

No. 712,897.

Patented Nov. 4, 1902.

L. W. BARKER.
MAIL POUCH CRANE AND HANGER.

(Application filed June 20, 1902.)

(No Model.)

Fig. 1.

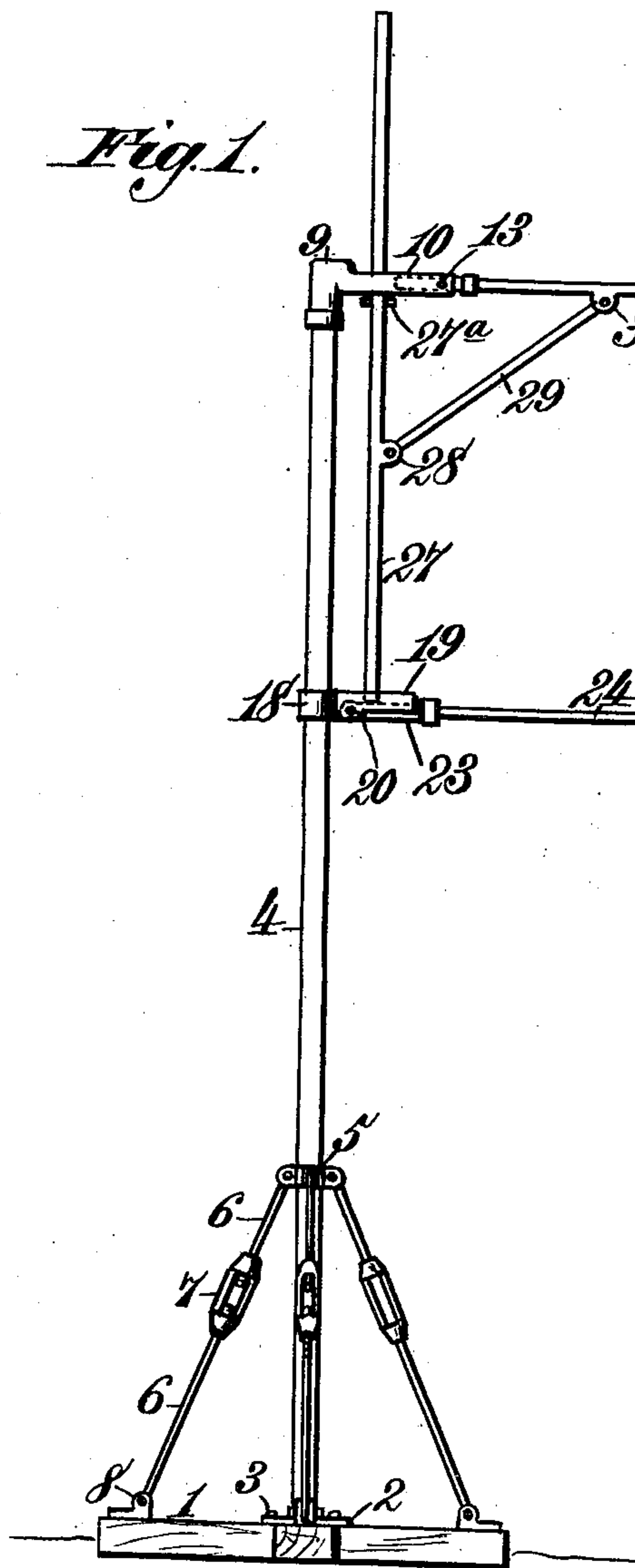


Fig. 2.

