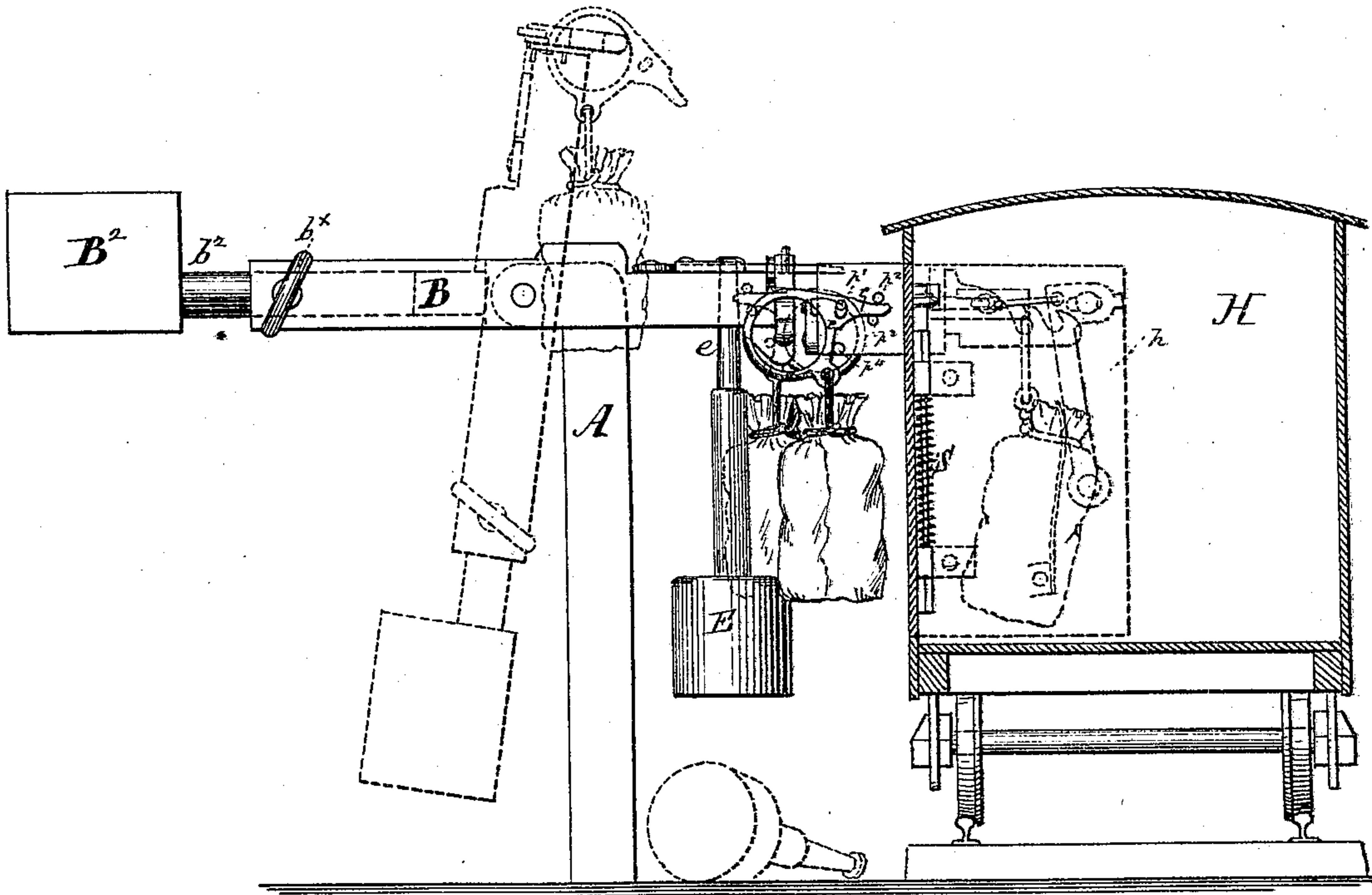


# MAIL-BAG CATCHER.

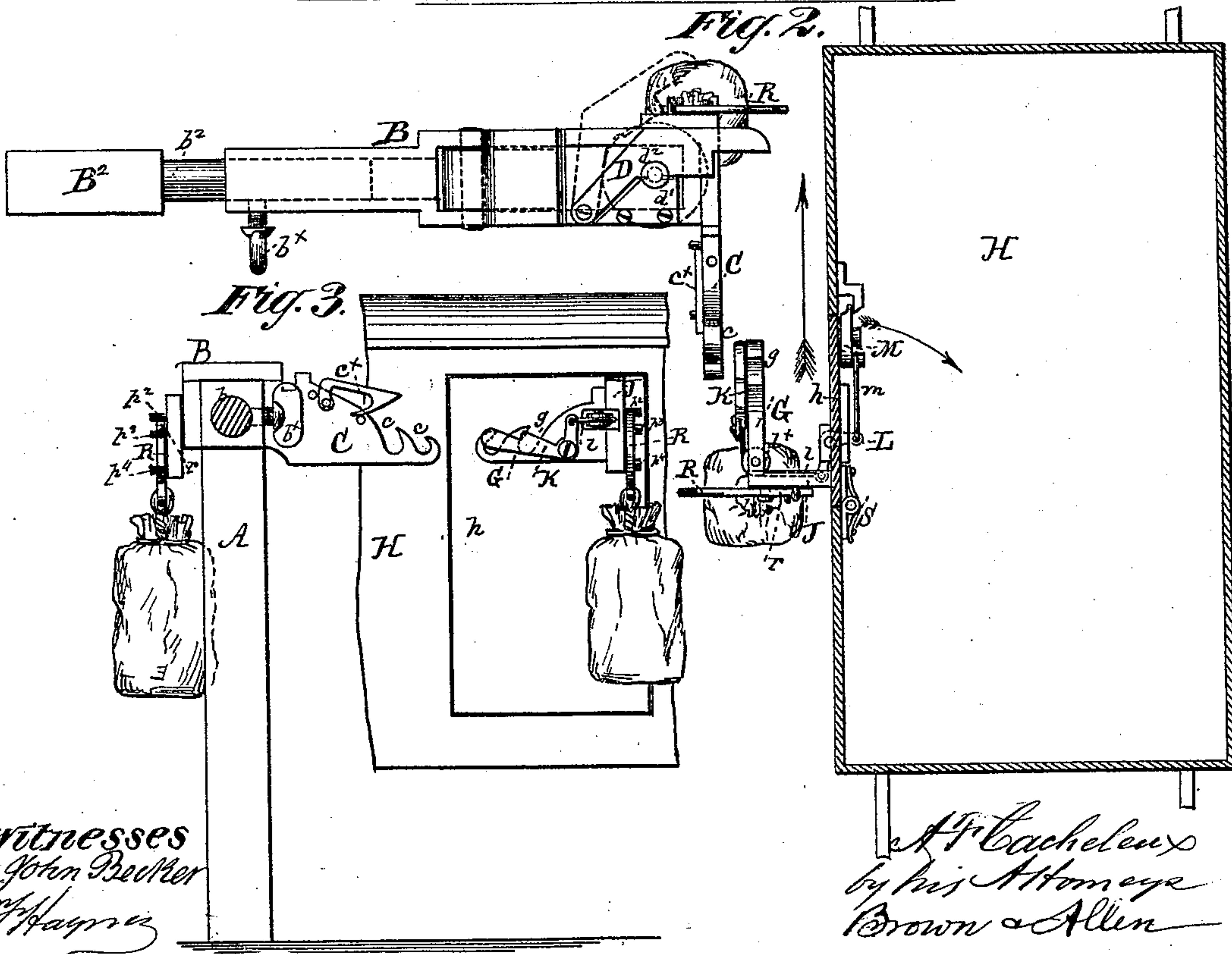
No. 175,660.

Patented April 4, 1876.

*Fig. 1.*



*Fig. 2.*



Witnesses  
John Brecher  
J. Hagner

Attest  
J. F. Tacheleux  
by his Attorney  
Brown & Allen



# UNITED STATES PATENT OFFICE.

ALEXIS FIRMIN CACHELEUX, OF PARIS, FRANCE.

