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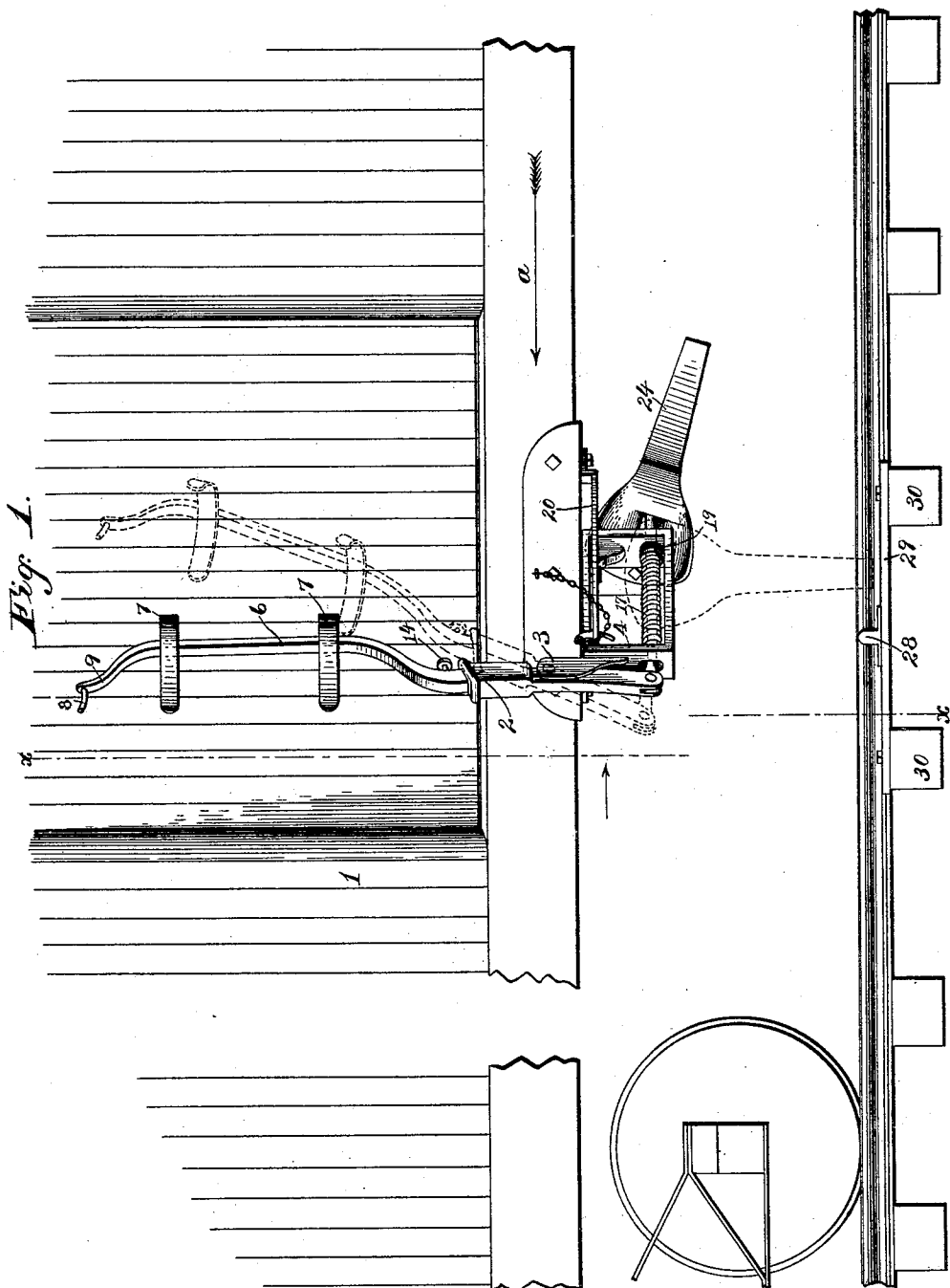
3 Sheets—Sheet 1.

C. B. WINSOR & G. W. CUMMINGS.

MAIL BAG THROWER.

No. 481,322.

Patented Aug. 23, 1892.



Witnesses;

Henry C. Bowen
D. Darley

Inventors:

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(No Model.)

