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W. E. WESTERMANN.

MAIL CRANE.

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Fig. 1.

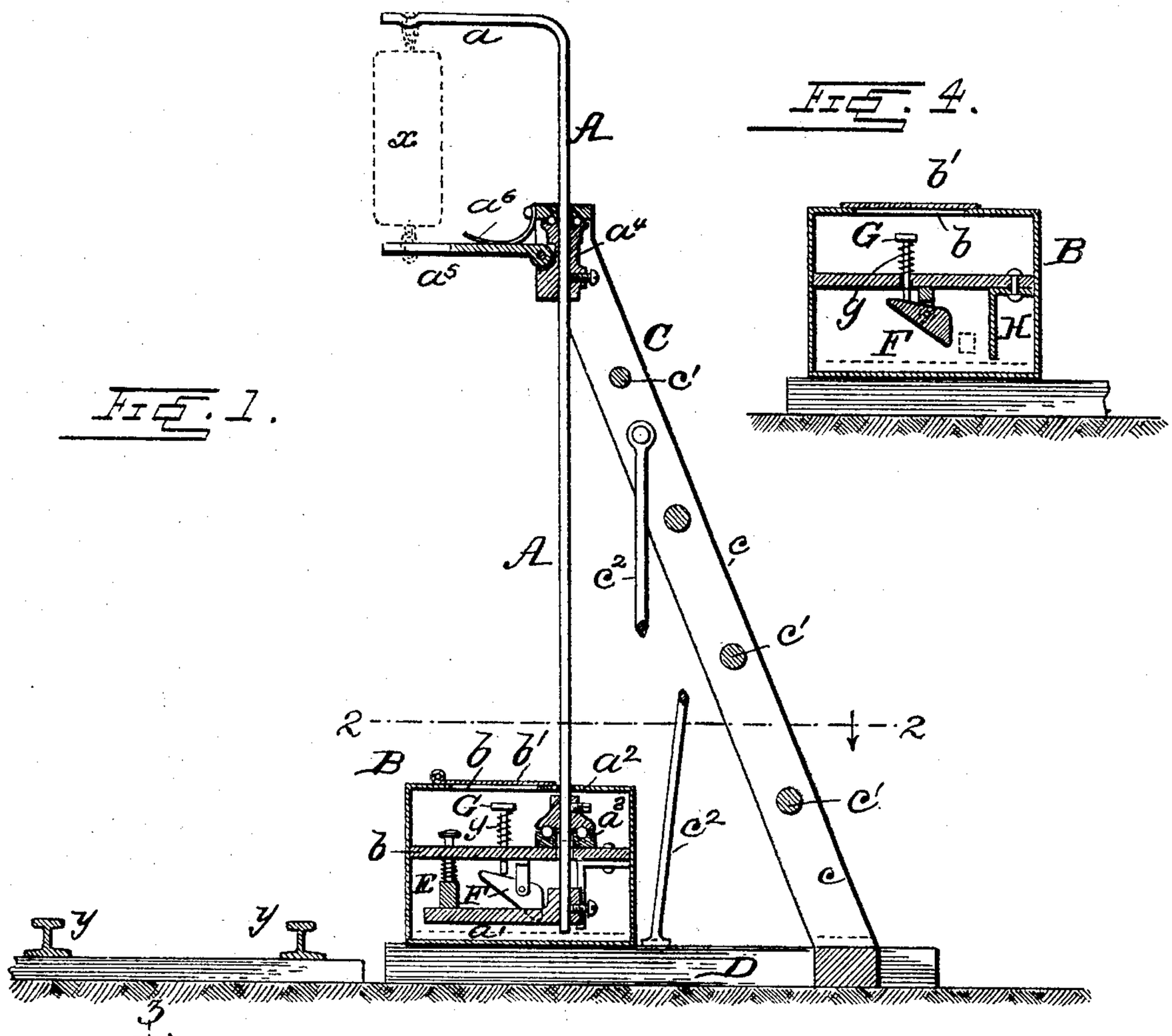
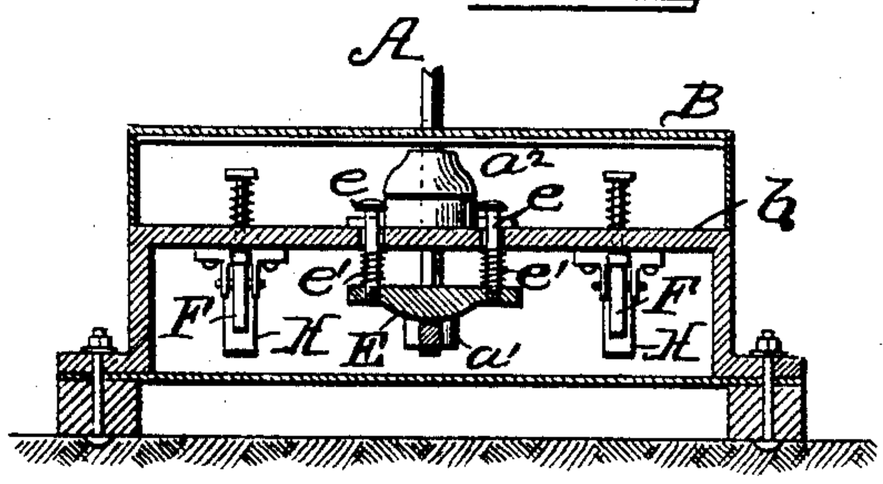


