

No. 763,316.

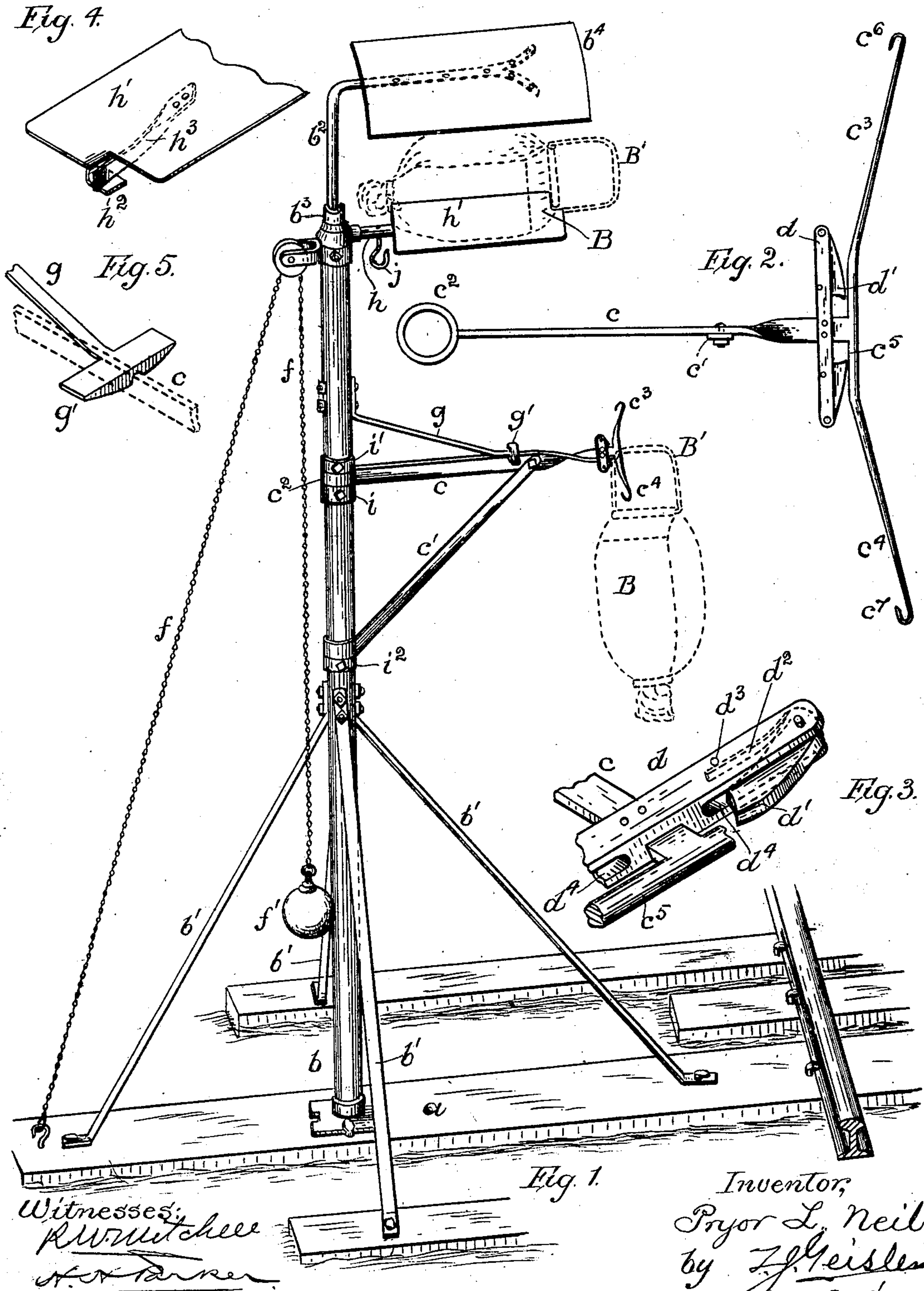
PATENTED JUNE 21, 1904.

P. L. NEIL.
MAIL BAG CATCHING AND DELIVERING DEVICE.

APPLICATION FILED DEC. 1, 1902.

NO MODEL.

2 SHEETS—SHEET 1.



No. 763,316.