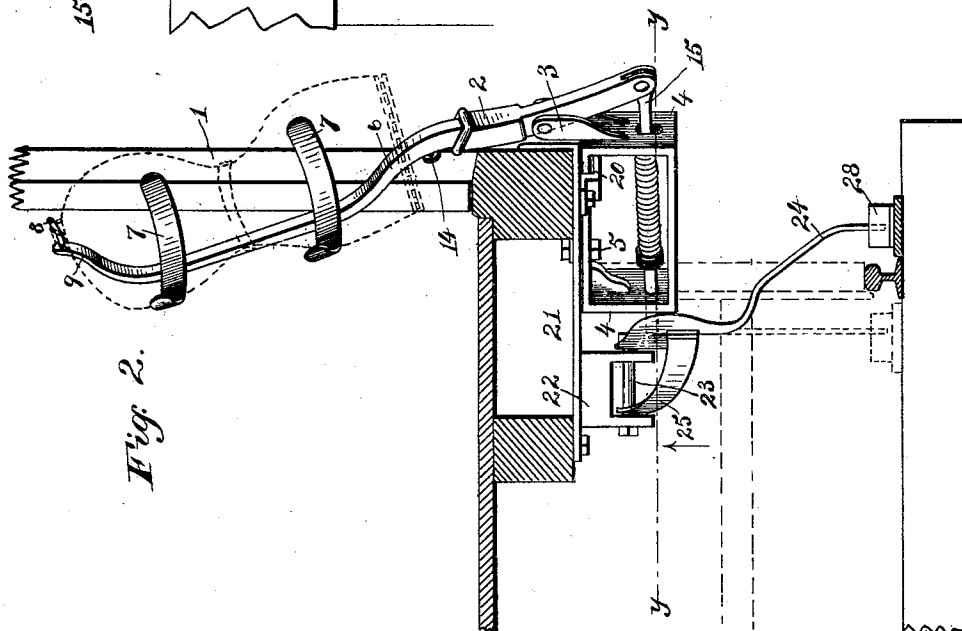
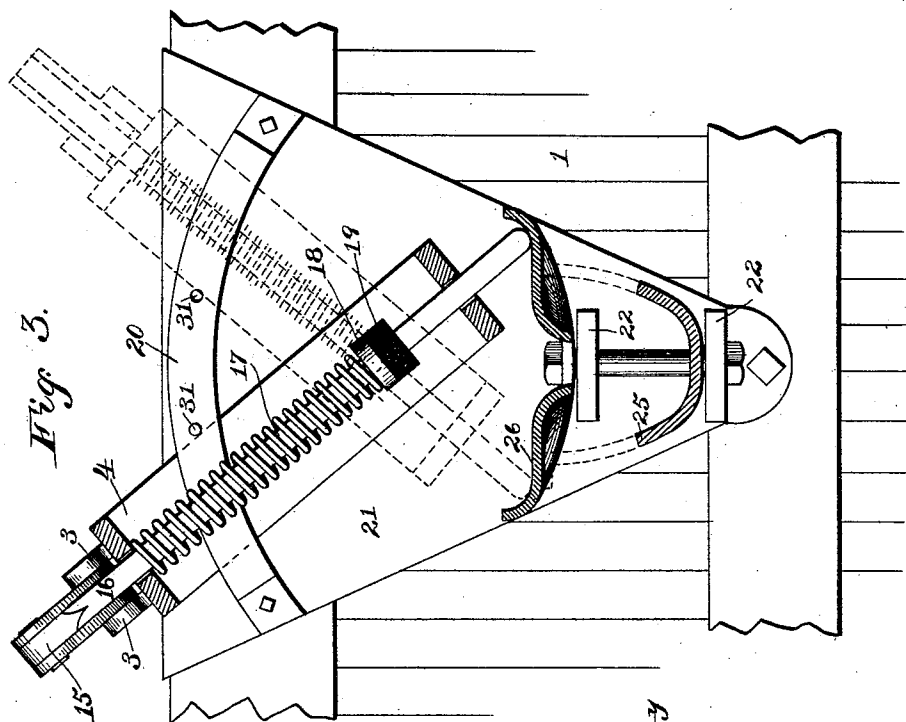
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Witnesses;

