2 Sheets—Sheet 1.

P. K. CURLL.

MAIL BAG CATCHER.

No. 182,805. Patented Oct. 3, 1876.

Fig. 1.

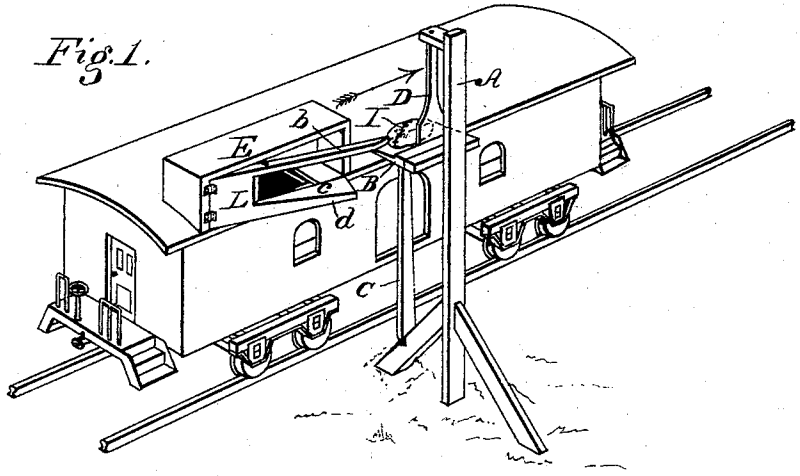
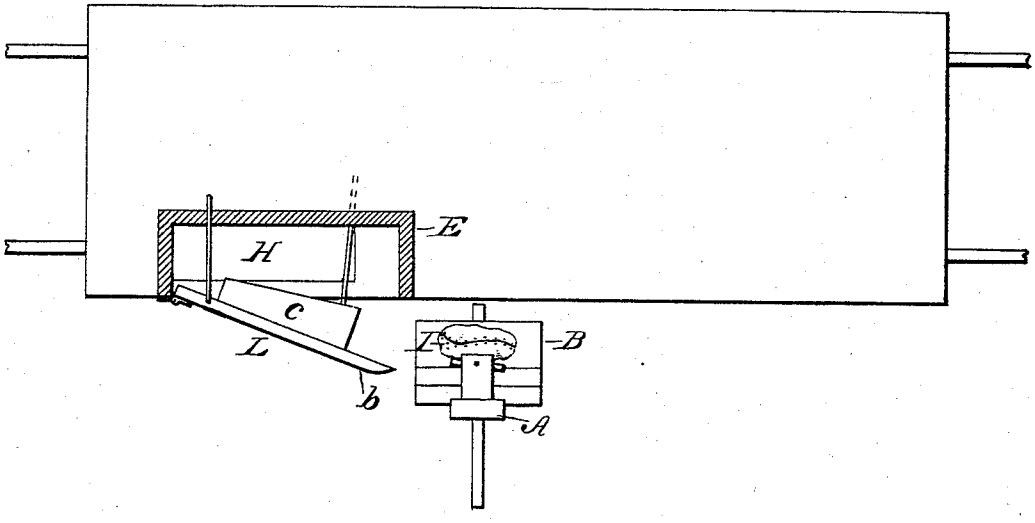


Fig. 2.



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2 Sheets—Sheet 2.

