

907,566.

E. BRITTON.
MAIL CATCHER AND DELIVERER.
APPLICATION FILED SEPT. 18, 1908.

Patented Dec. 22, 1908.
2 SHEETS—SHEET 1.

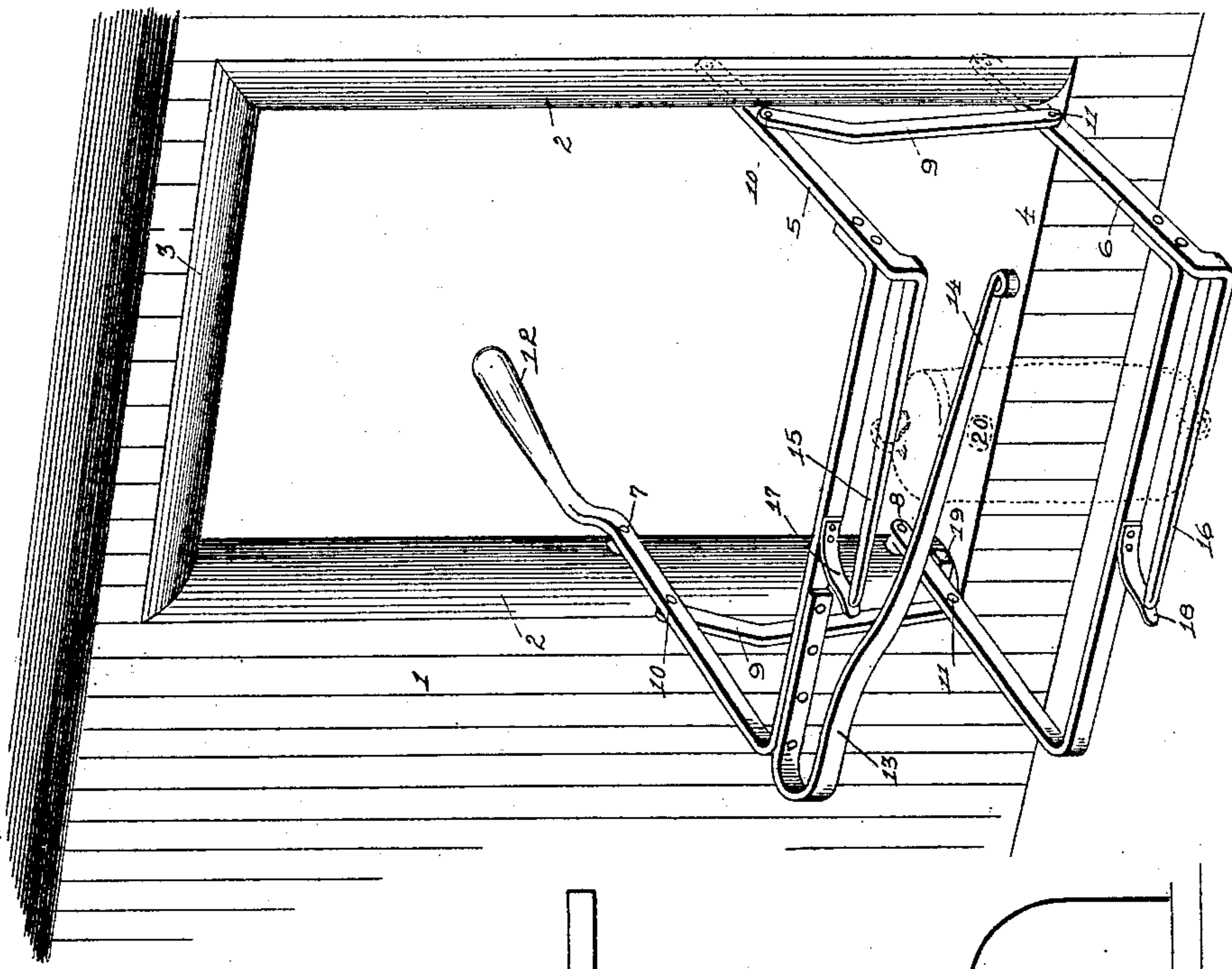


Fig. 2.

