F. W. BRIDENBECKER.

MAIL-BAG CRANES.

No. 195,567. Patented Sept. 25, 1877

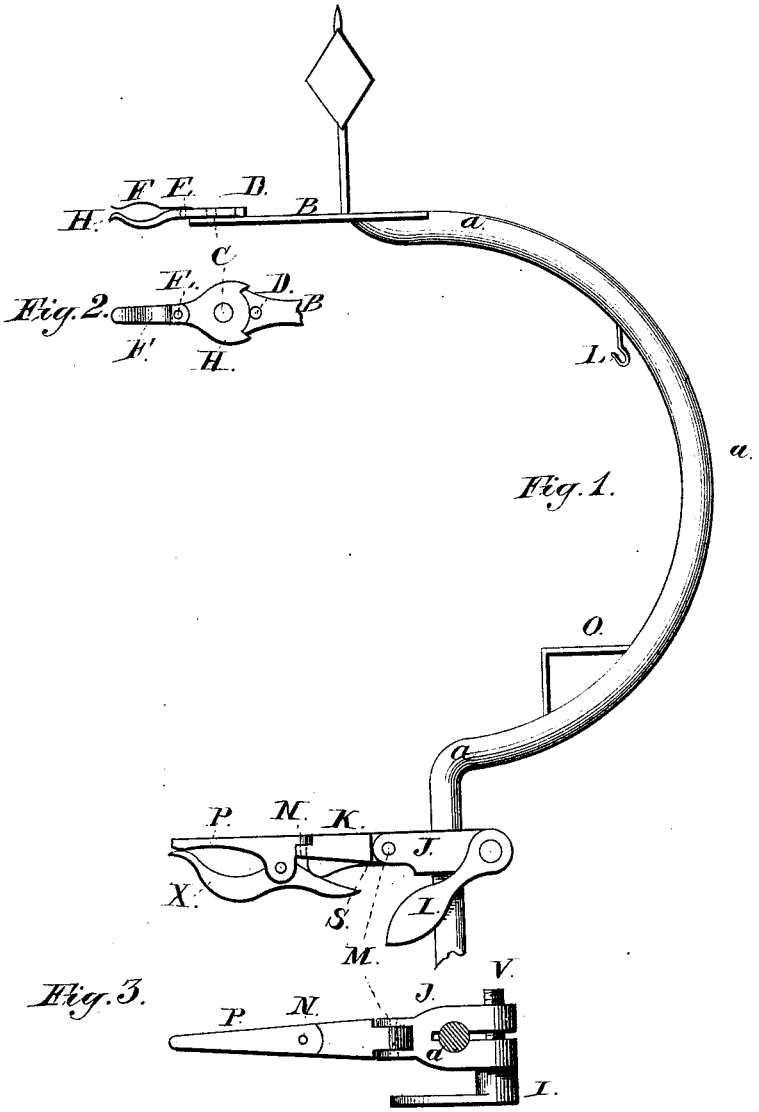

Fig. 2.

Fig. 1.

Fig. 3.

Witnesses:

J. S. Pettman

Frederick Gates

Inventor:

Frank W. Bridenbecker.

UNITED STATES PATENT OFFICE.

FRANK. W. BRIDENBECKER, OF SCHUYLER, NEW YORK.

IMPROVEMENT IN MAIL-BAG CRANES.

Specification forming part of Letters Patent No. **195,567**, dated September 25, 1877; application filed March 22, 1876.

To all whom it may concern:

Be it known that I, FRANK. W. BRIDENBECKER, of the town of Schuyler, in the county of Herkimer and State of New York, have invented a new and useful Improvement in Railway-Cranes for Mail-Bags, which improvement is fully set forth in the following specification, reference being had to the accompanying drawings.

The objects of my invention are, first, to hold the mail pouch or bag so securely in its proper position that neither the force of the wind, the suction of the passing cars, nor the jarring of the approaching train shall detach it from the hooks; secondly, to provide a crane that shall be more readily and easily adapted to different lengths of bags; and, thirdly, to make the mail-bag visible to the train-men at night, and thus render the exchange by night as certain and sure as by day.

The drawings show, in Figure 1, a side view of my improved crane; in Fig. 2, a top view of the upper hook; and, in Fig. 3, a top view of the bottom hook.

The same letters refer to the same parts in the different figures.

It is well known by those connected with the "fast mail" service that the cranes in present use do not always hold the mail-bag in a proper position until the "catcher," attached to the postal-car, takes it off. When the wind is blowing hard it is often impossible to make the bag remain upon the crane unless tied with strong twine. Then, again, in quiet weather the suction of the passing engine, or the jarring of the ground caused by the advancing train, frequently detaches the bag just before the catcher reaches it and it falls to the ground, and often under the wheels of the cars. By reference to the drawings it will be seen how I remedy this defect.

a a a is the main part of the crane, constructed of iron in the usual manner, the mail-bag being held in a vertical position, the ring in the top of the bag being held by the hook H, and the ring in the bottom being held by the hook P. Attached to the top of the rod A is a strong spring, B, to the extremity of which is fastened the hook H. This hook is attached to the spring B by a bolt or rivet, C, which allows a horizontal motion of the hook, like those in present use. Riveted to the hook is a spring, F, so constructed as to press upon the end of the hook H, as shown, and forming a joint, through which the iron ring of the top of the bag must pass to be detached, but through which the ring cannot pass without the application of considerable force, thus preventing any accidental detachment of the mail-bag.

The lower hook P has a lever, X, hinged to it, and operated by a spring, S, as shown, said lever being an equivalent of the simple spring F, thus preventing any accidental detaching of the lower end of the bag. The hook P is hinged at N to the arm K, thus allowing a horizontal motion of the hook, and the arm K is hinged at M to the sleeve J, so that it has a vertical swinging motion, like those now in use.

When the bag is in position the weight of arm K and hook P hangs upon the bag, keeping it in position for the catcher; but when the bag is taken off the arm at once drops down beside the standard *a*.

The lever X may be used on both hooks, if desired, or the simple spring F likewise. The springs may be made of a certain strength, or a set-screw may be attached, to increase or diminish the pressure of the springs at pleasure.

The sleeve J is slit in a vertical direction through most of its length, as clearly shown in Fig. 3, and a screw, V, and nut with handle I, is used to clamp the two parts upon the standard A at any desired height, thus firmly securing it, the only motions necessary to change the height of the sleeve being to move the handle I one-half circle to the right, fix the sleeve at the desired point, and move the handle back again one-half circle to the left.

Instead of the screw V a lever and cam may be used to draw the two parts of J around the standard *a*, and clamp it firmly in any position; but the screw is prefered.

In transferring mails at night, a lantern is usually shown, to notify the engineer that the bag is in position and ready for the catcher. The engineer signals the man who works the catcher; but neither of them can see the bag in the darkness, and accidents are liable to occur.

In my improved crane I construct a shelf or platform, O, on the back side of the crane, as shown, on which to set a lamp or lantern. In this position the light will shine upon the bag, and it will be visible to the train-men. The light may be so screened as to shine only upon the bag, if desired. Where a lantern is used as a signal it may be hung from a hook, L, instead of standing upon the platform O. With a light placed in or near the position indicated the transfer of mails at night will be rendered as certain by night as by day.

I claim as my invention—

The improved mail-bag crane herein described, consisting of the frame *a a*, having swinging arms H P, provided with springs or spring attachments F X, the lower arm P being hinged to an adjustable sleeve, J, substantially in the manner and for the purpose herein shown and specified.

FRANK. W. BRIDENBECKER.

Witnesses:

J. S. PUTMAN,

FREDERICK GATES.