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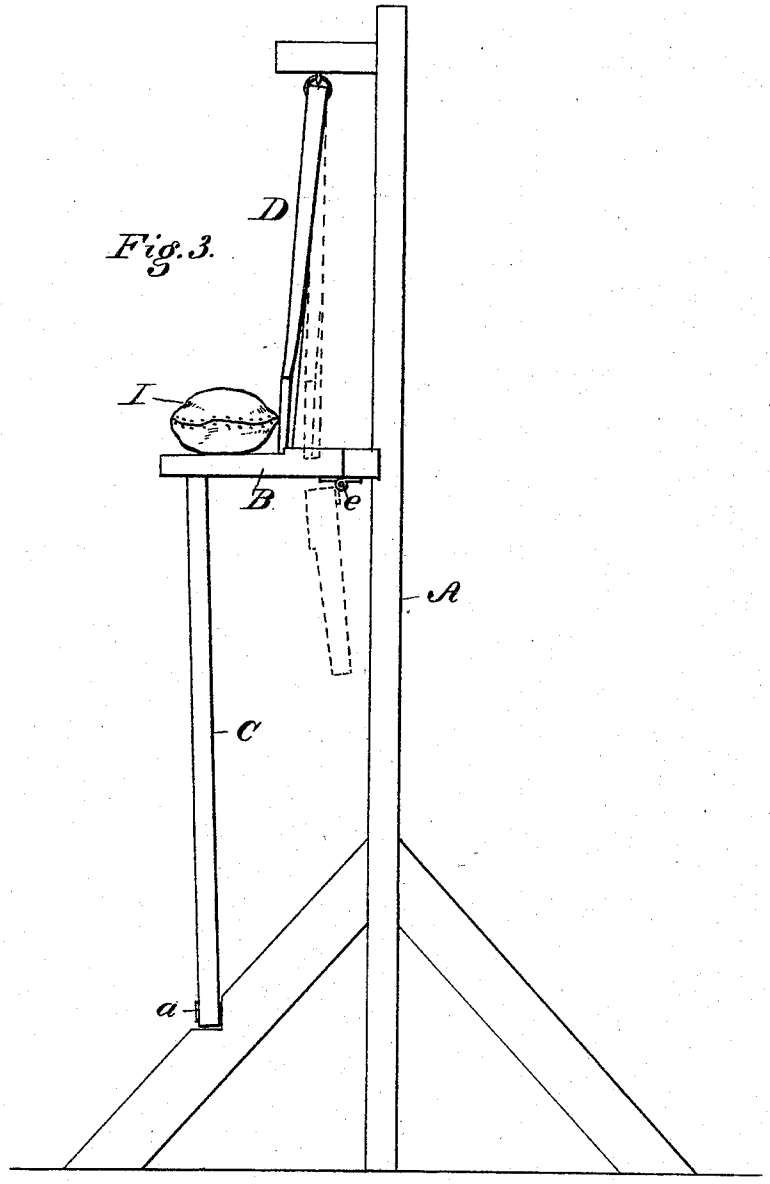
Fig. 3.



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UNITED STATES PATENT OFFICE.

PEARCE K. CURLL, OF HANOVER, ASSIGNOR OF ONE-HALF HIS RIGHT TO CHARLES E. COFFIN, OF MUIRKIRK, MARYLAND.

IMPROVEMENT IN MAIL-BAG CATCHES.

Specification forming part of Letters Patent No. **182,805**, dated October 3, 1876; application filed March 9, 1876.

To all whom it may concern:

Be it known that I, PEARCE K. CURLL, of Hanover, in the county of Howard and State of Maryland, have invented certain Improvements in Apparatus for Taking on and Delivering Mail-Bags, &c., of which the following is a specification:

My invention consists of a mail catching and delivering apparatus of that class designed for taking mail-bags from, and delivering them at, stations by the car as it passes without stopping; and its novelty consists in the peculiar construction and mode of operation of the apparatus, whereby the bag is taken with certainty, and without injury to the bag, as hereinafter more fully set forth.

Figure 1 is a perspective view of the apparatus as applied to use. Fig. 2 is a top-plan view, with a portion shown in section; and Fig. 3 is a side elevation of the stationary part of the apparatus.

It is now common to take up, and also to deliver, mail matter on cars while under motion, and many devices have been devised for this purpose; but nearly all the mail-bags are suspended from arms provided with hooks or catches of various kinds, from which the bag is taken by an arm or device that strikes against it in the line of the car's movement, thereby producing a powerful concussion, which is very apt to injure or tear the bags. Moreover, by the present plan the bag is thrown with great violence into the car, at right angles to the line of the car's movement, which not unfrequently bursts the bag, and also injures its contents.

The object of my invention is to overcome these difficulties, and at the same time provide an apparatus which shall be more certain in its operation, it not unfrequently happening that the bags fail to be taken up by the apparatus now in use.

To carry out my invention I proceed as follows: By the side of the track I erect the bag-holding device, as represented in Fig. 3. This consists of a suitable standard or frame, A, to the side of which, nearest the track, I hinge a shelf, B, of suitable size and strength to support the mail bag or bags I, one or more in number, as the case may require. This shelf is supported in a horizontal position by a pivoted rod or brace, C, the upper end of which rests loosely under the shelf B. In rear of the bag I, and reaching down to the shelf, is a swinging or pivoted bar, D, the lower end of which is made wide enough to bear against the bag nearly its entire length, and which, if preferred, may be made of metal or wood, in the form of a strong frame, the object being to have a large surface to bear against the bag, so that, when struck by the catcher-arm on the passing car, the force shall be distributed over as much of the surface of the bag as possible, and thus lessen the chances of rupturing or injuring the same, and so also as to be sure to move the bag bodily without any danger of its slipping or turning sidewise and being thrown off in the wrong direction.