## IMPROVEMENT IN MAIL-BAG CATCHERS.

Specification forming part of Letters Patent No. 175,660, dated April 4, 1876; application filed March 7, 1876.

### *To whom it may concern:*

Be it known that I, ALEXIS FIRMIN CACHELEUX, of Paris, in the Republic of France, have invented certain new and useful Improvements in Apparatus for Receiving and Delivering Mail-Bags; and I do hereby declare that the following is a full, clear, and exact description of the same.

My invention relates to certain means for delivering mail matter from a railway car or train to a station, and for receiving mail matter from a station and depositing it in the car, both of said operations being performed while the train is in motion.

The invention consists in a novel construction, arrangement, and operation of devices for automatically depositing the bag inside the car immediately on receiving it from the station, said devices being actuated by the weight of the bag when received, so as to cause the door of the car to swing inward and carry the bag to the interior, where it may be detached from the receiving device without danger to the occupants of the car. The invention consists, further, in a novel construction and combination, with the delivering and receiving devices, of rings by which the bags are suspended, whereby said bags are held in such position as to insure their proper delivery and reception by the devices provided for the purpose.

The accompanying drawing illustrates one mode in which my invention may be carried into effect.

Figure 1 is an elevation, partly in vertical section, representing the parts in the positions in which they are placed immediately before the delivering of one bag and the receiving of another. Fig. 2 is a top view of the same, partly in horizontal section. Fig. 3 is a view at right angles to Fig. 1.

A post or standard, A, is securely planted in the ground, or otherwise firmly held in position, at a suitable distance from the track at every point on the line of the railway where the apparatus is to be used. At or near the upper end of the standard A a beam, B, is pivoted, so that it may readily be made to assume a horizontal or a vertical position. This beam is provided with a counter-balance weight, which is adjustable by suitable means

to suit the weight of the mail-bag. As shown herein, the weight B<sup>2</sup> is connected with the end of the beam farthest from the track, by means of a stem, b<sup>2</sup>, and a set-screw, b<sup>x</sup>, the stem working in a recess in the beam, and the screw passing through one side of the beam, and bearing against the stem, so as to hold it in place, and allow the weight to be adjusted nearer to or farther from the end of the beam, in order to regulate the amount of leverage.

On the end of the beam B nearest the railway-track is an arm, C, arranged in a direction parallel with the track and the line of travel of the train, and projecting from the beam B toward the direction from which the train approaches the station. The projecting portion of the arm C is beveled or inclined downward toward the extreme end, and provided with one or more notches, c, as shown in Fig. 3, for holding the bag when received from the train. It may also be provided with a pivoted hooked latch, c<sup>x</sup>, as shown in said figure, for rendering more certain the retention of the bag when received on the arm.

The mail-bag may be suspended from the car in various ways, one of which is hereinafter particularly described. When the swinging beam is not used for delivering, but only for receiving, a bag from a passing train, the beam is placed in a horizontal position, and so held by means of a weight, which may be arranged as shown in Figs. 1 and 2. The weight E is provided with a stem, e, which may be attached either rigidly or by a flexible connection. The upper end of the stem has a flanged or studded head, and the weight is held in position by the engagement of said head with two notches, one of which, d<sup>1</sup>, is formed on a portion of the beam B, and is stationary, and the other, d<sup>2</sup>, is formed on a latch, D, pivoted at one end to the beam B, and having its other end projecting somewhat beyond the end of the beam. The beam is held in a horizontal position by placing the stem e in the notch d<sup>1</sup>, and then bringing the latch D to the position shown in Fig. 2, so that the flanged head of the stem e will engage with both of the notches d<sup>1</sup> d<sup>2</sup>, and hold the weight suspended, as shown in Fig. 1.

The bag is attached to a ring, by which it



is suspended from the car in such a position that the tapered end of the arm C is sure to enter the ring. As the car passes the post or standard the arm C passes into the ring, taking it from the car, and causing it to drop into one of the notches *c* and hold the bag suspended from the arm C. As the car continues its travel, a projection on the car strikes the projecting end of the latch D, forcing it away from the stem *e*, and allowing the weight E to drop, whereupon the weight B<sup>2</sup> being so adjusted as to counterbalance the bag, the beam B will swing so as to carry the bag upward and out of the way, the parts assuming the positions shown in dotted lines.

