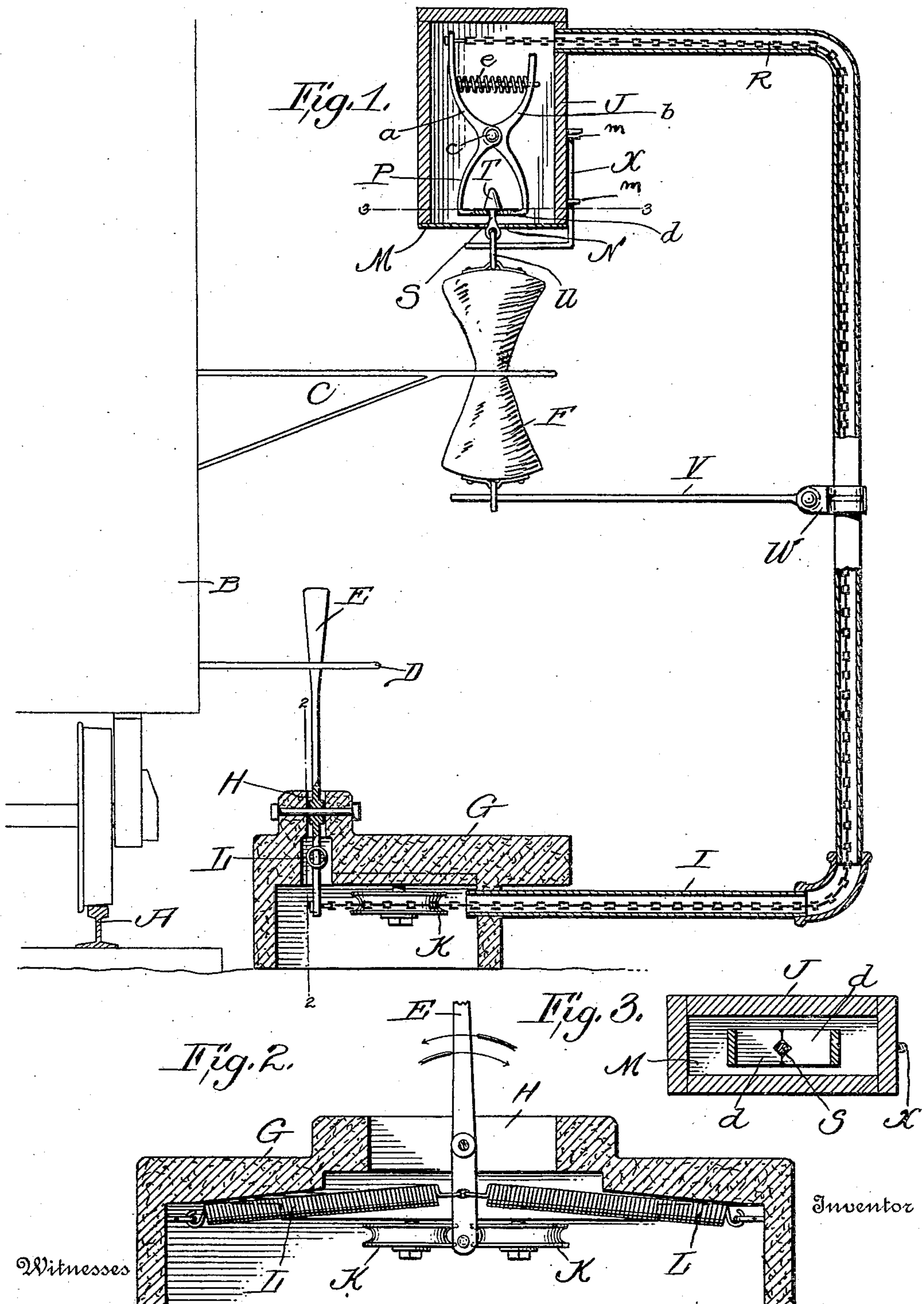


A. H. STONE.
MAIL BAG CRANE.

APPLICATION FILED JULY 19, 1909.

936,489.

Patented Oct. 12, 1909.



