W. O. MASSIE.

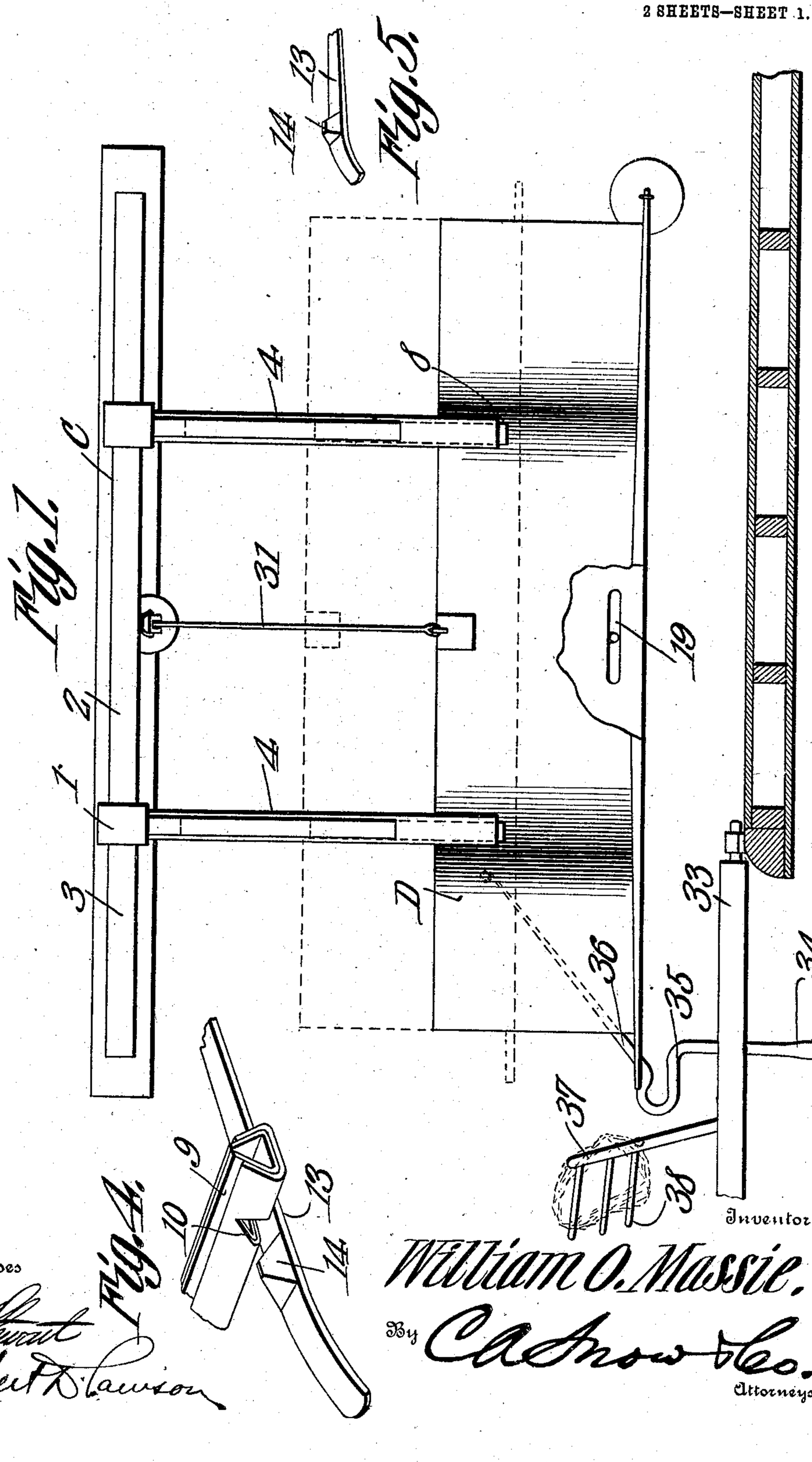
APPARATUS FOR DELIVERING AND RECEIVING MAIL.

APPLICATION FILED MAR. 30, 1909.

924,085.

Patented June 8, 1909.