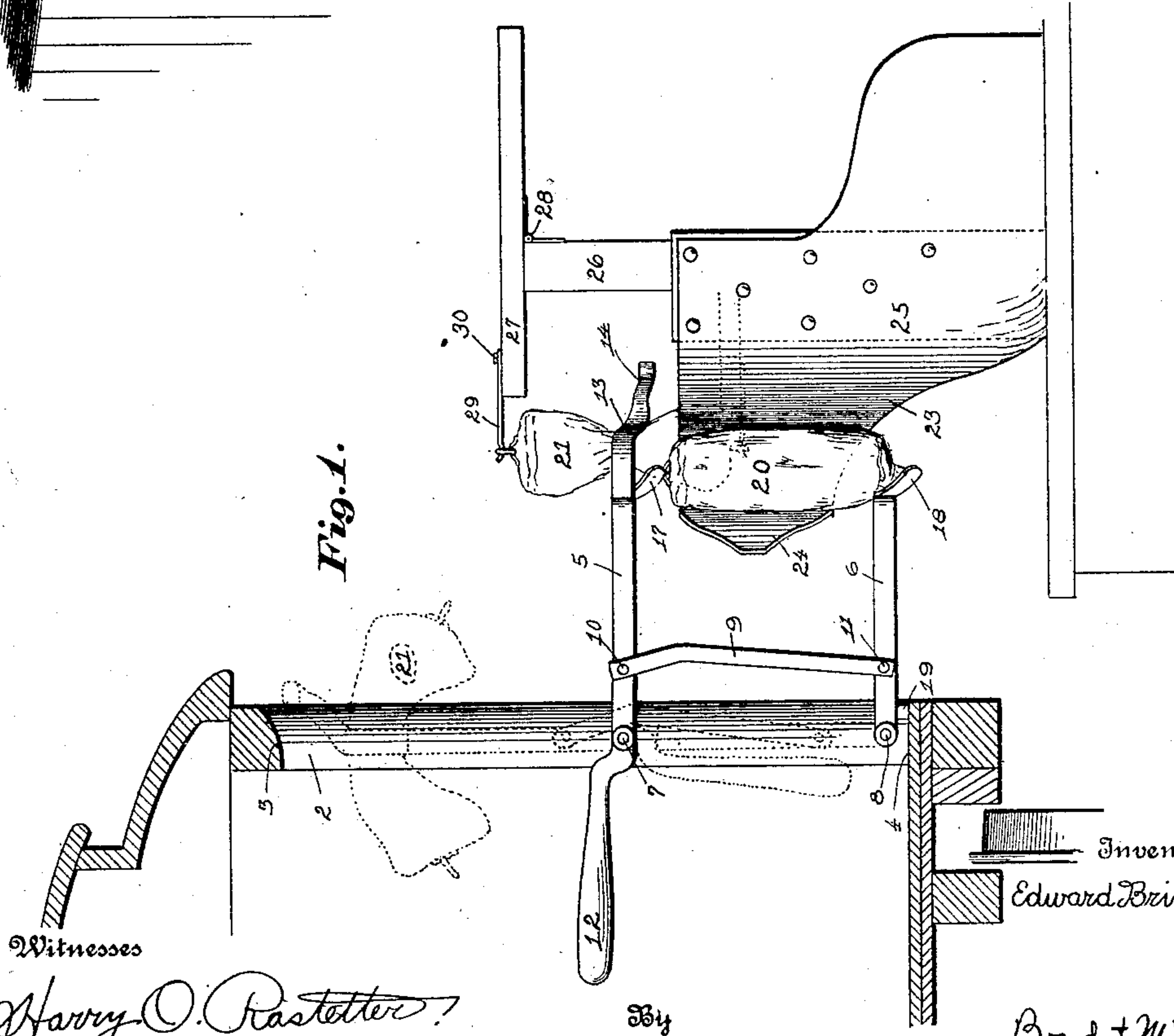


Fig. 1.

Witnesses

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Sylvia Boron.