Witnesses
Oliver H. Holmes.
W. C. Healy

By

A. H. Stone.
James Shuey Attorney

UNITED STATES PATENT OFFICE.

AXEL H. STONE, OF MARSHALLTOWN, IOWA, ASSIGNOR OF ONE-THIRD TO SAM STONE
AND ONE-THIRD TO CON JACOBSON, OF MARSHALLTOWN, IOWA.

MAIL-BAG CRANE.

936,489.

Specification of Letters Patent.

Patented Oct. 12, 1909.

Application filed July 19, 1909. Serial No. 508,386.

To all whom it may concern:

Be it known that I, AXEL H. STONE, citizen of Norway, residing at Marshalltown, in the county of Marshall and State of Iowa, have invented new and useful Improvements in Mail-Bag Cranes, of which the following is a specification.

My invention pertains to mail bag cranes or devices for holding mail bags in such manner that the same can be taken on moving trains; and it has for its object to provide a mail bag holding device constructed in such manner that the mail bag is locked against removal and can only be removed when the device is unlocked by a complementary device on a passing mail car.

With the foregoing in view the invention will be fully understood from the following description and claims when the same are read in connection with the drawings, accompanying and forming part of this specification, in which:

Figure 1 is a view, partly in elevation and partly in vertical section, showing my novel device as properly arranged relative to a railway and a mail car thereon. Fig. 2 is a detail section taken in the plane indicated by the line 2—2 of Fig. 1 and showing the lever for coöperating with the car tappet, and also showing the parts connected with said lever. Fig. 3 is a detail horizontal section taken in the plane indicated by the line 3—3 of Fig. 1, looking downwardly.

Similar letters designate corresponding parts in all of the views of the drawings, referring to which:

A is a rail of a railway, and B is a mail car. The said mail car B is provided with a mail bag catcher C of conventional construction or of any other construction suitable for use in combination with my improvements; and it is also equipped with a tappet D which, when extended laterally from the car body, is adapted to coöperate with the lever E of my improvements and by such coöperation unlock the mail bag designated F and permit the removal of the same by the catcher C.

In the present and best practical embodiment of my invention that I have yet devised, I employ a casing G, of plastic ma-

terial or of any other material compatible with its use. The said casing is arranged in or on the ground at one side of the railway, and is provided in its upper wall with a slot H extending parallel to the railway. In the said slot the before mentioned lever E is fulcrumed at an intermediate point of its length, and in such manner that it is free to swing in both directions as indicated by arrows in Fig. 2. I also employ a hollow support I which extends laterally outward from the casing G, then upward and then inward, and carries at its upper end a box J.

The casing G incloses two suitably supported, horizontally disposed sheaves K and two tractile springs L, the latter being arranged at opposite sides of the lower arm of the lever and being connected at their inner ends to the arm and at their outer ends to the casing. Said springs serve to yieldingly maintain the lever E in the upright position shown, and to return said lever to the upright position after the tappet D passes out of engagement with the same.

The box J has a bottom wall M in which is an aperture N, and inclosed in said box is a keeper P made up of members *a* and *b*, hinged together at *c* and having notched terminals *d*, Figs. 1 and 3, on their lower arms, and a coiled spring *e* interposed between the upper arms of the members *a* and *b*, and designed to yieldingly hold the opposed ends of the terminals *d* together under normal conditions.

Connected at one end to the upper arm of the keeper member *a* and at its opposite end to the lower arm of the lever E is a cable R, preferably of chain. The said cable extends between the sheaves K and through the support I, and from this it follows that when the lever E is swung in either direction the lower arm of the keeper member *a* will be moved to carry the terminal *d* on its lower arm away from the terminal *d* on the member *b*.

My invention contemplates equipping each of the bags to be delivered to the moving car with a device S having a head T; the said device being, by preference, loosely connected to the handle U at one end of the bag. I also prefer to equip the upright portion of

the support I with an arm V adapted to swing vertically on a fitting W which latter is adapted to turn freely about the said upright portion of the support. The arm V is designed to be extended through the lower handle on a bag with a view of steadying the same, and when the bag is engaged by the catcher C said arm V will obviously permit of free removal of the bag.

