No. 686,933. Patented Nov. 19, 1901.

B. CHAMBERLAIN.

MAIL BAG CATCHER AND DELIVERER.

(Application filed Jan. 11, 1901.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.

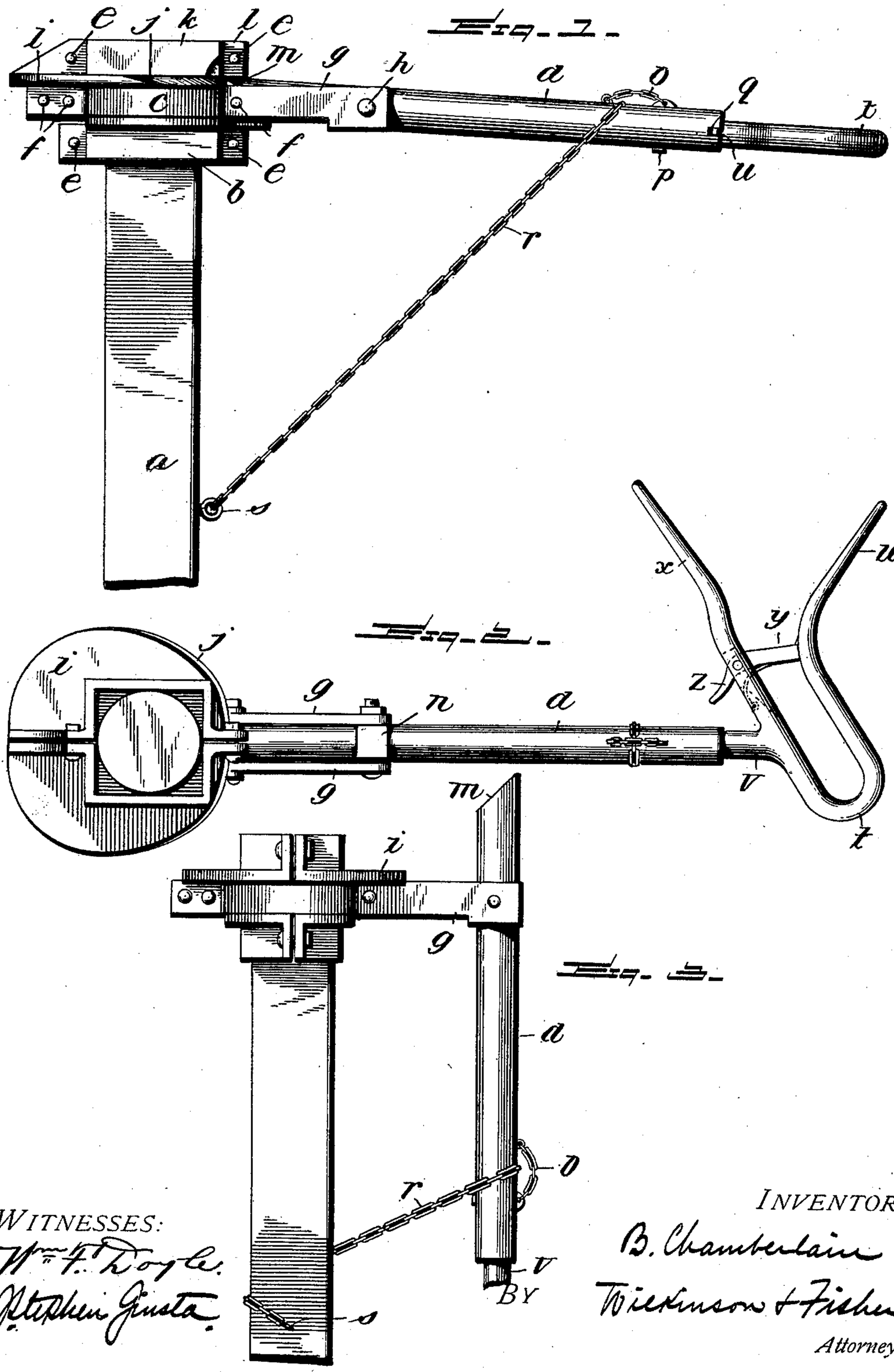

Fig. 2.

Fig. 3.