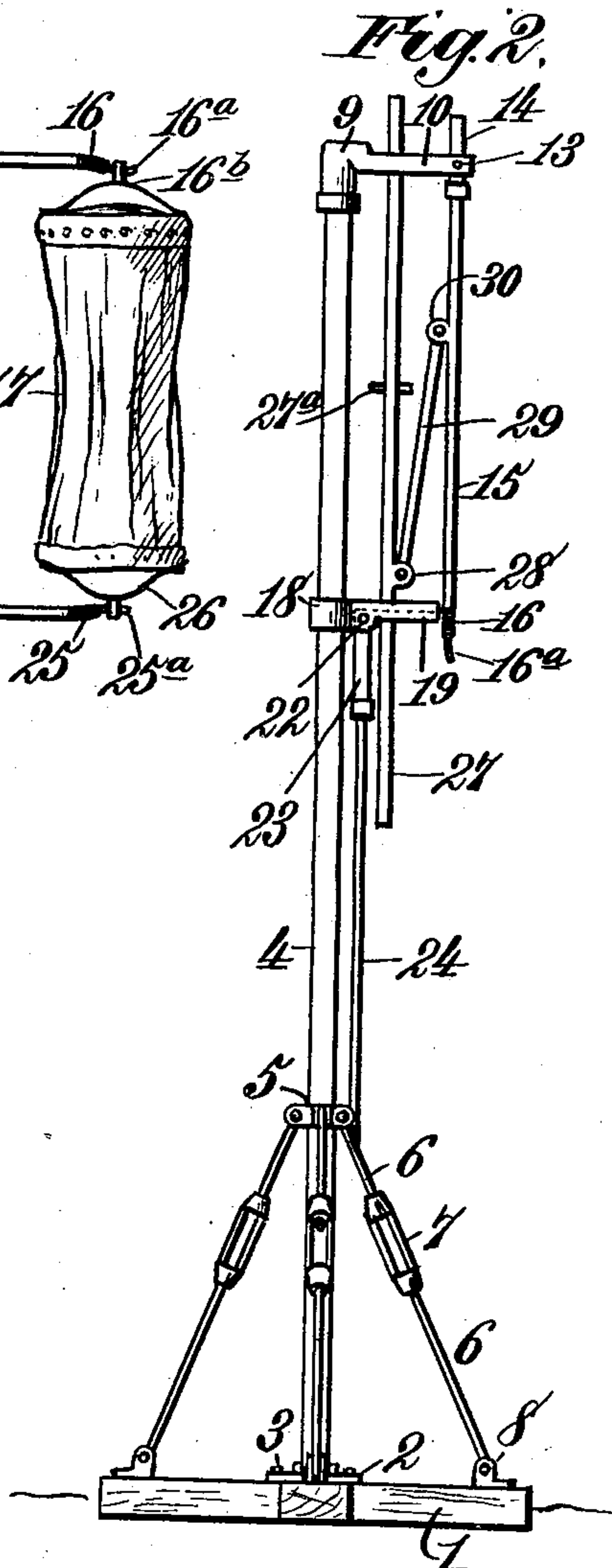
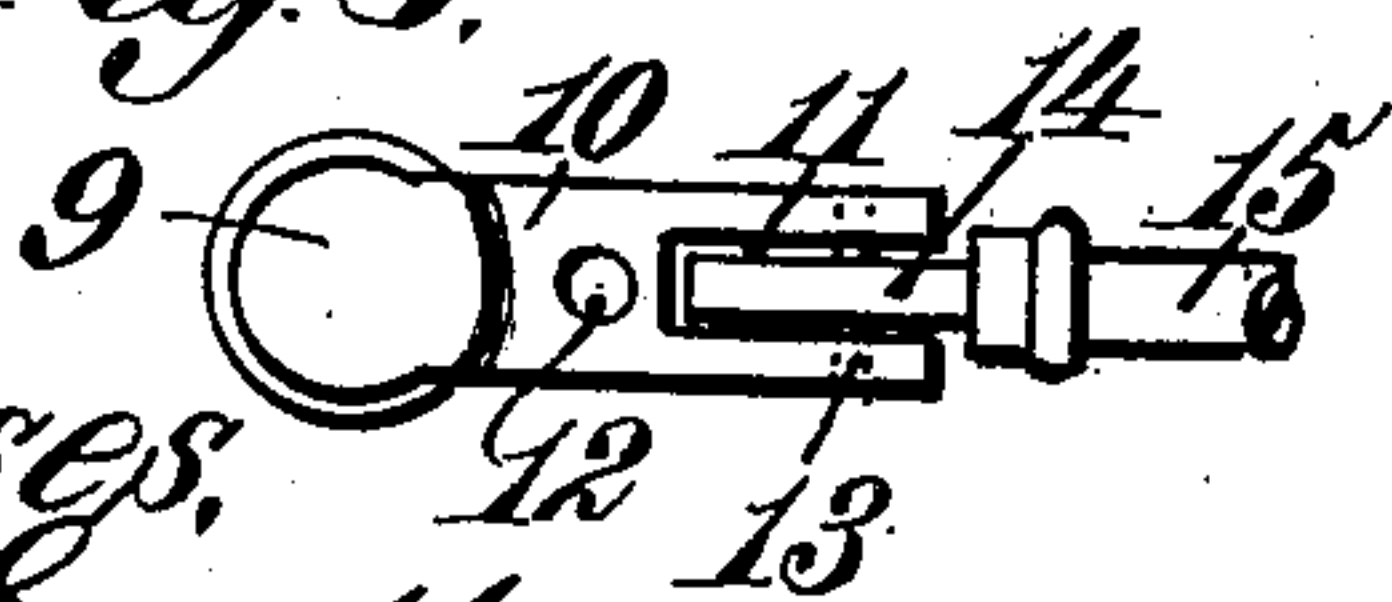