Having thus described the stationary part of my apparatus, I now proceed to describe the part attached to the car. This, as shown in Figs. 1 and 2, consists of a vertically-hinged receiver, L, cut away nearly its entire length, so as to leave two arms, *b* and *d*, as represented in Fig. 1, the upper arm *b* being longer than the lower one *d*. To the lower arm *d* is secured a bottom piece or shelf, *c*, which projects inward, and has its rear end inclined inward and downward, thus forming an inclined shelf or chute, to receive the mail-bag I as the latter is delivered thereon, and conduct it through the opening H into the car.

The apparatus constructed, the operation will be as follows: At the proper time the shelf B will be raised and supported by the brace C, and the mail-bag or package I placed thereon. As the car approaches, the attendant within the car, by means of suitably-arranged levers or cords, will swing the hinged receiver L outward, causing its front end to project from the side of the car, as represented in Figs. 1 and 2. As the car advances the front end of the upper arm *b* will pass behind the hinged bar D, striking it on an incline, and thereby forcing it gradually inward toward the car, and, of course, shoving the bag I off of the shelf B onto the inclined bottom of the receiver *c*, down which it slides diagonally through the opening H into the car. Thus, by the combined action of the inwardly-mov-

ing bar or frame D, the passing car, and the receiver L, the movement of the bag, instead of being as usual, (a violent one at right angles to the line of the track,) is converted into a compound movement, composed of the three movements—lateral, backward, and downward; and as the first movement is a gradual one onaccount of the inclination of the arm *c*, it follows that the shock to the moving bag is much less than it otherwise would be. Moreover, as the inclination of the bottom or chute *c* tends to throw the bag in a diagonal direction instead of directly backward, to that extent is the concussion or shock between the bag and the walls of the car lessened. At the same time that the above is taking place, and just as the bag is moved from the shelf, the front end of the receiver *c* strikes against the loose brace C, knocking it over, thus permitting the shelf B to drop to the position indicated by the dotted lines in Fig. 3, this being done to have it out of the way of passing cars, and to prevent the accumulation of snow or ice thereon.

It is obvious that the shelf B need not be hinged, in which case the brace C may be dispensed with, the bag being delivered just the same; but it is preferred to construct it in this manner for the reason above stated.

If desired, the bag-holding apparatus may be covered by a roof, so as to protect the mail-bag from storms and the apparatus from snow, ice, and wet; and by the exercise of a little judgment and skill the stationary apparatus may thus be rendered a neat and ornamental affair, instead of being, as they usually are, an unsightly affair.

As a means of illustrating my invention, I have shown the receiver as applied to the top of the car, and at one end and side only; but it will of course be understood that they will be located at opposite ends and sides of the car, so as to take the mail-bags from either side, and when passing in either direction. On a double track the stationary part of the apparatus may be located between the tracks and made to rotate, or be made double—that is, with a shelf and bar, D, on opposite sides, facing each track—or there may be a separate one located outside of each track, as may be preferred, or as circumstances and the locality shall dictate.

It is obvious, also, that instead of arranging the apparatus to take the bags through the top of the car, it may be arranged to take it through the side, or underneath the body between the trucks upon a receptacle arranged for that purpose; and in the case of heavy bags it may be desirable to thus arrange it, in order to save the time and labor of elevating to so high a position as would otherwise be required. It is also obvious that, by reversing the parts the apparatus may be used with equal facility for delivering the bags or packages from the car as it passes the various stations, it only being necessary to arrange the bag-holder with its swinging bar D on the car and the receiver by the side of the track. When thus arranged, as the car passes the swinging bar D as it comes in contact with the arms *b* of the stationary receiver, will be moved outward, thereby shoving the bag from the car onto the stationary receiver.

This apparatus may be used to deliver and take up express packages or any similar matter, and by arranging a series of the swinging bars D in succession along a long shelf or platform, any number of bags or packages may be thus taken on or delivered from a passing car. The apparatus is very simple and inexpensive, and can easily be applied to freight as well as mail cars.

Having thus described my invention, what I claim is—

1. An apparatus for taking on or delivering packages from cars, said apparatus consisting of a shelf or support, B, for the package I, an arm or frame, D, resting loosely in rear of said package, and the inclined arm *b* for imparting motion thereto, all constructed to operate substantially as described.

2. The hinged receiver L, having its bottom inclined laterally and longitudinally, substantially as shown and described.

3. The hinged shelf B, brace C, and the loose arm D, in combination with the hinged receiver L, all constructed to operate substantially as and for the purpose set forth.

PEARCE K. CURLL.

Witnesses:
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