By

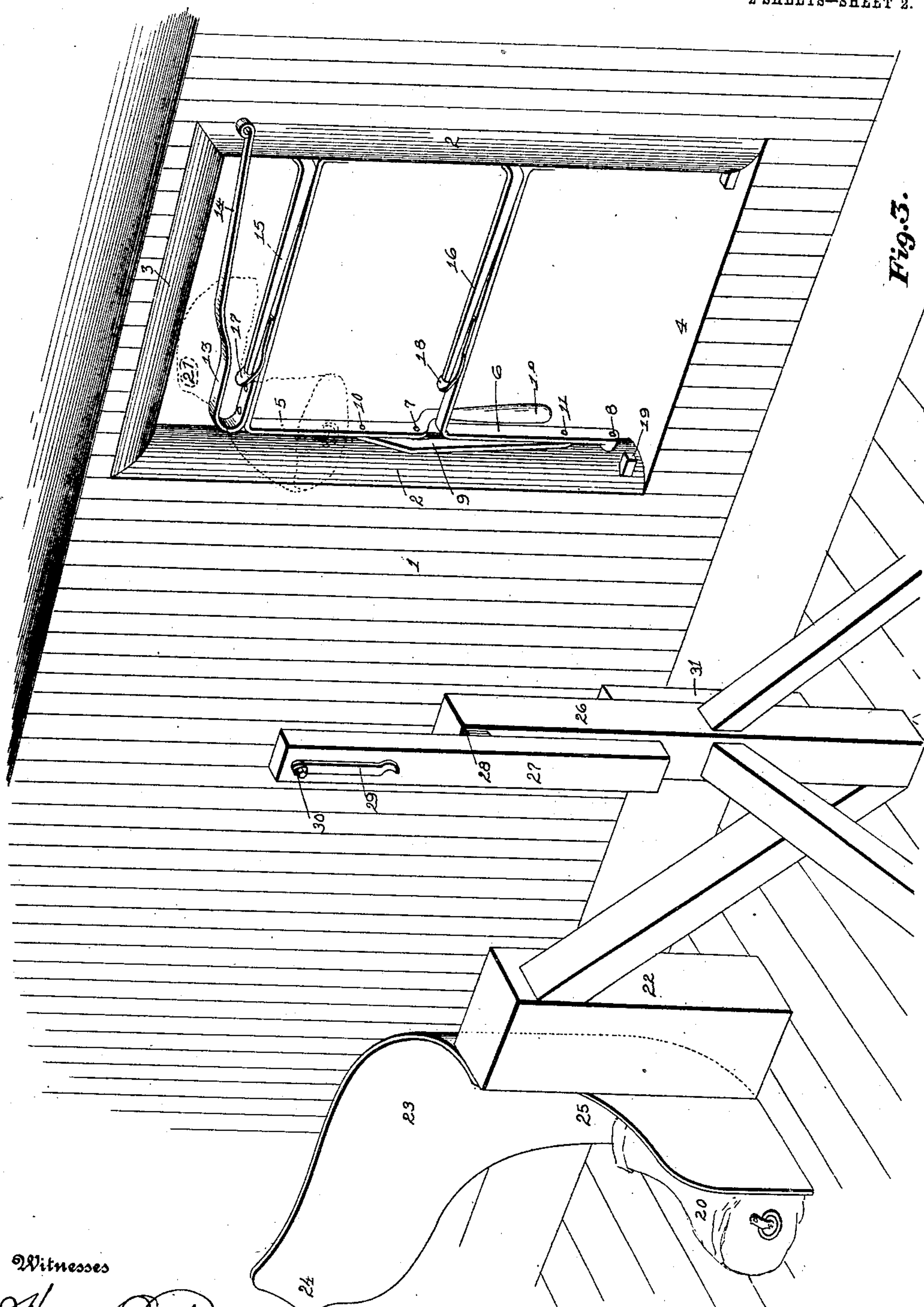
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UNITED STATES PATENT OFFICE.

EDWARD BRITTON, OF NORTH LAWRENCE, OHIO, ASSIGNOR OF ONE-HALF TO HARRY E. KAUFMAN, OF NORTH LAWRENCE, OHIO.

MAIL CATCHER AND DELIVERER.

No. 907,566.

Specification of Letters Patent.

Patented Dec. 22, 1908.

Application filed September 18, 1908. Serial No. 453,710.

To all whom it may concern:

Be it known that I, EDWARD BRITTON, a citizen of the United States, residing at North Lawrence, in the county of Stark and State of Ohio, have invented a new and useful Mail Catcher and Deliverer, of which the following is a specification.

My invention relates to improvements in devices for catching and delivering sacks of mail at stations where mail trains do not stop.

It has long been a common practice to exchange mail at such stations without stopping the train but the apparatus for catching and delivering said mail has been unsatisfactory in its operation or complicated in its construction and necessitating a complete change of the apparatus before in use. The safe delivery of sacks of mail from the moving train has especially been a problem heretofore practically unsolved and much mail has been injured or destroyed by the unsatisfactory methods heretofore employed.