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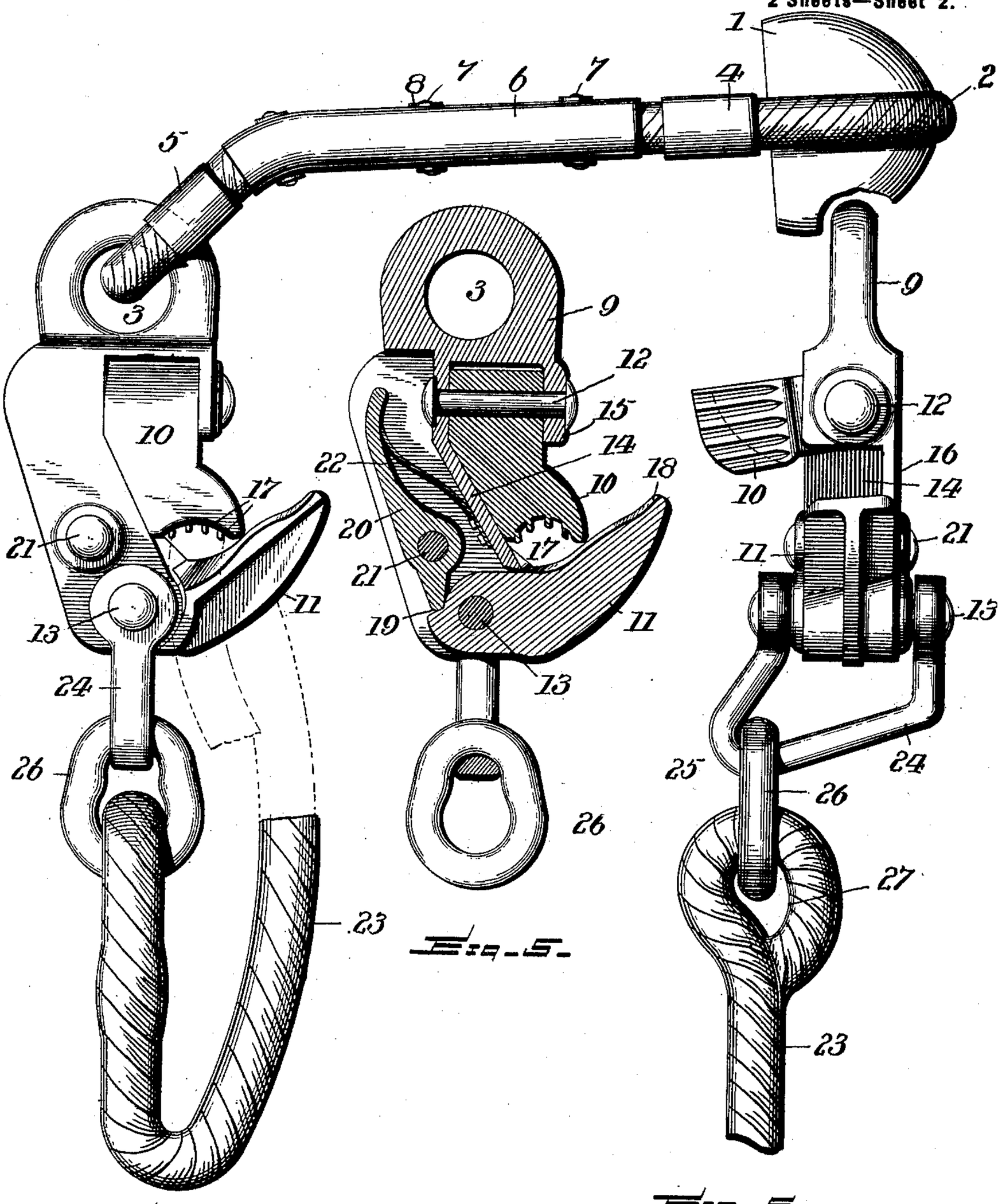

Fig. 4.

Fig. 5.

Fig. 6.

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UNITED STATES PATENT OFFICE.

BLANCHARD CHAMBERLAIN, OF BELLEFONTAINE, OHIO.

MAIL-BAG CATCHER AND DELIVERER.

SPECIFICATION forming part of Letters Patent No. 686,933, dated November 19, 1901.

Application filed January 11, 1901. Serial No. 42,899. (No model.)

To all whom it may concern:

Be it known that I, BLANCHARD CHAMBERLAIN, a citizen of the United States, residing at Bellefontaine, in the county of Logan and State of Ohio, have invented certain new and useful Improvements in Mail Catchers and Deliverers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in mail catchers and deliverers; and it consists in the construction and combinations of parts as hereinafter described and claimed.

