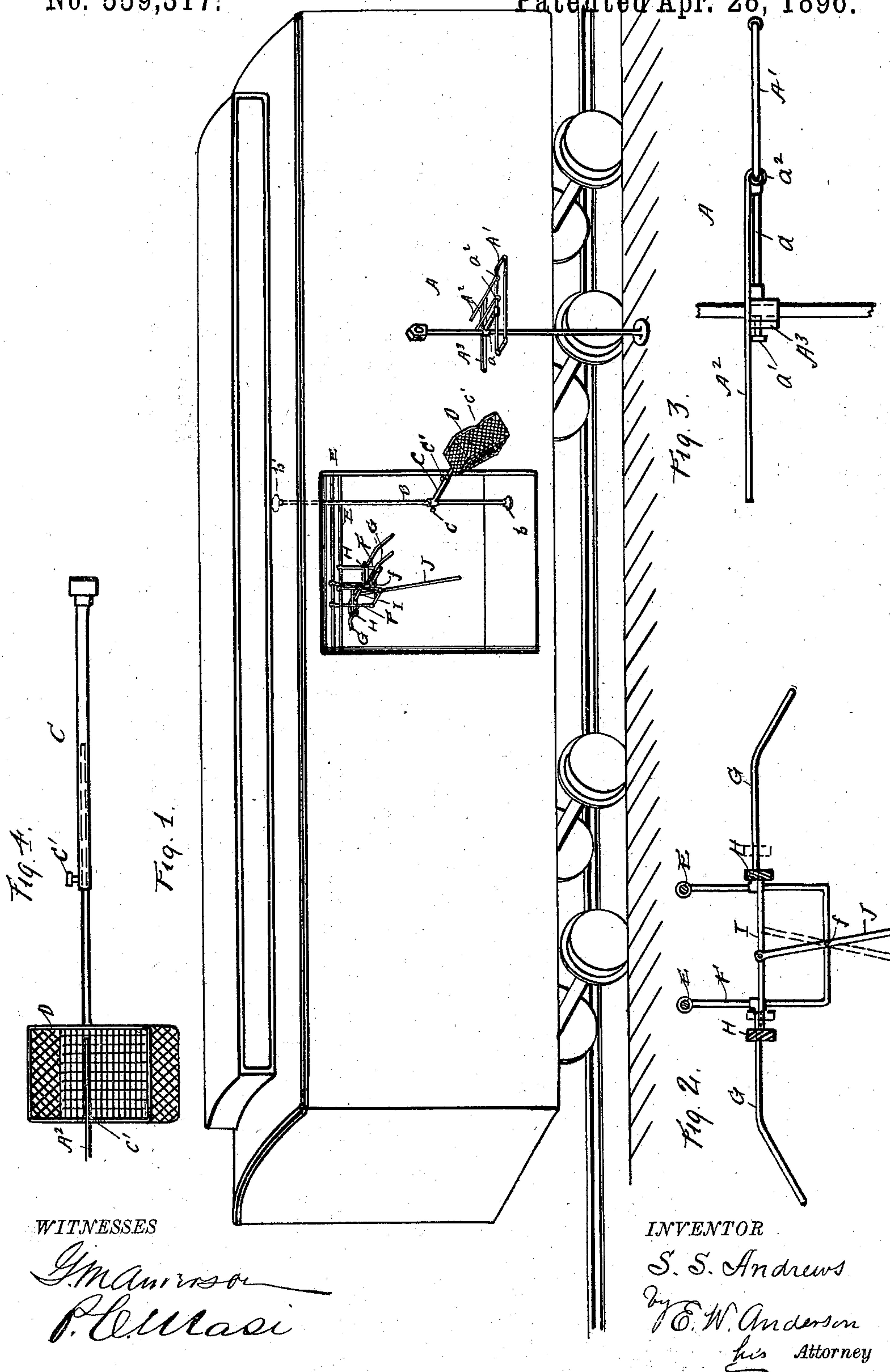


(No Model.)