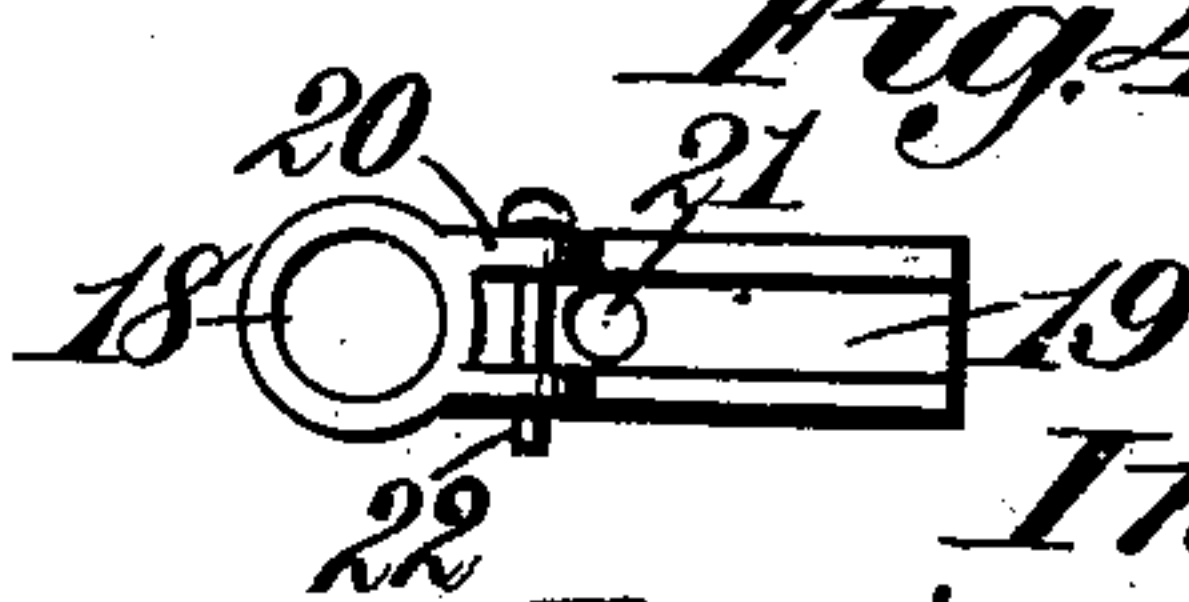