The objects of my improvement are to provide a mail catcher and deliverer of simple and substantial form which will be effective in its operation and in the use of which it will be unnecessary to make any considerable changes in the devices now commonly employed at the stations where mail is to be caught and delivered.

Further objects of my invention are to provide such a device as will not substantially close the doorway in the mail car when the said device is folded into said doorway and also to permit the attachment of mail sacks to be delivered while the device is folded into the doorway and to permit of their being swung from the side of the car to a point where they may safely be engaged by a delivering shield and prevented from being drawn underneath the train or hurled along the platform or ground, endangering such persons as may be standing near by.

Moreover, a very important object of my invention is to provide a mail catching and delivering device which will so act as to deliver and catch mail practically simultaneously and without the one operation depending at all upon the other, and which will bring the mail which is caught up by the train into an upward position where it may be more conveniently handled than when it is caught and thrown downward where it is necessary

to drag the mail sack up into the car as is commonly the case.

I attain these objects by the device illustrated in the accompanying drawings, in which—

Figure 1 is a view of the device in position for delivering and catching mail, the view being taken in the direction of the movement of the train and including a transverse sectional view of a portion of the car and a view of the delivering shield with the stationary mail supporting device arranged beyond said shield and also showing the mail catcher and deliverer in its folded position in dotted lines. Fig. 2 is a perspective view of a portion of the side of the mail car showing the mail catcher and deliverer in its extended position and showing a mail sack in dotted lines arranged upon the delivery fingers. Fig. 3 is a perspective view of a portion of the station platform, showing the delivery shield, the stationary mail supporting post in its folded position, a portion of the mail car, and the mail catcher and deliverer in its folded position with a sack of mail shown in dotted lines in the catcher arm.

Throughout the several views similar numerals of reference indicate similar parts.

The numeral 1 indicates the mail car having a doorway with the jambs 2, the lintel 3 and the sill 4.

The mail catcher and deliverer consists primarily of two pivoted frames, the upper frame 5 and the lower frame 6 pivotally arranged in the said doorway at the points 7 and 8 respectively, and connected by the connecting rods 9 which are pivoted to the frame 5 at the points 10 and to the frame 6 at the points 11 and which constitute means for the simultaneous pivotal movement of the two frames. The upper frame is provided with the extension 12 constituting a lever or handle for the purpose of pivotally actuating the frames and it should be stated that one of such handles or its equivalent for operating the frames may be arranged upon each side of the said frame if so desired. In the construction illustrated the handle is made bulky to aid in counteracting the weight of the frames and it is obvious that the said weight may be further counteracted by means of a spring if so desired.

To the outer portion of the upper frame is attached a mail catching arm comprising

the contracted portion 13 and the extended portion 14 adapted to insure the engagement of the said arm with the mail sack to be caught. It should, of course, be understood that the portion 14 is directed toward the front end of the train. To the outer portion of the frames 5 and 6 are also attached the mail delivery fingers 15 and 16 respectively, which are attached at their forward ends and extend in the direction of the rear of the train, and are preferably formed smaller at their rear ends to provide for a more ready discharge of the mail sacks therefrom, the said reduced ends being unattached. The springs 17 and 18 are affixed to the frames 5 and 6 and have their outer ends bearing against the ends of the delivery fingers 15 and 16 for the purpose of preventing the premature delivery of the mail sacks from said fingers but being so constructed that when the mail sacks upon said fingers are engaged by the delivery shield the said springs 17 and 18 may be readily overcome so as to allow the rings on the mail sacks to leave the said fingers. The stops 19 are provided upon the jambs for the purpose of limiting the downward movement of the frames when the device is extended from the side of the car for the purpose of delivering and catching mail.

In the drawings 20 indicates a mail sack to be delivered from the moving train, while 21 indicates the mail sack to be caught by the moving train. These mail sacks are provided with a ring at each end for the purpose of suspension of the said sacks, and the sack 21 should be constricted midway between its ends by means of a strap or suitable band, as is the common custom with those devices now in use.