10 In the practical use of my improvements the headed device T on one end of the bag is pressed upwardly through the aperture N in the bottom wall M of box J until its head is engaged and held by the terminals *d* on the members *a* and *b* of the keeper P. When the bag device S is held as stated it will be observed that the bag can only be removed when the lower arm of one keeper member is moved away from the lower arm of the other member, and from this it follows that there is no liability of the bag being surreptitiously removed from the crane by an unauthorized person. I also prefer in placing the bag to dispose the lower handle thereof on the arm V, for the purpose before described.

With the bag placed and held in the manner before described, it will be seen that when the tappet D on the car B engages and swings the lever E, the bag device S will be released from the keeper P, and then the bag will be taken from the crane by the catcher C. It will also be observed that subsequently to the described operation, the working parts of my improvement will be returned to the positions illustrated in readiness for another operation.

With a view of supporting the upper end of the bag in the event of the bag device S being released before the catcher C engages the bag, I provide the supporting rod X shown in Fig. 1. The said supporting rod X has an upright portion journaled and held against downward movement in bearings *m* on the side of the box J, and an arm extending inwardly from the lower end of said upright portion and adapted to extend through the upper handle of the bag as illustrated. While the said arm will serve the purpose stated, it will be noticed that there is no liability of its interfering with the release of the bag to the catcher C.

It will be gathered from the foregoing that notwithstanding the fact that my improved crane is adapted to prevent the unauthorized removal of a bag, it is simple and inexpensive in construction and is well adapted to withstand the rough usage and exposure to which mail bag cranes are ordinarily subjected.

The construction herein illustrated and described constitutes the best practical embodiment of my invention of which I am cogni-

zant, but it is obvious that in the future practice of the invention such changes or modifications may be made as do not involve departure from the scope of my invention as defined in the claims appended.

Having described my invention, what I claim and desire to secure by Letters-Patent, is:

1. A mail bag crane or holding device comprising a casing, sheaves suitably supported therein, a lever mounted in the casing, tractile springs disposed at opposite sides of and connected to the lower arm of the lever, a hollow support fixed with respect to the casing, a box carried by said support and having an aperture in its bottom, a headed device adapted to pass freely through said aperture and also adapted to be connected with a mail bag, a keeper comprising hinged members the lower arms of which are adapted to engage and hold the head of said device and also comprising a spring interposed between the upper arms of the members, and a cable connected to the lower arm of the lever and extending loosely between the sheaves and through the hollow support and connected to the upper arm of one keeper member.

2. A mail bag crane or holding device comprising a suitably supported lever, a support, means for yieldingly maintaining the lever in a substantially upright position, whereby the same is adapted to be engaged and moved by a tappet on a moving car, a box carried by the support and having an aperture in its bottom, a keeper disposed in said box and having a movable element, a device adapted to be attached to a mail bag and to be held by the keeper under normal conditions, and a suitably guided cable interposed between and connecting the lever and the movable element of the keeper.

3. A mail bag crane or holding device comprising a suitably supported lever, a support, means for yieldingly maintaining the lever in a substantially upright position, whereby the same is adapted to be engaged and moved by a tappet on a moving car, a box carried by the support and having an aperture in its bottom, a keeper disposed in said box and having a movable element, a device adapted to be attached to a mail bag and to be held by the keeper under normal conditions, a suitably guided cable interposed between and connecting the lever and the movable element of the keeper, and a bag support having an upright portion journaled in bearings on the box and also having an arm adapted to freely swing below the bottom of the box.

4. A mail bag crane or holding device comprising suitably supported means for locking a bag against removal by an unauthorized person, and movable means con-

nected with and adapted when actuated to unlock said locking means; said movable means being adapted to be engaged and actuated by means on a moving car to then permit of the bag being taken by a catcher on the car.

In testimony whereof I have hereunto set

my hand in presence of two subscribing witnesses.

AXEL H. STONE.

Witnesses:

F. E. NORTHUP,

E. A. PARKER.