S. S. ANDREWS.  
MAIL BAG CATCHER AND CRANE.

No. 559,317.

Patented Apr. 28, 1896.



WITNESSES

*G. Morrison*  
*P. C. Masi*

INVENTOR

*S. S. Andrews*  
by *E. W. Anderson*  
his Attorney



# UNITED STATES PATENT OFFICE.

SAMUEL S. ANDREWS, OF GRAND JUNCTION, IOWA, ASSIGNOR OF ONE-HALF  
TO CLAUDE L. JOY AND CHARLEY G. COX, OF SAME PLACE.

## MAIL-BAG CATCHER AND CRANE.

SPECIFICATION forming part of Letters Patent No. 559,317, dated April 28, 1896.

Application filed January 31, 1896. Serial No. 577,571. (No model.)

*To all whom it may concern:*

Be it known that I, SAMUEL S. ANDREWS, a citizen of the United States, and a resident of Grand Junction, in the county of Greene and State of Iowa, have invented certain new and useful Improvements in Mail-Bag Catchers and Cranes; and I do 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings shows the invention as in application. Fig. 2 is a sectional view of device for delivering bag from train. Fig. 3 is a side view of mail-bag-supporting stand, upright being broken. Fig. 4 is a side view of basket and carrying-arm, one of cross-bars  $A^2$  being shown in engagement therewith.

This invention is designed to provide means of improved character for use in connection with the railway mail service for the purpose of taking mail-bags into and delivering the same from moving trains; and the invention consists in the novel construction and combination of parts, all as hereinafter described, and pointed out in the appended claims.

Referring to the accompanying drawings, the letter A designates a mail-bag-supporting stand, one of which is placed upon or secured to the platform of each station where mail is to be taken by a train without stopping. This stand consists of a post or upright, which rises from a suitable base, a frame  $A'$ , adjustably secured to said post or upright, pouch-supporting rods  $A^2$ , which work on the said frame, and a cross-bar  $A^3$  for supporting said rods. The frame  $A'$  is of open rectangular form and is supported behind the post by means of an arm  $a$ , having a sleeve or socket which slidably engages the post and is secured thereto in the desired position by means of a set-screw  $a$  or other suitable fastening device. The cross-bar  $A^3$  is secured to said sleeve upon the front side of the post. The two rods  $A^2$  have large eyes  $a^2$  at their inner ends, which loosely engage the bars of the frame  $A'$ , which is preferably composed of

sections of gas-pipe connected by ordinary elbow-couplings.

B designates a vertical rotary shaft, which is carried by the mail-car, its lower end being removably journaled in a step or socket  $b$ , secured to the car-floor at the center of the car and at about the line of the front edge of the door thereof. Its upper end is journaled in a bearing  $b'$ , secured to the top frame or joists of the car. With cars having wide doors two sets of bearings are provided for this shaft, one set to each side of the door, in order that said shaft may be shifted from one to the other, according to the direction in which the train is going. With cars having narrow doors four sets of the bearing devices should be provided, one set at each corner of the space included between the opposite doors, in order that the shaft may be adjacent to either edge of either door. Adjustably secured to said shaft by a set-screw  $c$  is a horizontally-extending arm C, which is formed in two telescoping sections, whose adjustment is secured by a screw  $C'$ . The outer section of this arm carries a catch-basket D, which consists of a rectangular frame and a body portion of net or other suitable material secured to and suspended from the said frame. This frame, together with the arm C, is preferably constructed from gas-pipe, as indicated. The outer bar of said frame is formed with a depression  $c'$ .