Fig. 4.

Fig. 2.

Fig. 3.



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MAIL-CRANE.

No. 797,479. Specification of Letters Patent. Patented Aug. 15, 1905.

Application filed March 31, 1905. Serial No. 253,004.

To all whom it may concern:

Be it known that I, WILLIAM E. WESTERMANN, a citizen of the United States, residing at Oldfort, in the county of McDowell and State of North Carolina, have made certain new and useful Improvements in Mail-Cranes, of which the following is a specification.

My invention is an improvement in that class of devices or apparatus arranged alongside a railroad-track for holding a mail-pouch or mail-bag suspended in such position that it may be seized by a person on a passing train or removed by a device forming an attachment of a mail-car.

The invention is embodied in the construction, arrangement, and combination of parts hereinafter described, and illustrated in the accompanying drawings, in which—

Figure 1 is a vertical section of the apparatus, together with a railroad-track alongside which it is arranged in due position. Fig. 2 is a horizontal section on the line 2 2 of Fig. 1. Fig. 3 is a transverse vertical section on the line 3 3 of Fig. 2. Fig. 4 is a transverse vertical section on the line 4 4 of Fig. 2.

A indicates a vertical rod or shaft which is supported in suitable bearings and adapted to rotate. Its upper end is bent laterally to form an arm a, adapted for suspension of a mail-pouch or mail-bag x, and its lower end is provided with an arm a', which also projects laterally and is parallel to the upper arm a. The arm a' is, however, shown as detachable, it being secured to the shaft A by a clamp-screw. I employ ball-bearings for the shaft A, as shown. Thus a block a^2 is clamped to the shaft and rests upon a ball-bearing a^3, which is in turn supported on a horizontal partition b of a metallic casing B, arranged alongside the track. Another block a^4 is similarly clamped to the shaft A at a point just below the top of the fixed inclined frame C. The latter is constructed in practice as a ladder, it being formed of iron bars c and iron rods that constitute rungs c', while diagonal or inclined braces c^2 are arranged to support the ladder rigidly, the feet of the same resting upon the horizontal base D, whereon the metallic casing B is also secured. The upper block a^4 is provided with a hinged or pivoted arm a^5, which is adapted to project laterally and engage a ring or other device attached to the lower end of the mail-pouch x. A spring a^6 is arranged to bear upon the arm a^5 in such manner as to tend to depress it, so that the mail-pouch x is subjected to tension to such a degree that it will not be accidentally dislodged by the wind and is held in due position to be seized by a person or device on the mail-car. When the apparatus is set in due position for supporting a mail-pouch x in the required position, as indicated in Fig. 1, the upper and lower arms $a\,a'$ project toward the rails y at right angles thereto, and for setting or holding the rock-shaft in this position I employ a spring-actuated presser E. (See Fig. 3.) The same is a horizontal bar having its under middle portion rounded, as shown, to enable the bar a' to pass easily on and off the same and vertical guide-pins e, which pass up through holes in the horizontal partition b of the metal casing B and are encircled by spiral spring e', which tend to press the bar E downward, as will be readily understood. When the shaft A is turned to the position indicated in Fig. 1, the arm a' rides up on the swell or rounded portion of the bar E, and thereby raises the latter against the tension of the spring g'. It is apparent that by the friction thus produced between the arm a' and bar E the rock-shaft will be held in due position for supporting the mail-pouch, as indicated. When the mail-pouch is seized, as before stated, the shaft A will be rocked or turned on its axis, so that the arms a, a', and a^5 will all swing to the right or left, as the case may be, and thus the mail-pouch will slip easily off from the free ends of the arms $a\,a^5$. When this occurs, the momentum acquired by the shaft A in such rotation or rocking movement will cause the lower arm a' to pass under the pendent end of a gravity-catch F, (see Figs. 1, 3, and 4,) and thus be locked, as indicated by dotted lines, Fig. 3. There are two gravity-catches F, located on opposite sides of the shaft A within the metal casing or box B and pivoted in brackets attached to and pendent from the horizontal partition b. The heavier end of the catches tends to hold them in position for automatic engagement with the arm a' of shaft A, so that when the arm passes under them they are tilted on their pivots, but immediately fall back to their normal position, Fig. 1 and Fig. 3, so as to prevent the shaft swinging back to the original position. For the purpose of tripping the catches F, so that the arm a' may be swung back into position for due engagement with the friction-bar E, some means must be employed which are accessible to the switchman, and for this purpose I propose to employ a depressible foot-rod G, which works in a hole in the horizontal par-

