(No Model.)

W. L. HATFIELD.

MAIL BAG CRANE.

No. 604,115. Patented May 17, 1898.

Fig. 1.

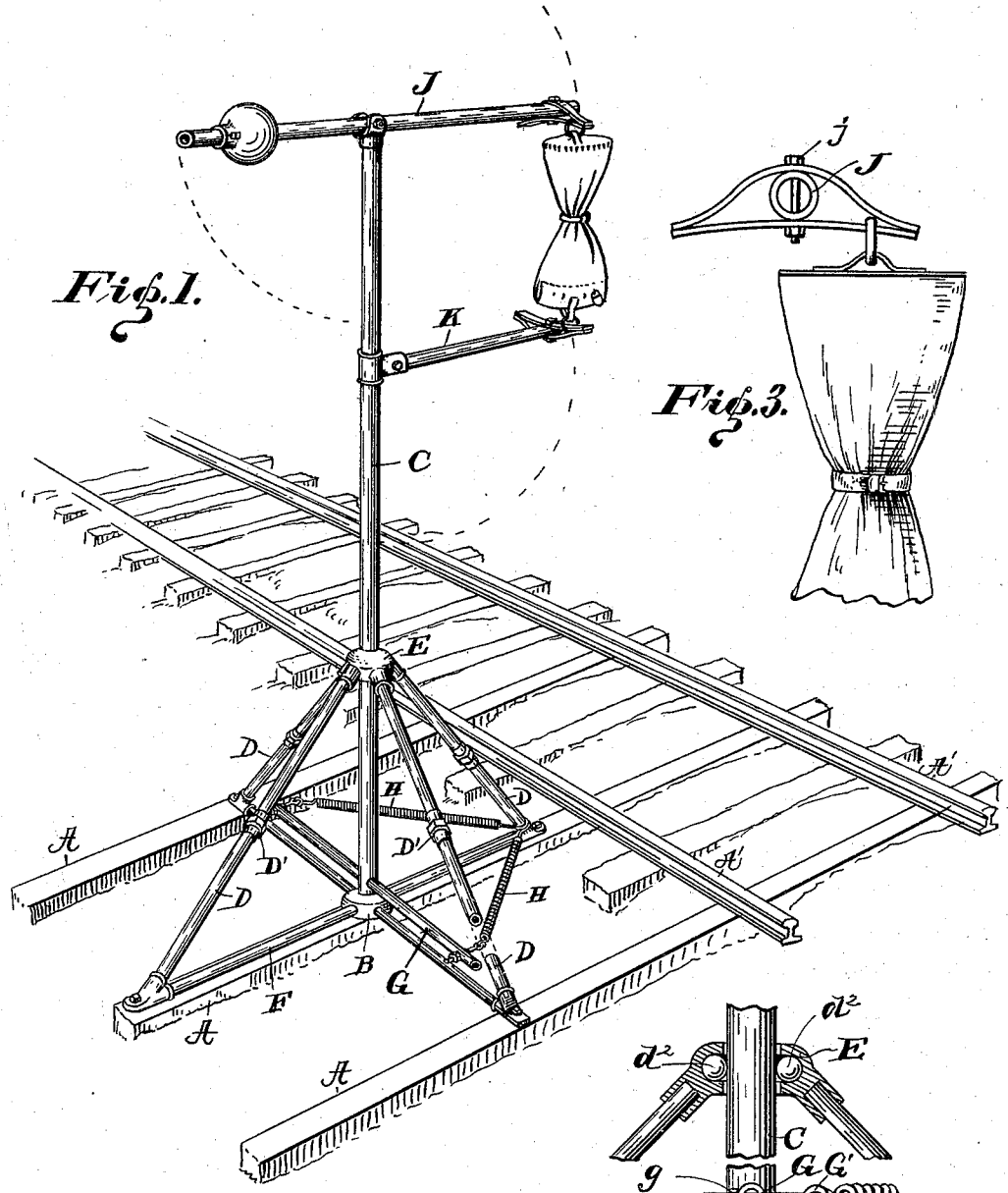
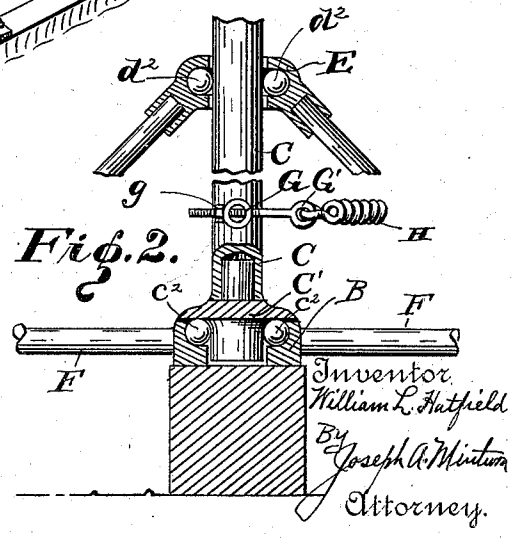


Fig. 3.

Fig. 2.



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UNITED STATES PATENT OFFICE.

WILLIAM L. HATFIELD, OF GREEN FORK, INDIANA.

MAIL-BAG CRANE.

SPECIFICATION forming part of Letters Patent No. 604,115, dated May 17, 1898.

Application filed August 25, 1897. Serial No. 649,438. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM L. HATFIELD, a citizen of the United States, residing at Green Fork, in the county of Wayne and State of Indiana, have invented certain new and useful Improvements in Mail-Bag Cranes, of which the following is a specification.

