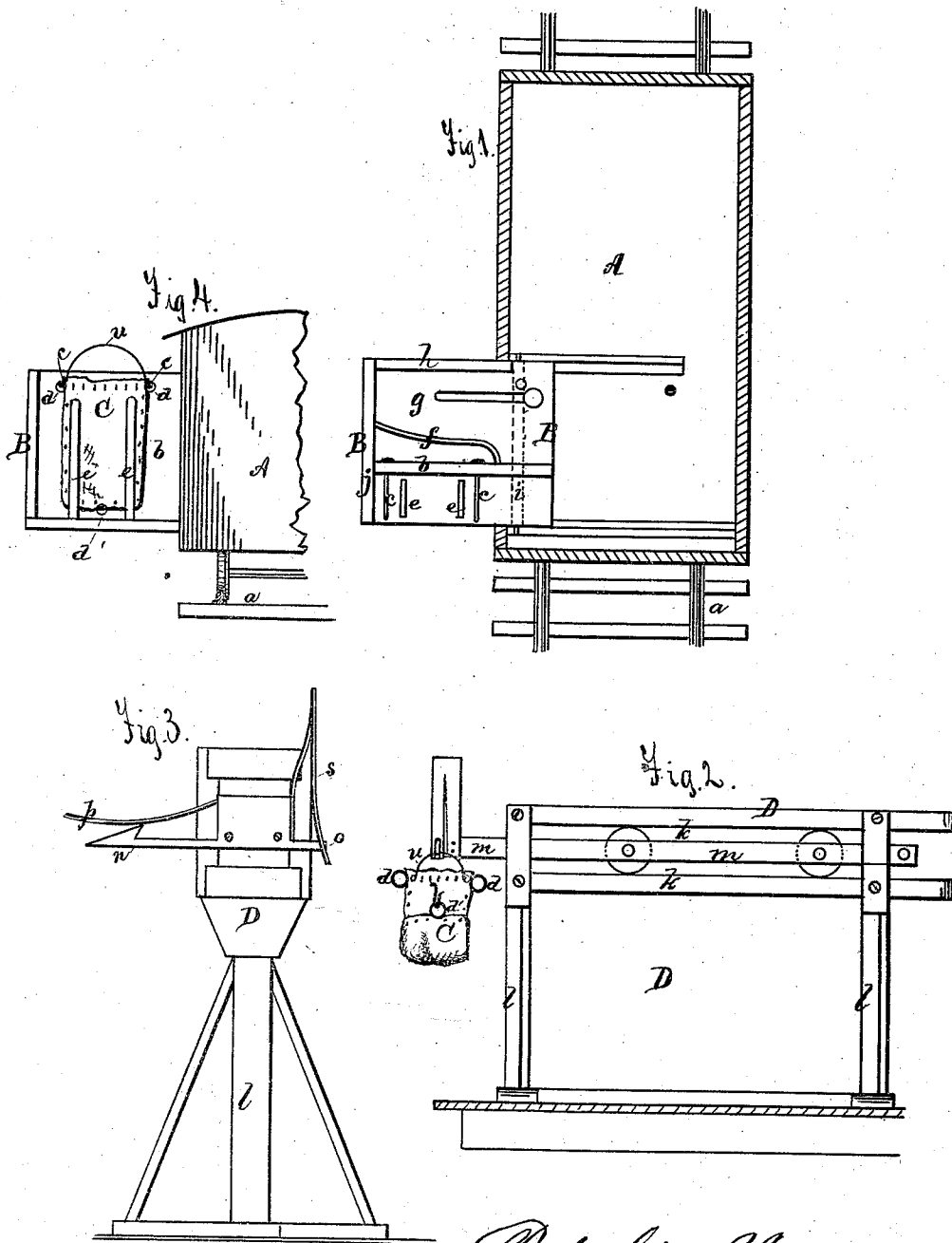


D. HARRISON.
MAIL-BAG CATCHERS.

No. 182,021.

Patented Sept. 12, 1876.



Witnessed:
T. H. Parsons.
J. R. Drake.

Dolphin Harrison,
Inventor
By his attorney
J. R. Drake.

UNITED STATES PATENT OFFICE.

DOLPHIN HARRISON, OF FARNHAM, ASSIGNOR OF ONE-HALF HIS RIGHT
TO THOMAS GUESS, OF BUFFALO, NEW YORK.

IMPROVEMENT IN MAIL-BAG CATCHERS.

Specification forming part of Letters Patent No. **182,021**, dated September 12, 1876; application filed
April 28, 1876.

To all whom it may concern:

Be it known that I, DOLPHIN HARRISON, of Farnham, in the county of Erie and State of New York, assignor to myself and THOMAS GUESS, of Buffalo, Erie county, New York, have made certain Improvements in Automatic Mail-Bag Changers for fast mail-trains, of which the following is a specification:

This invention is for the purpose of delivering from the mail-car a mail-bag (or bags) at each mail-station and taking on bags while the train is in motion; and the invention consists in the construction and arrangement of a sliding compartment in the side of the mail-car, in which the mail-bag to be delivered is attached, and the compartment then slid out as it approaches the station. It further consists in a sliding or extension arm on an upright frame attached to the platform of the station, and having a peculiar catch, which picks off the mail-bag from the car-compartment as it passes, and at the same time delivers into the compartment the bag for the car which was hung on the other side of the arm by the Post-Office agent for that purpose, all as hereinafter described.