tition *b* and bears upon the outer end of the gravity-catches, it being held normally up by a spiral spring *g*. The upper portion of the metal box or casing B incloses these trip devices G and their adjacent parts, but is provided with an opening at *b* and a cover *b'* therefor, so that convenient access may be had to the trips G. In practice the cover *b'* may be provided with a lock, so that surreptitious access to the apparatus for resetting it will be prevented. It is apparent that since the shaft A may rock in either direction mail-pouches *x* may be taken off the crane *a* when the train is passing in either direction and that the arm *a'* will lock with one or the other of the gravity-catches F, according as the train moves one way or the other. Directly behind each of the gravity-catches F, I arrange a pendent stop H, (see Figs. 3 and 4,) which serves to arrest the swinging movement of the arm *a'* after it has passed beyond the nose of the catch.

It will be noted that the bearing-block a^2, arranged within the casing B, may be adjusted higher or lower, and the block a^4 may be adjusted correspondingly, so as to accommodate the crane A for supporting mail-pouches of different lengths or at different heights. Also if the crane A be vertically adjusted the lower arm *a'* will require corresponding adjustment, which is provided for by the means that clamp it to the rock-shaft.

The apparatus is very simple, is constructed in the most durable manner, and is highly efficient in use.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. An improved mail-crane comprising a rigid frame-support, a vertical rock-shaft having horizontal parallel arms at its ends, a pivoted spring-pressed arm for holding the lower end of the mail-pouch, a metal casing inclosing the lower arm and having a swinging friction device for engaging the latter, automatic catches for engaging the lower arm when swung laterally, and means for tripping such catches to allow the crane, or rock-shaft, to be restored to its normal position, substantially as described.

2. In a mail-crane, the combination, with a vertically-inclined ladder, and means for supporting it rigidly in position, a bearing applied to the upper portion of said ladder, a rock-shaft, or mail-bag crane, arranged in said bearing, and means for holding the crane set in normal position, and other means for automatically locking the shaft when rotated in one direction or the other, substantially as described.

3. The combination, with a rigid supporting-frame and a vertical rock-shaft having a lateral arm for supporting a mail-pouch, of another arm secured to the lower end of the shaft and projecting laterally, and a friction-stop for engaging such arm, the same including a device which is rounded or curved on its under side to facilitate engagement and disengagement of the said arm, and a spring tending to press the device downward, substantially as described.

4. The combination, with a rock-shaft having a lateral arm for supporting a mail-bag, and a rigid frame in which it is journaled, of a lower bearing for said shaft, a horizontal arm attached to the shaft, and a horizontal bar having its under side provided with a swell or rounded projection, pins arranged in suitably-fixed guides and attached to said bar, and springs tending to depress the latter, whereby it is held in due frictional engagement with the lower arm of the rock-shaft, substantially as described.

5. The combination, with a suitable supporting-frame, and a vertical rock-shaft journaled therein having a lateral arm for supporting the mail-pouch, of a metal casing having a bearing for the lower end of the rock-shaft, an arm secured horizontally to the rock-shaft within said casing, devices for locking the said arm when the rock-shaft has been rotated in the operation of detaching the mail-pouch, means for tripping such devices, the metal casing having an opening which permits access to the trip means, and a door adapted to close the opening, and means for securing the same, substantially as described.

6. The combination, with a suitable support, of the vertical rock-shaft A having a vertically-adjustable block a^2 applied to its lower portion, a horizontal support having a bearing for said block, a horizontal arm attached to the portion of the rod that projects below the lower bearing, and a spring-pressed friction-bar arranged for contact with the lower arm of the rock-shaft for holding it in a normal or set position, substantially as described.

7. The combination, with a rigid supporting-frame, of a rock-shaft arranged vertical and journaled therein, a lower bearing for said rock-shaft, and a horizontal arm attached to the lower portion of the latter, automatic locking-catches with which said arm may engage when thrown in either direction, and stops for arresting the throw after passing the catches, substantially as described.

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