The stationary devices to be used in connection with the mail catcher and deliverer herein described may be of various forms, but the preferable or more simplified forms are shown in the drawings, and therein 22 is a stout post thoroughly braced to withstand the impact of the mail delivered from the train. Attached to the post 22 and supported principally thereby is the delivery shield 23, which is preferably of the form shown, having an integral, extended point-portion, 24, directed in the opposite way from that in which the train is intended to move, and an integral compound curved portion, 25, adapted to guide the movements of the sacks after they have been delivered from the train and to prevent the said sacks from being drawn under the train or hurled along the platform or ground. It should be noted that the point 24 is of considerable width vertically so as to engage a considerable portion of the mail sack to be delivered, while at the same time being sufficiently narrow to freely clear the upper and lower frames as they pass by the said point. The curve of the said point it should be noted

is such that the mail sacks to be delivered are not thrown immediately against a wholly rigid stop or shield but are more gradually delivered by reason of the fact that the said point 24 extends at an angle to the track so that as the train advances the pressure on the mail sacks increases until as the said sacks near the wider portion of the shield the pressure is sufficiently great to free them from the delivery fingers by overcoming the springs 17 and 18 whereupon the mail sacks will be guided farther along the smooth inner surface of the delivery guard and deposited in substantially the manner illustrated in Fig. 3 without injury to their contents.

The stationary mail supporting device is preferably of the simplified form illustrated in the drawings and consists of a perpendicular post, 26, provided with a top arm, 27, hinged at the point 28 to the said post 26 and provided with a supporting finger, 29, having a slight hook-like formation at its outer end to prevent the premature removal of the mail sack, and being pivoted at the point 30 to the arm 27 in such way that as the mail sack 21 is removed from the finger 29 the said finger may have some pivotal movement about the point 30 and thus facilitate the removal of the ring from the said finger. The lower arm 31 is of analogous construction except that the finger is on the lower side thereof and the said arm is hinged to the side of the post 26 so that it may swing downward into the position in Fig. 3 when the mail sack is removed, while the upper arm 27 will swing into the position also shown in Fig. 3 by reason of the overweight of the portion of the arm 27 beyond the hinge 28.

A car having been supplied with the mail catcher and deliverer and the stationary devices provided, as described, the operation of the same is as follows. The mail sack 21 is constricted and placed upon the supporting device as illustrated in full lines in Fig. 1. While the mail catcher and deliverer are folded into the doorway of the moving car, as illustrated in full lines in Fig. 3, the mail sacks to be delivered from the train are arranged upon and between the fingers 15 and 16, the rings of said sacks being threaded on said fingers, and the device is then swung into the extended position illustrated in Fig. 2, when the said mail sacks to be delivered will be in the position illustrated in dotted lines in said figure. As the car passes the delivery shield the point 24 thereof will engage the sack 20 as illustrated in Fig. 1 and by the continued forward movement of the train the said sack will be disengaged from the fingers 15 and 16 and deposited as shown in full lines in Fig. 3. Immediately after such delivery the catcher arm passing on, will engage the sack 21 and when said sack has entered the contracted portion 13 of the said arm it will

be removed from the fingers of the stationary supporting device, whereupon, by folding the frames, the said sack may be brought into the position illustrated in dotted lines in Figs. 1 and 3, thus bringing the said sack to where it may be very readily disengaged from the catcher arm and taken within the car. It will be understood that the extension and the folding of the mail catcher and deliverer is accomplished by a lifting of and a downward pressure upon the handle 12 respectively. It will also be understood that when the catcher and deliverer are folded there is sufficient room between the lower frame and the sill for the ingress and egress of mail clerks at those stations where stops are made and where the device is not used.

I claim—

1. The herein described mail catcher and deliverer comprising frames arranged in the doorway of a mail car, said frames being pivoted to the jambs at the sides of said doorway, said frames provided with sack catching and sack delivering means and adapted for simultaneous pivotal movement into an extended position and into an upward folded position within said doorway.

2. The herein described mail catcher and deliverer comprising upper and lower U-shaped frames pivoted in the doorway of a mail car, said frames provided with sack catching and sack delivering means, connecting means between said frames for causing the simultaneous pivotal movement of the same, whereby the said frames are adapted to be folded into the doorway of said mail car or simultaneously moved into an extended position.

3. The herein described mail catcher and deliverer comprising upper and lower U shaped frames pivoted in the doorway of a mail car, said frames provided with sack catching and sack delivering means, and adapted to be swung together into an upward, folded position and into an outward, extended position and means for causing the simultaneous movement of said frames.