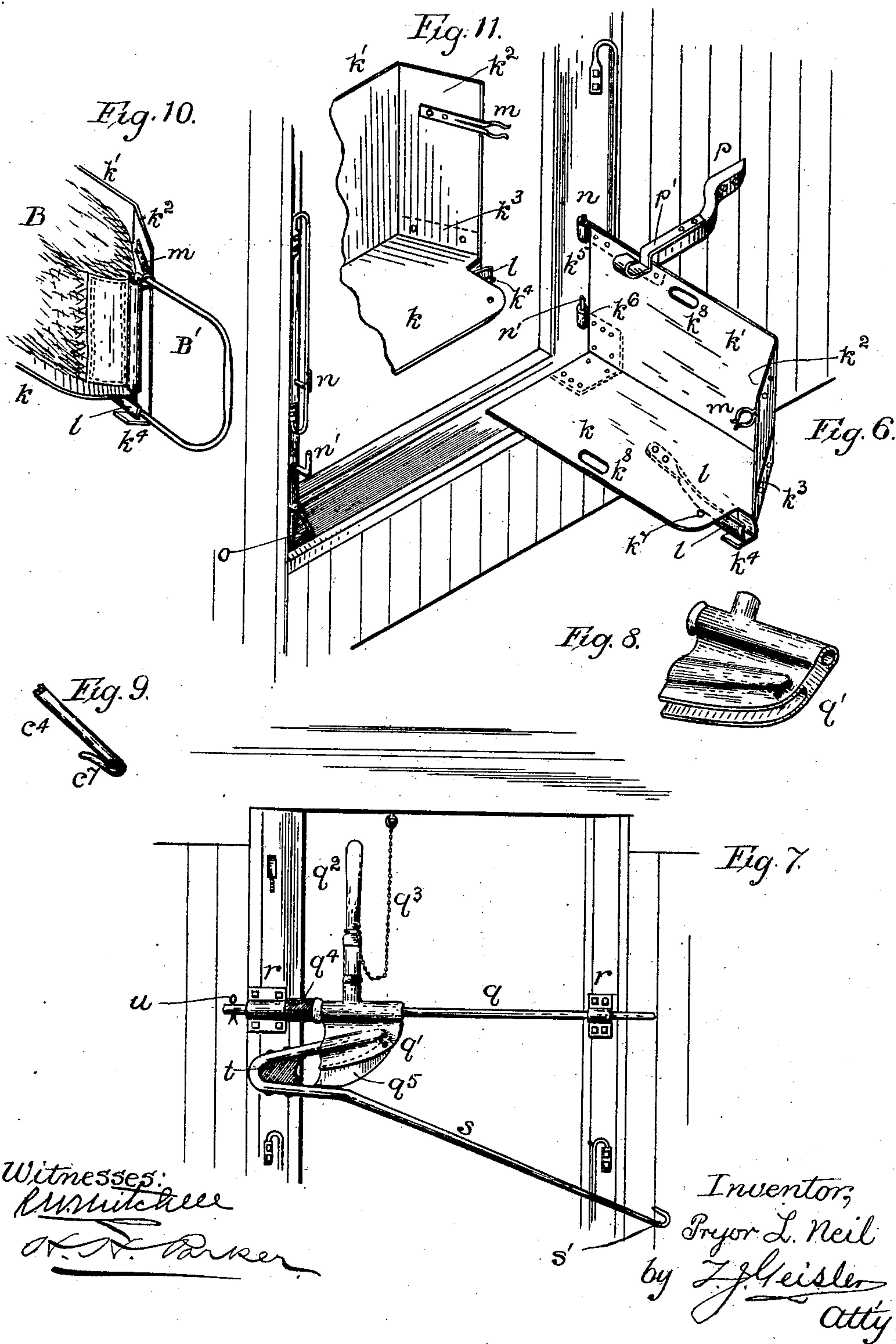
PATENTED JUNE 21, 1904.

P. L. NEIL.
MAIL BAG CATCHING AND DELIVERING DEVICE.

APPLICATION FILED DEC. 1, 1902.

NO MODEL.

2 SHEETS—SHEET 2.



UNITED STATES PATENT OFFICE.

PRYOR L. NEIL, OF BOISE, IDAHO.

MAIL-BAG CATCHING AND DELIVERING DEVICE.

SPECIFICATION forming part of Letters Patent No. 763,316, dated June 21, 1904.

Application filed December 1, 1902. Serial No. 133,506. (No model.)

To all whom it may concern:

Be it known that I, PRYOR L. NEIL, a citizen of the United States, and a resident of Boise, in the county of Ada, State of Idaho, have invented a new and useful Improvement in Mail-Bag Catching and Delivering Devices, of which the following is a specification, reference being had to the accompanying drawings as a part thereof.