In the drawings, Figure 1 is a plan of a mail-car with the top removed, showing the mail-compartment slid out. Fig. 2 is a side elevation of the catcher and bag-deliverer; and Fig. 3 is an end view of the same, showing the devices for catching and holding the bags. Fig. 4 is a detail of the bag-holding devices in the compartment.

A represents a mail-car on track *a*, and B the mail-catching compartment slid out. *b* is a partition, solid or of frame-work, in said compartment, which divides the delivery from the receiving side. *c c* are two straight pins, set at right angles to, and in the top of, the partition *b*, on which the mail-bag C is hung by means of rings or eyes *d d*, attached to each side of the opening of the bag. One or two upright springs or slats, *e e*, press against the bag, to keep it from falling or being blown off. The other side of the partition *b* is to receive the bag from the delivery end of the catcher D, and it is knocked off the holder by a bar, *f*, at or near the top of the compartment B. The bag at once drops into the open space

g of the compartment, and is kept from falling out by a side piece, *h*.

When a bag has been delivered and the other received, the compartment is slid into the car, it having suitable rollers *i*, or other devices for that purpose, and when in, the piece *j* forms a portion of the side of the car. It is then made ready for the next mail-station by putting another mail-bag on the pins *c c*, and removing the bag that has dropped in the space *g*. This completes that part of the invention so far as the mail-car is concerned.

The devices for catching and delivering the bags at each mail-station are as follows: The main part D is of wood or metal, and consists of one or more upright posts, *l*, attached to the platform of the station, or at a suitable place for the purpose, and which support a longitudinal frame, *k*. Running in the frame on rollers is a long arm, *m*, on the outer end of which is attached a peculiar device, of metal, for catching the bag from the car and delivering one at the same time. It consists of a long pointed hook or barb, *n*, which stands out in line with the track or approaching trains. This is the catcher. On its other end is a straight piece or holder, *o*, on which is hung the bag to be caught by the passing train. A long upwardly-curved spring, *p*, is arranged over the barbed catcher *n*, to insure the bag going on and remaining on the catcher. Another upright guard-spring, *s*, is arranged in connection with the holder *o*, at the other end, to prevent the bag being blown off, or slipping from the holder until knocked off by the mail-car bar *f*.

The mail-bags will be those ordinarily in use, except that rings or eyes *d d*, before referred to, are attached to the bags, as shown in Figs. 2 and 4, to hang on the pins *c c*. Also, a metal bail or handle, *u*, will be attached to the bag, which will project up above the partition *b* of the compartment B, so as to be caught by the catcher *n*. The bag will also be hung by this bail on the holder *o* of the catching device, as shown.

Another ring, *d'*, may be fastened on the bottom of the bag, so that the bag can be doubled over—when it is a long one—and hooked up, as shown in Fig. 2.

These devices are to obviate the disadvantages of those now used for fast mail-trains, and which fail to take on or catch the bag with any certainty, and oftentimes cause a bag to be dropped in the ditch or under a car, to the damage of the mail-matter therein.

The operations of my device are as follows: The mail-bag to be delivered from the car is hung on the pins *c c* in the compartment B, and the spring or spring-bars *e e* set over, to prevent it being blown off. The mail to be caught in the car is hung on the end *o* of the extension-arm *m*, guarded by the spring *s*, to prevent its being blown off. As the car approaches the station the compartment B is slid out just as far as necessary, and, as it passes the frame D, the barbed hook *n* catches the bail *u* of the bag C, and draws out the bag. The bar *f* in the sliding compartment B at the same time strikes the mail-bag on the holder *o*, on the other side of the catcher, knocking it off, and dropping it against the partition *b*, and down onto the floor *g*, and it is kept from falling out by the side piece *h*. The compartment is then slid into the car and the mail-bag taken out, and it is made ready for the next delivery. The extension-arm *m* is then slid back into the frame, and the bag removed by the proper person ready for the next mail-train.

A set-screw may be arranged in the arm *m*, to hold it when slid out at any point desired.

The devices above described are all exceedingly simple, and work with absolute certainty.

I claim—

1. The car A, constructed with the sliding-out mail-compartment B, with the partitions *b h* or their equivalents, and in combination with the catcher and deliverer D *k m n o*, substantially as and for the purpose specified.

2. The mail catcher and deliverer D, consisting, essentially, of the extension-arm *m*, the barbed catch *n*, and holder *o*, attached thereto, with the guard-springs *p s*, substantially as and for the purpose specified.

3. The sliding compartment B, having the partitions *b h*, the bar *f*, pins *c c*, and springs *e e* or their equivalents, as and for the purpose specified.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

DOLPHIN HARRISON.

Witnesses:

J. R. DRAKE,

THOMAS GUESS.