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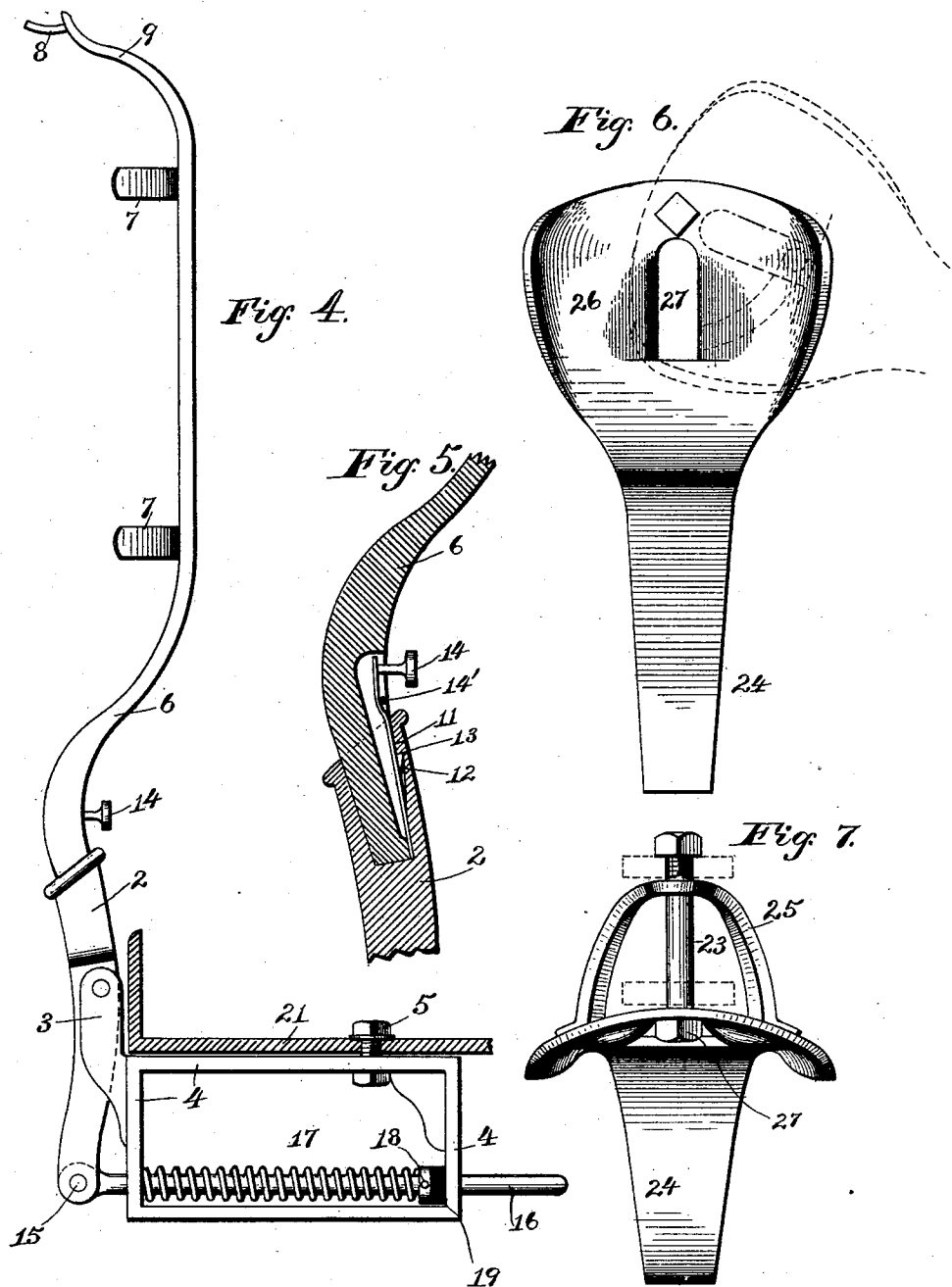
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Inventors:

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UNITED STATES PATENT OFFICE.

CLINTON B. WINSOR AND GEORGE W. CUMMINGS, OF JAMESTOWN,
NEW YORK.

MAIL-BAG THROWER.

SPECIFICATION forming part of Letters Patent No. 481,322, dated August 23, 1892.

Application filed October 2, 1891. Serial No. 407,526. (No model.)

To all whom it may concern:

Be it known that we, CLINTON B. WINSOR and GEORGE W. CUMMINGS, citizens of the United States, and residents of Jamestown, in the county of Chautauqua and State of New York, have invented a certain new and useful Improvement in Mail-Bag Throwers, of which the following is a full, exact, and clear description.