In the accompanying drawings, Figure 1 represents a side view of my improved device. Fig. 2 is a top view of the same. Fig. 3 is a side view of the same with the hook broken away, showing the catcher in the position it assumes after a mail bag or pouch has been caught or delivered. Fig. 4 is a side view of the sling. Fig. 5 is a cross-section of a part of said sling, and Fig. 6 is an end view of part of said sling.

a represents the usual supporting-post, which is placed at the side of the railway-track. This post is shown square; but it is preferably provided with a smaller cylindrical portion near its top. Just below this cylindrical portion is mounted the stationary support *b*, which is usually made of iron and in two halves, united together around the post *a* by bolts or pins *e*. The lower part of the support *b* is rectangular and the upper part cylindrical for the reception of the revoluble annular iron holder *c* of the catcher-arm *d*. This holder is usually made in two halves, which are united together by pins or bolts *f* and encircles the cylindrical part of the support *b*. The holder *c* revolves freely around the cylindrical part of the support *b*. Each half of the holder *b* is provided with an extension *g*, between which the catcher-arm *d* is free to move up and down, being pivoted therebetween on the bolt *h*. Above the holder *c* the support *b* is enlarged, each half of said support terminating in a large flat cam-plate *i*, having a cam-surface *j* and a vertical rib *k*. This plate *i* keeps the holder *c* always horizontal no matter how far said holder may be rotated about the support *b*. Each of the ribs *k* has a projecting portion *l*.

The catcher-arm *d* is preferably a hollow iron tube with its inner end—that is, the end next the post—beveled off, as shown at *m*. This beveled end is closed by a wooden plug, beveled off to correspond to the shape of the inner end of the arm *d*. This plug is soaked in hot oil and then driven into the end of the arm *d*, this soaking in oil serving the double purpose of excluding water or moisture from the arm *d*, especially when the latter is in the position shown in Fig. 3, and of supplying a lubricant to the pin *h*. The arm *d* has a squared portion *n*, through which the pin or pivot *h* runs, enabling the extensions *g* to properly guide said arm as it swings up and down. A small rope or chain *o*, carrying a key *p*, is attached to said arm *d*, which is perforated for the reception of said key. The outer end of the arm *d* is provided with oppositely-located slots *q*. A cable or chain *r* runs from a hook *s* on the post *a* around the arm *d*, the upper end of said chain or cable *r* being prevented from undue slipping on said arm by the chain *o*, especially when the arm *d* is in its proper position, as shown in Fig. 1.

The catcher-hook is provided with two diverging arms *x* and *w*, which serve to catch the sling and guide it to the pocket or corner *t*, in which it is securely held. This hook has a substantially cylindrical portion *v*, which is adapted to be slipped into the outer end of the catcher-arm *d*. This cylindrical portion of the hook is provided with oppositely-located lugs *u*, (formed by driving a pin through the part *v* and welding it there,) which are adapted to fit into the slots *q*, rendering it possible to swing the hook over, so that it will face the opposite way by slightly withdrawing the hook, turning it over, and pushing it back. The portion *v* is also perforated for the reception of the pin *p*, which pin, together with the lugs *u*, hold the hook and catcher-arm firmly in engagement with each other. A spring-pressed key *y*, provided with a thumb-piece or handle *z*, is located in the arm *x*, which is slotted for this purpose, the spring normally holding the key in the position shown in Fig. 2, but yet permitting it to yield

when struck by the sling of the mail-pouch, after which the key is forced back into its normal position by the spring.

The sling, which forms an important part of my invention, is shown in Figs. 4, 5, and 6. The upper part of the sling is a knob 1, preferably of wood, approximately hemispherical in shape and provided with a groove in which is located a loop of a doubled rope 2, the other loop passing through the eye 3 of the clamp. Metal tubes 4 and 5 encircle the parts of this rope near the knob or ball 1 and the eye 3, and a longer flattened metal or leather tube 6 extends nearly the whole distance between said tubes, and the two strands of the rope are secured in the tube 6, bolts 7, provided with washers 8, serving to firmly secure said rope and tube together.