My invention relates to means for delivering and catching from a traveling train mail-bags of the class for which I heretofore made application for Letters Patent, filed June 13, 1902, Serial No. 111,563; and my invention has for its object the providing of practical and simple contrivances for the purposes mentioned. The construction and operation of such devices are fully described and illustrated in the drawings above referred to.

In such drawings, Figure 1 shows perspective one of my cranes to be located at a railway-station and operating to both deliver and catch a mail-bag as a train passes. Fig. 2 is a plan, on a larger scale, of the swiveling catcher *c*. Fig. 3 is a detail, perspective shown, of such catcher. Fig. 4 is a partial detail in perspective of the delivery-tray *h'*. Fig. 5 is a detail of the stop *g'* or means for alining the catcher *C* in proper position. Fig. 6 shows perspective a partial side door of a mail-car, illustrating the disposition of the tray for supporting the mail-bag to be delivered. Fig. 7 is an elevation of the upper part of a like door of the mail-car and shows the catcher-arm in place. Fig. 8 is a detail of such catcher. Fig. 9 is a detail of the hooked extremity of the catcher-arm. Fig. 10 is a partial detail of the tray *h'* and illustrates more particularly the operation of the means provided on the tray for holding the ring of the mail-bag in position for delivery, and Fig. 11 is another perspective detail of said tray.

The letters designate the parts referred to.

There are two devices comprised in my invention operating simultaneously, one device delivering and the other catching the mail-bag at a station while the train is in motion. The details of construction of these devices vary somewhat, according to whether consti-

tuting part of the equipment of the mail-car or of the crane at the station, but their mode of operation is substantially the same.

The devices of the crane consist of a tubular post *b*, spiked to cross-tie *a* and braced by rods *b'*. At the upper end of the post is secured an arm *b²* by means of a reducing-coupling *b³*. The arm *b²* supports a shed or roof *b⁴*, the function of which is to cover and protect against rain or snow the mail-bag *B* when placed on the flat tray *h'*. The latter is rigidly supported by a horizontal arm *h*. It is designed to support a mail-bag of the particular type invented by me, such bag being provided at the bottom with a socket holding an endwise-movable D-ring *B'*, and to hold such ring in upright position ready for the catcher-arm of the mail-car the tray is provided with an angular portion *h²* and a clamping-spring *h³*, the same operating as described in my said previous application for Letters Patent and illustrated herein in Figs. 4 and 10. Below the tray is secured the swiveling catcher *C*. Such device consists of an arm and brace *C'*, respectively, provided with eyes *C²*, inserted on the post *b* and held in position by set-screws *i i' i²*. At the extremity of the arm *C* is an integral cross-piece *C⁵*, having projecting members *C³ C⁴*. There is further a cross-piece *d*, the extremities of which have recesses *d¹*, and herein are pivoted the keepers *d'*, controlled by springs *d²*, the free ends of which springs bear against pins *d³*. All this is illustrated in the detail Fig. 3. The inner faces of said spring-keepers *d'* are concaved and slope back so as to more securely lock the ring *B'* of the mail-bag in place. The extremities *c⁶ c⁷* of the members *c³ c⁴* are turned back and also slightly up to provide hooks, operating to hold the ring of the mail-bag from slipping off catcher in case the speed of the train should not have been sufficient to drive such ring past the keeper *d*. A detail of this construction is shown in Fig. 9. Either one of the members *c³ c⁴*, according to the direction of the train, enters the eye of the ring of the mail-bag lying on the tray *K*, projecting from the doorway of the mail-car. The impact of the ring *B'* of the mail-bag with the catcher-arm *C* causes the latter to swirl around until

stopped by striking against the chain f , held taut by a weight f' . The catch-arm C is alined in proper position by means of the rigid guide-arm g , having at its end a transverse grooved and beveled bar g' , operating as shown in Fig. 5. The hook j is provided to suspend a lantern at night-time.

The mail-car is also provided with devices for catching and delivering a mail-bag the devices for delivering the mail-bag consisting of a removably-hinged tray made of sheet metal, (shown in Fig. 6,) comprising a flat bottom h and wind-guard h' h^2 , the portion h^2 being formed at an angle to more effectually deflect the air-current striking the tray. In constructing such tray the front end of the bottom h is cut with a projecting lip h^3 , which is turned up and riveted to the angle portion h^2 , bracing the same. The tray is provided with hinge-knuckles h^5 h^6 , by which the tray is supported from hinge-pins n n' , inserted in both sides of the door-casing. Hand-holes h^3 are provided for conveniently handling the tray. Two trays of the style described are required to be used with each car, the trays being adapted for travel in opposite directions. The hinge h^6 is constructed to serve also as a stiffening for the corner of the tray. Until the train is about to arrive at the station where the mail-bag is to be delivered the tray is turned in parallel to the door-casing and secured in such place by a hook O, inserted in hole h^7 . To hold the ring B' of the mail-bag B in upright position for the catcher-arm C of the crane, said tray is provided with the usual angular portion h^4 and clamping-spring l and with an auxiliary clamping-spring m (see Fig. 11,) the combined actions of such clamping devices holding the ring B, as shown in Fig. 10.