Our invention has relation to mail-bag deliverers or throwers, and is intended to provide a means for automatically delivering the mail-bags at the various stations along a railroad without necessitating the stoppage of the train, as will appear in the hereunto-appended specification, reference being had to the accompanying drawings, in which—

Figure 1 shows our device applied to the side of a car, the dotted lines indicating the position it assumes when ready to throw the mail-bag. Fig. 2 is a view on line $x x$ of Fig. 1, looking in the direction of the arm; Fig. 3, a view taken on line $y y$ of Fig. 2, looking upward toward the bottom of the car; Fig. 4, a view of the delivering-lever and socket and their connections; Fig. 5, a detail view of the device for securing the delivery-lever to the socket. Fig. 6 is a side elevation of the trip, and Fig. 7 a plan view of the same.

In the drawings, 1 represents a car-body, upon which a support 2 is pivoted, preferably, in lugs 3, fastened to a box-like frame 4, which is mounted on a pivot-bolt 5, passing through a plate secured to the under portion of the car-body. Seated in the support 2 is the delivering-lever or thrower, the upper portion of which 6 is bent to conform to the shape of a mail-bag, and is provided with skeleton spring-supports 7 7 to more securely retain the bag in place when hung from the projecting finger 8 of the goose-neck 9. The support 2 has a socket 10 in its upper portion adapted to receive the tapering lower end of the delivering-lever 6, which end is recessed to receive and is provided with a spring-catch 11, having a lug 12 thereon adapted to fit under a corresponding shoulder 13 in the socket of the support 2. A button 14 serves to operate the spring-catch 11, which catch is prevented from coming outside of the face of the delivering-lever by means of pin 15,

secured to the side of the recess in lever 6. The lower portion of the support 2 is bifurcated to receive the head 15 of a rod 16, adapted to work through openings in the front and back portion of the box-like frame 4.

17 denotes a spring coiled around said sliding rod 16 inside the box-frame. One end of spring 17 bears against the outer end of the box-frame, and the other end is secured to a collar 18, fastened to the rod. On the outer side of the collar a suitable buffer 19 is placed, which bears against the other end of the box when the spring is expanded.

20 represents a curved way secured at its ends to a plate 21, fastened to the under side of the car-frame, and upon said way 20 the box-like frame 4 is adapted to oscillate in the operation of the deliverer, to be hereinafter described.

Depending from plate 21 is a bracket or hanger 22, through which passes horizontally a bolt 23. Mounted upon said bolt is a trip-arm 24, at its upper end being provided with a yoke 25, extending rearwardly therefrom. The upper forward portion 26 of said trip-arm 24 is convexed or shell-shaped and is also provided with a longitudinal slot 27.

Adjacent to one of the rails of the railroad-track and preferably in contact therewith is placed the trip 28. We have shown the trip 28 mounted on a flat bar 29, extending over two ties 30. It is evident, however, that said trip 28 may be mounted directly on one of the ties instead of as shown, and it is also obvious that by changing the curve of the trip-arm said stop may be placed inside the rails of the track, as indicated in dotted lines in Fig. 2. Attention is directed to the fact that the stop 28 is so located as to be within a vertical plane through the passing car, and that as it occupies a small space it affords no obstruction to the passage of trains and is not liable to cause accidents to persons on the train or those standing near the track, as are many of the present large-sized, expensive, and ungainly trip-frames in use.

31 denotes a curved pin fastened to a chain 32, secured to the car. This pin 31 is intended to fit in a hole 33 in the curved way or track 20, and thus serve as an additional means for preventing the socket and deliver-

ing-lever from being shifted to the opposite side of the way 20 when not desired, thereby providing means for securing in position the thrower when reversed.

- 5 The operation of our device is as follows: The thrower 6 is drawn backward to the position indicated in dotted lines in Fig. 1, and by this movement the spring 17 on the rod 16 is compressed and the extremity of the rod 16 is drawn from the opening or slot 27 of the portion 26 of trip-arm 24, thereby permitting the said trip-arm to drop by gravity to the position indicated in dotted lines in Fig. 1, so that its lower extremity will be in a position to touch the trip 28 projecting alongside the track when the said trip is reached by the movement of the train. When the delivering-lever is in the position described, it will be observed that the extremity of rod 16 will ride up from slot 27 and occupy the position in the dish-shaped trip-arm 26, as indicated in Fig. 3. The mail-bag is then hung on a finger 8 of the goose-neck 9 and supported in that position by the shape of the delivering-lever and the braces or supports 7. In this position the device is ready to deliver the bag at the station. As the trip-arm 24 reaches the trip 28 as the car passes over said trip the lower end of the trip-arm is deflected and the position of the upper end of the arm is changed, thus permitting the spring to suddenly force the bolt 16 into slot 27, and thereby drawing the lower end of the lever inward and throwing the delivering-lever outwardly by the expansion of the spring, thus ejecting the mail-bag from the finger 8. The device may then be reset and another bag hung on the finger to be delivered when the next station is approached.
- 40 In view of the fact that the box-like frame is pivoted, as described, said box-like frame 4 may be moved along track or way 20, whereby we are enabled to shift the thrower, as indicated in dotted lines in Fig. 3, and thus deliver mail from the other side of the car-door. This feature is advantageous on single-track railroads.