The clamp consists of three members 9, 10, and 11, the latter two of which are pivoted on the member 9 by means of the pivot-pins 12 and 13, which run at right angles to each other. The pivot-pin 12 passes through the central rib 14 and the shorter side rib 15. The member 10, therefore, can swing freely through an arc of ninety degrees in one direction, as shown in Fig. 6, but is prevented from swinging beyond the perpendicular position on its return by the casing 16 of the member 9. The lower part of the member 10 is curved in two directions, as shown in Figs. 5 and 6, and is provided with teeth 17 to enable it to firmly grip the rope, as shown in dotted lines in Fig. 4. The upper face 18 of the member 11 is inclined slightly from the horizontal, as shown in Fig. 6. This member 11 has a depression 19 in its rear, into which fits the point of a thumb-piece 20, supported on a pivot-pin 21 and normally held by a spring 22 in engagement with a depression 19 on the member 11. The thumb-piece 20 when in engagement with member 11 holds it normally in a substantially horizontal position, as shown in Figs. 4 and 5, in which position the two members 10 and 11 are designed to bite or grip a rope 23, (see Fig. 4,) which rope is designed to be passed around a mail-pouch and is of sufficient length to encircle any of the mail-pouches in use. When it is desired to release the pouch, the thumb-piece 20 is pressed and the member 11 drops, thus setting free the rope 23 and the mail-pouch inclosed thereby. The pivot-pin 13 is extended beyond the sides of the member 11 and on this pin is carried a swinging link 24 of the peculiar shape shown in Fig. 6—that is to say, the lower side of the link slopes downward and terminates in a depression 25. In this depression 25 is pivoted an ordinary link 26, which engages a loop 27 in the rope 23. The reason for the peculiar shape of the link 24 is that it is desirable to have the link 26 always occupy one position relatively to the clamp, and this is accomplished by the peculiar shape of the link already described.

The operation of my device is as follows: In receiving a mail-pouch from a train the rope 23 is doubled around the pouch and the end of said rope is drawn up between the members 10 and 11. Any pull upon the rope after it has once been adjusted between these two members simply tightens it on account of the teeth and the peculiar shape and arrangement already described. The mail-pouch and sling are then hung up upon a hook, the knob or ball 1 serving to hold the whole in their proper positions relatively to the catching device. The sling carrying the mail-pouch hangs down vertically from the delivery-hook on the car and is so arranged that the ball or knob 1 is some little distance above the arms *w* and *x* of the catcher-hook. As the train moves along the diverging arms of the catcher-hook come upon either side of the sling, preferably about the metal or leather part 6 thereof. This part strikes the key *y*, which yields and permits the sling to pass it, immediately springing back, however, into position after the sling has passed it. The distance between the rear part of the arms *x w*, which, as shown in the drawings, are for some distance nearly parallel with each other, is great enough to allow the free passage of the part 6, but not to permit the passage of the ball or knob 1. Consequently when the part 6 strikes the rear part of the catcher-hook the sling is thus disengaged from the delivery-hook and falls, the knob 1, however, preventing it from falling through the catcher-hook. The shock of the sling striking the catcher-hook causes said hook and the catcher-arm which carries it and the holder *c* to rotate in a substantially horizontal plane. As soon as the end of the arm *d* passes beyond the projecting portion *l* of the rib *k* the weight of the arm and pouch would naturally cause the arm and hook to fall into the position shown in Fig. 3. To insure positive action, however, and to make it inevitable that the arm *d* must fall I, have provided the cam-plate *i* with the cam-surface *j*. This cam-surface, catching under the inclined beveled portion *m* of the catcher-arm *d*, throws this end up, causing the catcher-arm to fall. Moreover, the chain or cable *r* as the arm revolves around the post *a* prevents the arm *d*, with the catcher-hook and mail-pouch carried thereby, from swinging around too far. When, therefore, the catcher-hook is struck by the sling it is swung to one side and simultaneously dropped into a substantially vertical position. This of course draws it away from the train, thus preventing accidents either to the pouch or to the train. My improvement may also be used for delivering a pouch to a train by turning the hook in the opposite direction and allowing the sling to be supported by said hook, the ball being supported by the arms *x w* thereof. Of course the catching device, which is located on the moving train, must be so adjusted as to strike the sling below the knob or ball 1.

It is obvious that many changes might be made without departing from the spirit of my invention, and I wish it to be expressly un-

derstood that I do not limit myself to the exact details shown and described.

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

1. In a mail catcher and deliverer, the combination of a hollow catcher-arm provided with slots, a catcher-hook provided with lugs fitting in said slots, means for fastening said arm and hook together and a support for said arm.

2. In a mail catcher and deliverer, the combination of a support having a cylindrical portion, an annular holder fitting around said support, said holder being provided with extensions, a beveled-ended catcher-arm pivoted in said extensions and a catcher-hook carried by said arm, said support having means thereon to positively force said arm down after its release.

3. In a mail catcher and deliverer, the combination of a support having a cylindrical portion, an annular, revoluble holder, fitting around said cylindrical portion and having extensions, a catcher-arm, having its inner end beveled off, pivoted in said extensions, and a catcher-hook fastened to said arm, said support being provided with means for holding said catcher-arm in a substantially horizontal position, and with means to positively force said arm down after its release.

4. In a mail catcher and deliverer, the combination of a post, a support thereon, a holder carried by said support and revoluble thereon, a catcher-arm pivoted upon said holder, a catcher-hook carried by said arm and a flexible connection between said post and said arm.