My invention relates to cranes which are used to support the mail-bags in position to be caught by a passing train at places along the railroad where the train does not stop, but where the mail is to be taken aboard the train; and the object of the invention is to provide a support for the bag which will be capable of yielding and swinging around in the direction of the movement of the train when the bag is struck by the gripper on the mail-car in order to prevent injury to the bag. The object, moreover, is to provide such a yielding crane which will also be able to resist the pressure of the wind without being blown out of reach of the gripper.

I accomplish the objects of the invention by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a view in perspective of my improved crane in operative position by the side of a railroad-track with a mail-bag supported by the crane. One of the diagonal braces in this view is broken away to show the underlying parts. Fig. 2 is a detail of the post, showing the ball-bearing for the support of the post; and Fig. 3 is a detail end view of the top arm of the crane, showing the fastening for holding the bag and showing a mail-bag in place on the arm.

Similar letters refer to like parts throughout the several views of the drawings.

A are stringers, which serve also as cross-ties for the rails A′.

B is a base-plate which rests on the middle stringer. It has a socket in its upper side.

C is the main post, and consists, preferably, of a suitable length of iron pipe, to the lower end of which a cast-iron toe C′ is fastened. This toe enters the socket in the base-plate B. Suitable runs are formed in the base-plate and toe for the balls c^2, whereby a ball-bearing is provided for the post C.

D are four diagonal braces the upper ends of which are fastened to the collar E and the lower ends of which rest on the stringers A in the manner as shown, whereby a second and elevated support is provided for the post C. The lower ends of the diagonal braces are connected with the base B by the horizontal bars or tubes F. The lower ends of the diagonal braces are spiked or bolted to the stringers in the manner as clearly shown in Fig. 1. The diagonal braces will preferably be constructed from iron pipe and will each be in two sections united by the threaded unions D′, whereby the length of the braces can be adjusted to insure the vertical position of the post C. The collar E has an inside run concentric with the opening for the post C, within which the balls d^2 are placed and ball-bearings thereby provided between the collar and the post.

G is a bar passing transversely through the post C and extending an equal length on each side of said post.

H are a pair of springs, here shown as spiral springs, which are preferable and which connect the two ends of the bar G with a fixed point, here shown as the diagonal brace on the side of the post next to the railway-track. The connection of the springs with the bar G is by means of eyebolts G′, the threaded stems of which are projected through holes in the bar and are held by the nuts g on the threaded bolts. This fastening provides means for regulating the tension of the springs. The springs will be sufficiently strong to resist the pressure of the wind or air pressure created by the suction of the rapidly-moving train, but will yield under the force of the gripper on the mail-car when the latter comes in contact with the mail-bag and by allowing the post to swing around will prevent the tearing of the bag.

J is the top arm of the crane and is pivotally secured to the upper end of the post C. One end is provided with a fastener to engage and hold the mail-bag, which will be hereinafter described, and the other end, which is projected to a considerable distance on the opposite side of the post C, will be weighted, thereby causing the end of the arm to which the bag is fastened to swing up. K is a second arm which is preferably pivotally secured to the post a convenient distance below the top arm to allow a mail-bag to be suspended between the two arms. The arm

K is adapted to swing down and will not move up past an approximately horizontal position, thereby, when the mail-bag is suspended between the two arms and fastened to both, permitting the weighted upper arm to hold the bag taut between it and the lower arm.

The fastening for the mail-bag, as shown in Figs. 1 and 3, is a clamp comprising a pair of spring-bars which are bolted above and below on opposite sides of the arms J and K by means of the bolt *j*, which passes through the arm in each case and through the two bars. This forms a double clamp (one for each direction of movement of the trains) and the rings of the mail-bag are caught in the clamp on the side opposite the approaching train.

Having thus fully described my invention, what I claim as new, and wish to secure by Letters Patent of the United States, is—

1. A vertical, revoluble post having arms to support the mail-bag in the path of the gripper-arm of a passing mail-car and having a pair of springs of predetermined resistance attached to fixed supports outside of the post and to opposite sides of the post to hold the post against rotation from any force below the predetermined resistance of the springs.

2. A vertical, revoluble post mounted on ball-bearings and having arms to support a mail-bag in the path of the gripper-arm of a passing mail-car, a pair of arms secured to the post on opposite sides from each other and a pair of springs connecting the ends of the arms with a fixed support, all substantially as shown.

3. A vertical, revoluble, tubular post a base-plate to support the post and having ball-bearings between the plate and the post, a collar above the base-plate supported by diagonal braces and having ball-bearing contact with the post, a bar passing transversely through the post, spiral springs connected by eyebolts with the ends of the bar, the opposite ends of the springs being fastened to a fixed support, and arms projected laterally from the top portion of the post whereby a mail-bag supported by said arms will cross the path of the gripper-arm of a passing mail-car, all substantially as described and for the purposes specified.

4. The combination, with a vertical, revoluble post held by springs against rotation up to a predetermined resistance, of arms to hold a mail-bag in the path of the gripper-arm of a passing car, and clamps on the ends of the arms consisting of an upper and lower plate of spring metal with meeting outer ends, fastened to the arm by a bolt passing through the arm and through the upper and lower plate, substantially as shown.

In witness whereof I have hereunto set my hand and seal this 21st day of August, A. D. 1897.

WILLIAM L. HATFIELD. [L. S.]

Witnesses:
WILL M. ROLLER,
A. R. ALBERTSON.