Fig. 3.



Witnesses:
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Fig. 4.



Inventor:
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Att'y.

UNITED STATES PATENT OFFICE.

LEWIS W. BARKER, OF CLINTON, IOWA.

MAIL-POUCH CRANE AND HANGER.

SPECIFICATION forming part of Letters Patent No. 712,897, dated November 4, 1902.

Application filed June 20, 1902. Serial No. 112,522. (No model.)

To all whom it may concern:

Be it known that I, LEWIS W. BARKER, a citizen of the United States of America, residing at Clinton, in the county of Clinton and State of Iowa, have invented certain new and useful Improvements in Mail-Pouch Cranes and Hangers, of which the following is a specification.

This invention relates to certain new and useful improvements in mail-pouch cranes and hangers, and relates more particularly to that class or description of mail cranes and hangers known as "collapsible" cranes.

The invention aims to provide a mail-pouch crane and hanger which shall be extremely simple in its construction, strong, durable, efficient in its operation, comparatively inexpensive to set up, and foldable or collapsible automatically in a compact manner, so that the suspending-arms for the pouch when the latter is released will fall out of the way of the moving train.

The invention further aims to provide the suspending-arms for the pouch with new and novel means for the sure and easy release of the pouch when engaged by the pouch-catcher carried by the train, thereby overcoming the great resistance due to the pull necessary in disengaging the pouch from the arms.

With the above and other advantages in view the invention consists of the novel combination and arrangement of parts hereinafter more specifically described, illustrated in the accompanying drawings, and particularly pointed out in the claims hereunto appended.

In describing the invention in detail reference is had to the accompanying drawings, forming a part of this specification, wherein like numerals of reference indicate corresponding parts throughout the several views, and in which—

Figure 1 is an elevation of the crane and hanger, showing the same in the position for suspending the pouch, the pouch being attached thereto. Fig. 2 is a like view showing the crane and hanger collapsed when the pouch is released therefrom. Fig. 3 is a top plan view of the coupling or connecting device for the upper suspending-arm for the pouch, the arm being broken away; and Fig. 4 is a bottom plan view of the connect-

ing device for the lower suspending-arm for the pouch.

Referring to the drawings by reference-numerals, 1 denotes the base, which is constructed of a pair of cross-ties connected together by means of the plate 2, secured to the ties by a suitable fastening means, as at 3. Instead of forming the base of a pair of cross-ties it may be constructed of a single plate, if desired. The cross-ties 1 are adapted to be secured rigidly in position by any suitable means.

The reference-numeral 4 denotes a vertically-extending supporting-standard constructed of any suitable form and material and secured at its lower end to the plate 2 in any desirable manner. The supporting-standard 4 is further provided a suitable distance from its lower end with a collar or band 5, to which is connected the upper end of a series of stay-rods 6. Each of the latter is formed in two sections connected together by the turnbuckle 7 for increasing the tension thereof and secured at their lower end to the cross-ties 1, as at 8.

Mounted upon and secured to the upper end of the standard 4 is an L-shaped connecting-piece or coupling 9, having its free end flattened, as at 10. The flattened end 10 of the coupling 9 is formed with an elongated rectangular opening 11 and a vertically-extending opening 12. The latter is arranged adjacent to the inner end of the opening 11 and near the inner end of the flattened portion 10 of the coupling 9. Extending within the opening 11, as well as being pivoted therein by means of the pin 13, the latter arranged a suitable distance from the inner end of the opening 11, is the flattened inner end 14 of the upper suspending-arm 15. The arm 15 carries on its free or outer end a coil-spring 16, having its free end extending upwardly, as at 16^a, upon which the ring or strap 16^b of the pouch 17 is supported when the pouch is adapted to be suspended from the hanger.