4. The herein described mail catcher and deliverer comprising upper and lower frames, said frames pivoted in the doorway of a mail car and provided with means for catching and for holding sacks to be caught and sacks to be delivered, said frames adapted to be folded upwardly into said doorway and to be unfolded downwardly into an outward, extended position, and means for causing the simultaneous folding and unfolding of said frames.

5. The herein described mail catcher and deliverer, comprising upper and lower U shaped frames pivotally arranged in the doorway of a mail car, sack catching means provided on the upper frame, sack supporting means provided on both upper and lower frames and adapted for the suspension of

mail sacks to be delivered between said frames, and means for causing the simultaneous folding of said frames into a vertical position within said doorway and for causing the simultaneous unfolding of said frames from said doorway into an extended horizontal position.

6. In a mail catching and delivering device the combination of pivoted frames provided with sack catching and sack supporting means, said frames adapted to be folded into an upward, vertical position for the purpose of attaching sacks to be delivered and for the removal of sacks caught, and to be extended in a horizontal position for the purpose of delivering and catching said sacks.

7. In a mail catcher and deliverer, the combination of a frame having means for attaching sacks to be delivered while said frame is within the doorway of a car with means for extending said frame into an outward position from said car, means arranged on said frame for catching sacks and means for raising said frame and bringing the sacks caught into the upper portion of said doorway, substantially as and for the purpose specified.

8. The herein described mail catcher and deliverer comprising pivoted frames arranged in the doorway of a car, the pivotal points of said frames being vertically spaced from each other, said frames adapted to be folded into an upward position within said doorway and to be unfolded into an outward, extended position, means for suspending sacks between said frames, means arranged upon one of said frames for catching sacks, means for extending said frames into their unfolded outward position, means for engaging the sacks to be delivered and removing them from the suspending means on said frames, means for suspending sacks to be engaged by the said sack catching means and means for folding said frames into an upward vertical position in said doorway, whereby sacks to be delivered may be attached while said frames are in their folded position and whereby the sacks caught may be removed while said frames are again in said vertical folded position.

9. The herein described mail catcher and deliverer comprising upper and lower frames, said frames pivoted within the doorway of a car, connecting rods extending between said frames and pivoted thereto, a mail catching arm attached to said upper frame, mail delivery fingers arranged upon said upper and lower frames and means for folding said frames upwardly and inwardly into said doorway and for unfolding said frames downwardly and outwardly into an extended position.

10. In a mail catcher and deliverer, supporting means for sacks to be delivered, catching means for sacks to be caught, upper

and lower U shaped frames arranged in the doorway of a mail car, said supporting means arranged upon said upper and lower frames, said catching means arranged upon one of
5 said frames, said frames adapted to be folded within said doorway and to be extended from said doorway and means for causing the simultaneous folding and extension of said frames.

10 11. The herein described mail catcher and deliverer comprising upper and lower frames, said frames pivoted within the doorway of a car, connecting rods extending between said frames and pivoted thereto, mail delivery
15 fingers arranged upon said upper and lower frames, said fingers adapted for the suspension of mail sacks, means for preventing the premature delivery of said sacks from said delivery fingers and means for folding said
20 frames upwardly and inwardly into said doorway and for unfolding said frames downwardly and outwardly into an extended position.

12. The herein described mail catcher and
25 deliverer comprising upper and lower frames, said frames pivoted within the doorway of a car, connecting means extending between said frames, mail delivery fingers adapted for the suspension of mail sacks arranged upon
30 said upper and lower frames, said fingers being attached to said frames at their front ends extending rearwardly parallel with

each other from said points of attachment and being unattached to said frames at their rear ends and means for folding said frames
35 into said doorway and for unfolding said frames into an extended position.

13. In a mail catcher and deliverer a frame arranged in the doorway of a mail car, said frame provided with a catching arm, said
40 frame adapted for pivotal movement within said doorway means for extending said frame into an outward position, and for raising said frame into a vertical position within
45 said doorway whereby sacks of mail may be caught and raised into the upper portion of said doorway.

14. In a mail catcher and deliverer, means for suspending mail sacks to be delivered between upper and lower frames while said
50 frames are folded within the doorway of a car, means for extending said frames downwardly and outwardly from said doorway and means for engaging said sacks between the upper and lower frames and for removing
55 them from said suspending means.

In testimony that I claim the above, I have hereunto subscribed my name in the presence of two witnesses.

EDWARD BRITTON.

Witnesses:

SYLVIA BORON,
WM. H. MILLER.