5. In a mail catcher and deliverer, the combination of a supporting-post, a catcher-arm revoluble around said post, a catcher-hook pivotally mounted on said arm and a flexible connection between said arm and said post, said connection serving to limit the distance said arm may revolve around said post.

6. In a mail catcher and deliverer, the combination of a post, a catcher-arm revoluble around said post, a chain or cable connected to said post at one end and looped around said arm at the other end, and means for limiting the movement of the loop in said chain along said arm.

7. In a mail catcher and deliverer, the combination of a support, having a cam-face, and a catcher-arm revoluble around said support and provided with a beveled end.

8. In a mail catcher and deliverer, the combination of a support provided with a cam-face and extensions, a holder revoluble about said support and a catcher-arm with a beveled end pivotally carried by said holder.

9. In a mail catcher and deliverer, the combination of a support, provided with a cylindrical portion, a cam-face and projecting ribs, an annular holder engaging said cylindrical portion and adapted to revolve around it, said holder being provided with parallel extensions, a catcher-arm, provided with a beveled end, pivoted between said extensions, and a catcher-hook secured to said arm.

10. In a mail catcher and deliverer, the combination of a post, a support thereon, having a cylindrical portion, a flat plate provided with a cam-face and projecting ribs on said plate, an annular holder engaging said cylindrical portion and having parallel extensions and a catcher-arm having a squared portion and a beveled end, said arm being pivoted between the extensions of said holder.

11. In a mail catcher and deliverer, the combination of a post, a support thereon having a square base, a cylindrical portion above said base, and a flat plate, provided with a cam-face and with projecting ribs, above said cylindrical portion, an annular holder, provided with parallel extensions, mounted on said support, a catcher-arm provided with a squared portion, a beveled end and slots, a chain and key attached to said arm, a catcher-hook, comprising a cylindrical portion provided with lugs, diverging arms and a spring-pressed key, and a chain or cable connected to said post and passing around said arm.

12. In a mail catcher and deliverer, a support consisting of a base portion, a cylindrical portion above said base portion, and a flat plate provided with a cam-face and with an extension.

13. In a mail catcher and deliverer, a support, made in two symmetrical parts united together, said support consisting of a base portion, a cylindrical portion above said base portion and a flat plate above said cylindrical portion, said plate being provided with a cam-face and with ribs extending out beyond said face.

14. In a mail catcher and deliverer, a hollow catcher-arm beveled off at one end and provided with slots at the other end, said arm being perforated and provided with a squared portion.

15. In a mail catcher and deliverer, a hollow catcher-arm, beveled off at one end, which end is closed by an oil-soaked plug, said arm being provided with slots at the other end, with perforations between the ends, with a squared portion and with a chain and key attached thereto.

16. In a mail catcher and deliverer, a sling comprising a knob, a clamp connected thereto consisting of a fixed portion and two members pivoted thereto, one of said members being freely movable on the fixed portion and the other of said members being movably held in coöperative relation to said first member, and a rope supported by said clamp.

17. In a mail catcher and deliverer, a sling comprising a knob, a clamp connected thereto, said clamp comprising a fixed portion, two movable members pivoted thereon and a pivoted spring-pressed thumb-piece for engagement with one of said members, a link on said clamp and a rope attached to said link.

18. In a mail catcher and deliverer, a sling

consisting of a knob, a clamp, a rope connecting said knob and clamp, a link, with one side longer than the other, pivoted on said clamp, and a rope carried at one end by said link.

19. In a sling for a mail catcher and deliverer, a clamp consisting of a main member, two members pivoted therein and adapted to conjointly grip the supporting-rope, one of said pivoted members being freely movable, and a spring-pressed thumb-piece engaging the other of said pivoted members.

20. In a sling for mail catchers and deliverers, a clamp consisting of a main member, a toothed member pivoted thereon and freely movable thereon, a second member pivoted on said main member and means for detachably holding said second-named pivoted member in operative relation to said first-named pivoted member.

21. In a sling for mail catchers and deliverers, a clamp composed of a main member, a toothed member pivoted thereon and freely movable, said toothed member being provided with a curved face, a second member pivoted on said main member at right angles to said first-named pivoted member, said last-named member being provided with an inclined face and with a depression, a thumb-piece engaging in said depression and a spring attached to said main member and bearing against said thumb-piece.

In testimony whereof I affix my signature in presence of two witnesses.

BLANCHARD CHAMBERLAIN.

Witnesses:
ROBERT DOW,
M. R. BROWN.