- The thrower herein described may be used whether or not the station is provided with a receiving apparatus. It is evident that any ordinary receiver may be used in connection with the thrower; but we, however, prefer the network receiver shown and described in our patent of February 24, 1891, No. 447,094.
- 55 Hereinbefore we have described our thrower as being made separable from the socketed support. Our purpose in making it separable is that it may be readily removed should it happen to be in the way of the operative when not in use or in case the car is temporarily employed for other purposes. The thrower may be removed in an instant and as rapidly replaced in position, and is securely locked when in position.
- 65 As is obvious, the delivering-lever and socket may be made of one piece of material,

although in practice we prefer to manufacture it in two pieces.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent of the United States, is—

1. A mail-bag deliverer comprising a pivoted support on the car, a receptacle for the bag at the upper end of the said support, and means on the car connected with the lower end of the support for operating the thrower to deliver the bag.

2. A mail-bag deliverer comprising a pivoted support on the car, a receptacle for the bag at the upper end of the said support, and a spring-actuated rod connected with the lower end of the said support.

3. A mail-bag deliverer comprising a pivoted support on the car, a receptacle for the bag at the upper end of the said support, and means on the car connected with the lower end of the support, said means including a trip-arm adapted to contact with the stop located alongside a track-rail.

4. A mail-bag thrower pivotally mounted on the car and comprising a box-like frame on the under side of the car, a spring-actuated rod connected to the lower end of the support and passing through said frame, and a trip-arm connected with the inner end of said rod, adapted to contact with the trip on the track.

5. A mail-bag thrower pivotally mounted on the car and comprising a box-like frame, a way on the under side of the car upon which said box-frame is adapted to move, and means connected with the lower end of the pivot-support for operating the thrower.

6. A mail-bag deliverer comprising a pivoted support having a receptacle for the bag at its upper end and means whereby said thrower may be reversed in position, substantially as set forth.

7. A mail-bag deliverer comprising a pivoted support having a receptacle for the bag at its upper end and means whereby said thrower may be reversed in position, said means including a curved way, a pivoted box-frame, and a stop for securing the latter in adjusted position.

8. A mail-bag deliverer comprising a pivoted support for the bag, an operating-rod connected to the lower end of said pivoted support, and a shell-headed trip-arm adapted to be engaged by said rod.

9. A mail-bag deliverer comprising a pivoted support for the bag, an operating-rod connected to the lower end of said pivoted support, and a slotted dish-headed trip-arm adapted to be engaged by said rod.

10. A mail-bag thrower provided with a trip-arm having a slotted dish-shaped head.

11. A mail-bag thrower provided with a trip-arm having a slotted dish-shaped head and a yoke extending from the rear of said head.

12. A mail-bag thrower provided with a receptacle and pivoted on the car, a rod con-

nected to the lower end of said receptacle-support, and a coiled spring and buffer on said rod.

13. A mail-bag thrower pivoted on a car, a frame on the under side of the car adapted to oscillate, a rod connected to the support of the receptacle, passing through said frame, and a slotted dish-headed trip-arm.

14. A mail-bag deliverer comprising a socketed support and a separable bag-receptacle, whose lower end is adapted to fit in the socket of said support, and means whereby said receptacle may be instantly locked in position or released.

15. A mail-bag deliverer comprising a socketed support and a separable bag-receptacle, whose lower end is adapted to fit in the socket

of said support, and means whereby said receptacle may be instantly locked in position or released, said means including a shoulder in the socket and a spring-catch adapted to engage said shoulder.

16. A mail-bag deliverer comprising a socketed support and a separable bag-receptacle, the latter provided with skeleton spring-arms adapted to receive the bag.

In testimony whereof we hereunto affix our signatures in the presence of two witnesses.

CLINTON B. WINSOR.
GEORGE W. CUMMINGS.

Witnesses:

WARREN COUCH,
A. L. IRONS.