Rigidly secured to the standard 4 in any desirable manner and at a suitable distance below the coupling 9 is a collar or band 18, which has connected thereto or formed integral therewith the connecting-piece 19, of inverted-U-shaped formation, so that the piece

will have an open bottom and closed top. The piece 19 is provided near its inner end with a pair of downwardly-extending ears 20 and between the ears 20 and the outer end of the plate with a vertically-extending opening 21. Extending through the ears 20 is a pin 22 for pivotally connecting the inner end 23 of the lower suspending-arm 24 within the connecting-piece 19. The free or outer end 10 of the arm 24 carries a coil-spring 25, having its free end extending downwardly, as at 25^a, on which the ring or strap 26 of the pouch 17 is mounted when the pouch is adapted to be suspended from the hanger.

15 Operating through the openings 12 and 21 is a vertically-extending rod 27, provided with a stop-pin 27^a to limit the movement of the said rod 27. To the latter is pivoted, as at 28, the lower end of the supporting-rod 29, the latter adapted to extend at an inclination when the hangers are supporting the pouch, as shown in Fig. 1, and is pivotally connected at its upper end, as at 30, to the upper suspending-arm 15. The function of the stop-pin 27^a is to limit the upward movement of the rod 27 when the hanger is set by the operator to suspend the pouch 17. When the crane and hanger are in the position shown in Fig. 1, the lower end of the rod 27 rests 30 upon the inner end of the suspending-arm 24, supporting thereby the rod 29, and when the crane and hanger are in the position shown in Fig. 2 the rod 27 extends through the piece 19. When the crane and hanger are in the position as shown in Fig. 1, the rod 29 supports the rod 15 in a horizontal position, as well as forming the necessary connection and support to cause the suspension of the arm 24 in a horizontal position.

40 The operation of the device is as follows: Assuming that the pouch 17 has been attached to the arms 15 and 24 in the manner as shown in Fig. 1—that is, the rings or straps of the pouch being mounted upon the ends of the springs carried by the arms 15 and 24—when the pouch 17 is removed by the catcher it will cause the arm 24 to automatically fall from the horizontal position shown in Fig. 2 and at the same time release the rod 27, so that 50 it will pass through the opening 21, drawing rod 29 therewith, as well as the arm 15, and cause the latter to assume the vertical position shown in Fig. 2. When collapsed, the parts are in a very compact condition and will in no manner extend outwardly, so as to be engaged by the moving train.

It will be evident that by providing the ends of the arms 15 and 24 with the coil-springs 16 and 25 for connecting the pouch 60 to the arms that when the pouch is engaged by the catcher the springs will not only swing down, but at the same time sidewise, so as to allow the pouch to slip off easily from the ends of the springs, and consequently no resistance to the release of the pouch is met 65 with, and while the pouch is held firmly in its proper position there is no definite resist-

ance when the center of the pouch is grasped by the catcher. This arrangement not only prevents resistance when releasing the pouch, 70 but will also prevent the tearing of the pouch or the breaking off of the straps or rings of the pouch, for the reason that the pouch will be readily and easily released from the springs when engaged by the catcher. 75

It is thought the many advantages of my improved mail crane and hanger can be readily understood from the foregoing description, and it will also be evident that I have devised a simple, novel, and inexpensive mail 80 crane and hanger, and while the structural embodiment of the invention as herein disclosed is what I at the present time consider the preferable one it is evident that minor changes, variations, and modifications may 85 be resorted to without departing from the spirit of the invention or sacrificing any of its advantages, and I therefore do not wish to restrict myself to the details of construction hereinbefore described and as shown in 90 the accompanying drawings, but reserve the right to make such minor changes, variations, and modifications which come properly within the scope of the protection prayed.

Having thus described my invention, what 95 I claim as new, and desire to secure by Letters Patent, is—

1. In a mail crane and hanger, a standard, a pair of suspending-arms pivoted therewith, a coil-spring connected to the free end of each 100 of said arms, a vertically-movable rod, and a rod connected to the said vertically-movable rod and to one of said suspending-arms.