Secured to the roof-frame of the car and running longitudinally thereof between the doors are two parallel rods E. Depending from these rods and arranged to slide thereon are two frames F F, connected at the bottom by a fulcrum rod or brace  $f$ . Secured to each pair of the vertical arms of these frames F are two rods G, which extend laterally outward toward the doors. Connecting the inner portions of each pair of these rods and arranged to slide therein is a push bar or block H, and connecting the two blocks is a push-rod I. Connected at its upper end portion to the said rod and fulcrumed upon the said brace  $f$  is a depending lever-rod J, which hangs in the path of the basket-supporting arm C as the latter is swung into the car. The device just described is also preferably formed of gas-pipe sections and fittings and is designed to



be moved along the rods E to either side of the doors, according to the direction in which the car is going.

The operation is as follows: The rods A<sup>2</sup> are moved upon the frame A' and are supported upon the cross-bar A<sup>3</sup> upon the side of the post or upright opposite to that from which the train is coming. The bag or pouch to be taken up by the train is supported upon the end portions of these rods. The postal clerk or agent in the train as the latter approaches the station places the bag or pouch to be delivered upon the rods G at the side of the car where the delivery is to be made. He also swings the basket-arm C and its basket outwardly at right angles to the car, the basket having first been properly adjusted and inclined into substantially the position shown in Fig. 1, whereby it forms a sort of scoop. The basket strikes the bag or pouch on the rods A<sup>2</sup> in about the manner illustrated in said Fig. 4. The rods A<sup>2</sup> engage the bend or depression c' of the basket-frame and are pushed off the end of the bar A<sup>3</sup>. They now withdraw from underneath the bag and drop clear of the basket, into which the bag safely falls.

It will be seen that the arm C and its basket at the time the catch is made partake of the inertia or impetus of the moving car, while the bag or pouch, being stationary, has no impetus. Consequently when the catch is made the impetus of the basket is checked, as if by a stop, and the continued movement of the car causes the basket to swing backwardly into the car, where it comes into violent contact with the depending lever-rod J. The latter is thereby swung to one side, carrying with it the push-rod I, which moves the push-block II on the side opposite to the direction in which the lever J swings, outwardly, and throws the bag or pouch off onto the platform.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a railway mail apparatus, the combination of a pouch-supporting device on the station-platform, a swinging catch-basket carried by the train and adapted to take the pouch from the said supporting device, a pouch supporting and delivering device also carried by the train, a push device, and a

lever arranged to actuate said push device and to be actuated itself by the swinging basket carried, substantially as specified. 55

2. In a railway mail apparatus, means for automatically taking mail-pouches into and delivering the same from moving trains, a pouch-supporting device on the station-platform, a horizontally-swinging catch-basket carried by the mail-car of the train and arranged to take a pouch from the said supporting device, a depending pouch-supporting device suspended within the said car, and means whereby said device is actuated to deliver a pouch therefrom by the swinging basket-carrier as the latter is swung into the car with the pouch which it has caught, substantially as specified. 70

3. In a railway mail apparatus, the combination with the pouch-supporting device on the platform, consisting of a post or upright, an open frame adjustably supported from and behind said post or upright, the pouch-supporting rods loosely engaging the said frame, and the cross-bar arranged to support said rods, of the swinging, adjustable basket carried by the mail-car of a train and adapted to catch a pouch supported on the said rods, substantially as specified. 80

4. In a railway mail apparatus, a pouch-catcher, comprising a rotary vertical shaft, an arm adjustably secured to said shaft and formed in two telescoping sections, the outer section of said arm being adjustable with relation to the inner section, and a catch-basket carried by the said outer section, substantially as specified. 85

5. In a railway mail apparatus, the combination with the vertical rotary shaft carried by and within the mail-car; its swinging arm and catch-basket, of the delivering device, comprising the frames movably suspended within the car, the pouch-supporting rods carried thereby, the push-blocks on said rods, the push-rod connecting said blocks, and the lever connected to the said push-rod and arranged to be actuated by the swinging arm of the catch-basket, substantially as specified. 100

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

SAMUEL S. ANDREWS.

Witnesses:

C. E. REYNOLDS,  
A. J. HARVEY.