2 SHEETS—SHEET 1.



Witnesses

E. F. Hallowell

Herbert D. Lawson

Inventor

William O. Massie.

By Cushman & Co.

Attorneys

W. O. MASSIE.

APPARATUS FOR DELIVERING AND RECEIVING MAIL.

APPLICATION FILED MAR. 30, 1909.

924,085. Patented June 8, 1909.

2 SHEETS—SHEET 2.

Fig. 2.

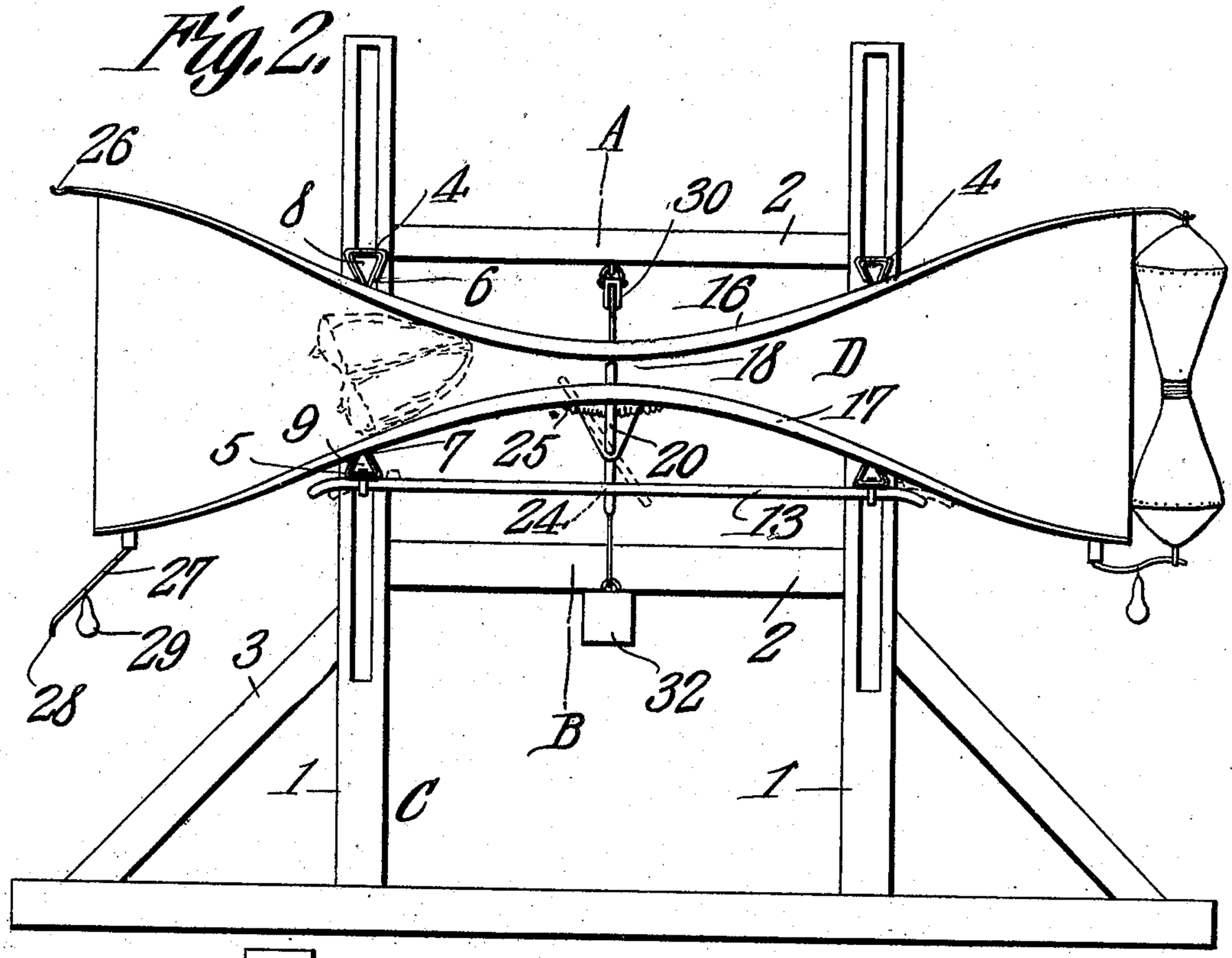
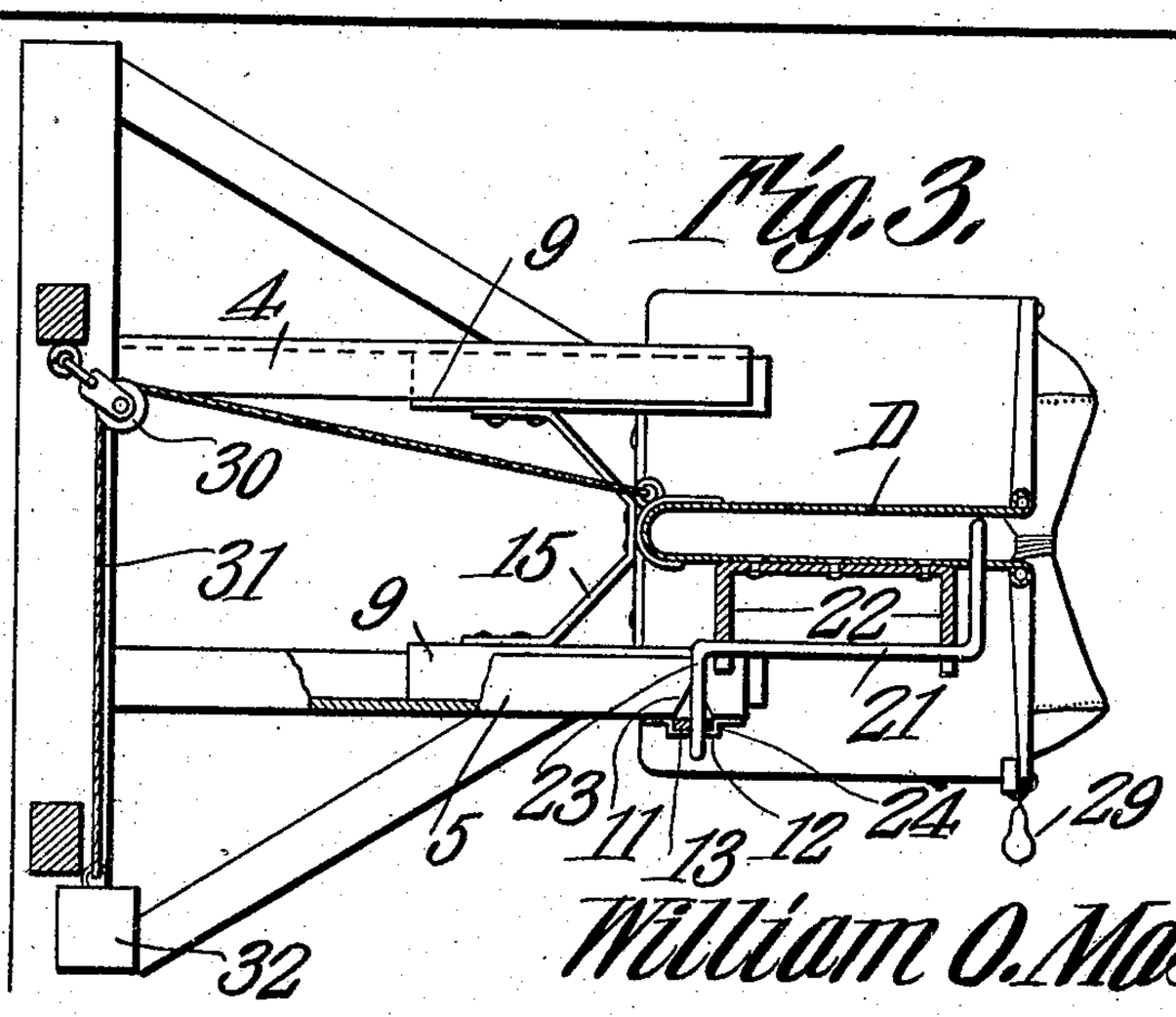


Fig. 3.