2. In a mail crane and hanger, a standard, a pair of suspending-arms, a coil-spring connected to one end of each of said arms, means 105 for pivotally connecting the other end of the said arms with said standard, a vertically-movable rod operating through said connecting means, and a rod pivoted to the said vertically-movable rod and to one of the said suspending-arms. 110

3. In a mail crane or hanger, a base, a standard, means for connecting the standard to the base, an upper suspending-arm, a spring 115 connected to one end thereof, a lower suspending-arm, a spring connected to one end thereof, means for pivotally connecting the upper arm to the top of said standard, said connecting means provided with an opening, 120 a lower suspending-arm, a spring connected to one end thereof, means for pivotally connecting said lower suspending-arm with the said standard, said connecting means provided with an opening, a vertically-mov- 125 able rod operating through the said openings, and a rod pivotally connected to the vertically-movable rod and to the upper suspending-arm.

4. In a mail crane and hanger, a standard, 130 a pair of suspending-arms pivotally connected therewith, a coil-spring connected to the free end of each of said arms, and means for supporting said arms in a horizontal manner.

5. In a mail crane and hanger, a standard, a pair of arms, means for pivotally connecting the said arms with said standard, a spring connected to the free end of each of said arms, and means operating through the said connecting means and connected with one of the said arms for supporting the arms in a horizontal position.

6. In a mail crane and hanger, a standard, an upper suspending-arm, a spring connected to one end thereof, a coupling mounted upon the top of said standard and provided with a vertically-extending opening and an elongated opening adapted to receive one end of said arm, means for pivotally connecting the said arm and the said elongated opening, a connecting-piece secured to said standard and provided with a vertically-extending opening, a lower suspending-arm adapted to extend in the said connecting-piece, means for pivotally connecting the said lower arm to said connecting-piece, a spring connected to the free end of said lower suspending-arm, a vertically-extending rod movable through the said openings of the coupling and connecting-piece, and a rod pivoted to the vertically-extending rod and to the upper suspending-arm, substantially as herein shown and described.

7. In a mail crane and hanger, a standard, an upper suspending-arm, a lower suspending-arm, a coil-spring connected to each of the said arms and adapted to engage a mail-pouch, means for pivotally connecting the upper arm with said standard, means for pivotally connecting the lower arm with said standard, each of said connecting means provided with an opening, and means extending through said openings and connected with the upper arm for supporting the said arms in a horizontal position when the said springs engage the mail-pouch.

8. In a mail crane and hanger, a pair of arms, a standard, means for pivotally connecting the arms with the standard, a vertically-movable rod extending through the said connecting means, and a rod connected to the said vertically-movable rod and to one of said arms.

9. In a mail crane and hanger, a standard, an upper suspending-arm, means for pivotally connecting said arm with the said standard, said means provided with an opening, a lower suspending-arm, means for pivotally connecting the said lower arm to the said standard, said means provided with an opening, and means extending through the opening and pivotally connected with the said upper arm for supporting the same in a horizontal position when the said arms suspend a mail-pouch.

10. In a mail crane and hanger, a standard, an upper suspending-arm, means for pivotally connecting the said arm with the said standard, said means provided with an opening, a lower suspending-arm, means for pivotally connecting the said lower arm to the said standard, said means provided with an opening, a vertically-movable rod extending through the said opening, a stop carried by said rod, and a rod pivotally connected to the said vertically-movable rod and to the upper suspending-arm, substantially as shown and described and for the purpose set forth.

11. In a mail crane and hanger, a standard, an upper suspending-arm, means for pivotally connecting the said arm with the said standard, said means provided with an opening, a lower suspending-arm, means for pivotally connecting the said lower arm to the said standard, said means provided with an opening, a vertically-movable rod extending through the said openings, a stop carried by said rod, a rod pivotally connected to the said vertically-movable rod and to the upper suspending-arm, a coil-spring connected to the free end of the upper arm, and a coil-spring connected to the free end of the lower arm, substantially as herein shown and described and for the purpose set forth.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

LEWIS W. BARKER.

Witnesses:

A. P. BARKER,
FRANK W. ELLIS.