To hold the tray extended in position for delivering the mail-bag B on the catcher-arm C of the crane, there is secured to the outside of the car an arm p , having a spring-latch p , operating as shown in Fig. 6.

The catcher-arm of the mail-car consists of a rod q , a casting q' , and arm s , welded together. The catcher-arm is pivoted to the door-casing by hinge-plates r r' and is secured by key u , and it is provided with a handle q^3 to lift the catcher-arm in position to pick up the mail-bag on the tray h of the crane, the proper position of the arm s being determined by a stop-chain q^3 . The elastic bumpers q^4 and t are provided to reduce the force of the impact with the ring B of the mail-bag when caught. The catcher also has a spring-controlled keeper q^5 , functioning like keepers d' of the catcher of the crane. The extremity of the arm s has a hook $3'$ for the purpose specified with respect to like hooks on the extremities of the members c^3 and c^4 , Fig. 3.

Now what I claim is—

65 1. A catching and delivering device for

mail-bags of the class specified, consisting of a tray or table, on which to support the mail-bag to be delivered; means on the tray for removably holding the ring of the mail-bag in upright position; and a catcher, comprising a pivoted slanting arm, adapted to enter the eye of the ring B of the mail-bag, and a spring-controlled keeper, for holding said ring against slipping off the arm again, substantially as described.

2. A catching and delivering crane for mail-bags of the class specified, consisting of a post, a projecting rigid tray or table; means on the tray for removably holding the ring B' of the mail-bag in upright position; a roof projecting from the post and covering said tray; a swiveling projecting catcher below the tray and consisting of a swiveling arm c ; members c^3 c^4 , having hooked extremities and spring-controlled keepers d' ; and a means for alining the swiveling catcher in catching position, substantially as described.

3. A catching and delivering crane, for mail-bags of the class specified, consisting of a post, a projecting rigid tray or table h' provided with means for removably holding the ring B' of the mail-bag in upright position; a roof h^4 covering said tray; a swiveling catcher-arm C, comprising members c^3 c^4 having hooked extremities, and spring-controlled keepers d' , means for alining the swiveling catcher-arm in catching position, and means for breaking the rotary force of the catcher-arm, after having caught a mail-bag from a passing train, substantially as described.

4. The combination with a mail-car of a removably-hinged tray, for holding the mail-bag to be delivered, and tray, comprising a flat bottom, one side, and partial and adapted to encompass one side of and shield the mail-bag against the wind, and means for removably holding the ring B of the mail-bag in upright position; and a latch secured to the exterior of the car, for holding the tray extended from the car, substantially as described.

5. The combination with a mail-car of a removably-hinged tray for holding the mail-bag to be delivered, such tray comprising a bottom h , side h' and partial end h^2 , adapted to shield the mail-bag against the wind, angular portion h , spring-clamp l , and spring-clamp m ; and an arm p secured to the exterior of the car and provided with spring-latch p' for holding the tray extended from the car, substantially as described.

6. The combination with a mail-car, of a mail-bag catcher comprising a rod q , casting q' and arm s , welded together, the rod q being pivotally supported across the door-casing; a bumper q^4 ; a spring-controlled keeper q^5 ; the arm s having a hooked extremity for the purpose stated; a handle q^3 ; and means for determining the proper elevation of the arm s when projected to catch a mail-bag ly-

ing on the tray of the crane, substantially as set forth.

7. The combination with a mail-car, of a mail-bag catcher comprising a rod q , casting
5 q' and arm s , welded together, the rod q being pivotally supported across the door-casing; a bumper q^4 ; a spring-controlled keeper q^5 ; the arms having a hooked extremity for the purpose stated; a handle q^2 ; and a chain
10 q^3 , one end of which is attached to the door-casing and the other end being attached to

the handle q^2 , to limit the elevation of the arm s , when projected to catch a mail-bag, lying on the tray of a crane, substantially as set forth.

In testimony whereof I have hereunto affixed my signature, in the presence of two witnesses, this 2d day of October, 1902.

PRYOR L. NEIL.

Witnesses:

T. J. GEISLER,

R. W. MITCHELL.

15