When the beam is used for only delivering a bag, and not receiving one, the auxiliary weight E may be found unnecessary, as the counter-balance weight B<sup>2</sup> may be so adjusted that the beam will be held down by the weight of the bag to be delivered, and will swing upward as soon as the delivery is accomplished.

The devices for receiving the bag from the station and automatically depositing it inside the car are constructed, arranged, and operated as follows: The arm G, which receives the bag, is similar in construction to the arm C above described, being tapered or inclined, and provided with one or more notches, *g*, for holding the suspending-rings. It is attached to the door *h* of the car H in any suitable manner, so as to extend in the direction in which the car travels. It is here shown as attached to a beam or arm, J, which extends laterally from the car-door, and which is used for suspending the bag to be delivered from the car, as hereinafter described. To the arm G an elbow-lever, K, is pivoted, so as to oscillate in a vertical plane. A cord, *l*, passing around a pulley, *l*<sup>x</sup>, connects the upper or short arm of the lever K with one arm of a lever, L, which works in a seat in the door *h*, and the other arm of which is connected by a link or cord, *m*, with a spring latch or bolt, M, which serves to keep the door *h* closed. The door *h* is provided with a spring, S, which forces the door open, when the bolt M is withdrawn from its keeper. The long arm of the lever K is arranged so that when at rest it is somewhat higher than the bottom of the notch or notches *g* in the arm G. The bag to be received by the car is suspended by its ring from the beam B. As the car passes the post or standard the arm G passes into the ring, taking it from the beam and causing it to drop into one of the notches *g* and hold the bag suspended from the arm G. As the ring drops into the notch the weight of the bag depresses the long arm of the lever K, and, through the operation of the cord *l*, lever L, and link or cord *m*,

draws back the latch or bolt M from its keeper, and allows the spring S to force the door *h* inward, and carry the bag to the interior of the car suspended on the arm G, from which it may be readily removed by the occupant of the car without danger or exposure of the person to any risk outside.

The door may be closed by the occupant, or may be provided with automatic devices of any suitable description for closing it after the removal of the bag.

The devices hereinabove described will operate successfully when the bags are suspended by means of rings in any suitable manner. In order, however, to provide for the suspension of the bags in such a manner as to insure the entrance of the receiving-arms into the suspending-rings, I construct said rings and the devices for holding them in the following manner: Each ring R is provided with an arm, *r*, extending laterally therefrom, and having an opening or slot about midway between the periphery of the ring and the extremity of the arm. The beam or arm J on the car-door *h* and the side of the swinging beam B opposite the end of the arm C are each provided with four studs or projections, *p*<sup>1</sup> *p*<sup>2</sup> *p*<sup>3</sup> *p*<sup>4</sup>. The ring is suspended from either the beam B or the beam or arm J, by hooking the opening or slot of the arm *r* on the stud *p*<sup>1</sup>, so that the extremity of the arm *r* will be held between the studs *p*<sup>2</sup> *p*<sup>3</sup>, and the periphery of the ring will rest against the stud *p*<sup>4</sup>. By this means the bag is nicely balanced, and the ring is held in such position and at such distance from the side of the car that the tapered end of the bag-receiving arm (on either the car or the beam B) is sure to pass into the ring and receive the bag from its suspending device.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with the car-door *h* and the bag-receiving arm G carried thereby, of mechanism for opening the door and depositing the bag inside the car, actuated by the weight of the bag, substantially as herein described.

2. A suspending-ring, R, having an arm, *r*, with a slot or opening therein, in combination with studs or projections *p*<sup>1</sup> *p*<sup>2</sup> *p*<sup>3</sup> *p*<sup>4</sup> on a delivering beam or arm, substantially as and for the purpose herein described.

In testimony whereof I have hereunto set my hand.

A. F. CACHELEUX.

Witnesses:

E. RESIE,  
H. BABEUF.