Witnesses

E. F. Holland

Herbert D. Lawson

Inventor

William O. Massie.

By Cachow & Co.

Attorneys

UNITED STATES PATENT OFFICE.

WILLIAM O. MASSIE, OF PUEBLO, COLORADO.

APPARATUS FOR DELIVERING AND RECEIVING MAIL.

No. 924,085. Specification of Letters Patent. Patented June 8, 1909.

Application filed March 30, 1909. Serial No. 486,656.

To all whom it may concern:

Be it known that I, WILLIAM O. MASSIE, a citizen of the United States, residing at Pueblo, in the county of Pueblo and State of Colorado, have invented a new and useful Apparatus for Delivering and Receiving Mail, of which the following is a specification.

This invention relates to apparatus for receiving and delivering mail and more especially to apparatus whereby the interchange of mail may be effected between stations and rapidly moving trains without danger of dropping the bags or injuring them or their contents.

One of the objects of the invention is to provide a receiver designed to be located along the track and to receive a bag from a car passing the same, means being provided whereby the receiver will be automatically shifted away from the car immediately subsequent to the interchange of mail.

A further object is to provide means whereby a bag may be held upon the receiver and in position to be engaged by a member carried by the car, said member operating to actuate the mechanism employed for shifting the receiver.

Another object of the invention is to provide apparatus of this character which is durable in construction and formed of but few parts.

With these and other objects in view the invention consists of certain novel details of construction and combinations of parts hereinafter more fully described and pointed out in the claims.

In the accompanying drawings the preferred form of the invention has been shown.

In said drawings—Figure 1 is a plan view of the complete apparatus, a portion of the top of the receiver being broken away and a portion of the car being shown in section, the position of the receiver when shifted away from the car being indicated by dotted lines. Fig. 2 is a front elevation of the receiver, one of the positions of the locking mechanism being indicated by dotted lines, and a sack being shown supported within the receiver ready for delivery to a car; the position assumed by a sack when deposited in the receiver being also indicated by dotted lines. Fig. 3 is a section on line A—B Fig. 2. Fig. 4 is a detail view of one of the lower slides. Fig. 5 is a perspective view of one end portion of the locking bar.

Referring to the figures by characters of reference C designates the supporting structure formed of wood or metal and consisting preferably of parallel standards 1 connected by cross members 2, said standards being provided with suitable braces 3 and each standard having upper and lower arms 4 and 5 respectively extending perpendicularly therefrom and in the direction of the track adjacent which the supporting structure is located. Each of the arms 4 and 5 is tubular, said arms being preferably triangular in cross section and the upper arm 4 being provided with a longitudinal slot 6 in the bottom portion thereof, while the lower arm 5 has a longitudinal slot 7 in the upper portion thereof. The two arms 4 are disposed in the same horizontal plane, and the same is also true of the lower arms 5, and mounted within each of the upper arms 4 is a slide 8 projecting downwardly through the slot 6. Slides 9 are mounted within the lower arms 5 and project upwardly through the slot 7, and each of these slides 9 has a notch 10 in its lower face designed to register with a notch 11 formed in the bottom portion of the arm 5 in which it is mounted. Guide straps 12 are secured to the lower faces of the arms 5 and extend under the notches 11, and mounted on these straps is a sliding bar 13 carrying locking heads 14 of any preferred form and which are normally seated within the notches 10 and 11 and thus hold the slides 9 within the outer end portions of the arms 5.

The upper and lower slides 8 and 9 are connected by means of cross heads 15 and secured to these cross heads and extending between the arms 4 and 5 is a receiver D of novel form. This receiver is in the shape of an elongated casing open at its ends and one side, the closed side of said casing being straight from end to end and the top and bottom of the casing being concaved in the direction of their length as indicated at 16 and 17, said top and bottom coming close together at the centers thereof to form a contracted neck 18, while the ends thereof are spaced apart distances greater than the length of the bags to be delivered to or received from the device. The bottom 17 of the casing D has a slot 19 in the center thereof adjacent the open side of the casing and movably mounted within this slot is an arm 20 extending upwardly from a rock shaft 21 which is journaled in hangers 22

extending downwardly from the bottom 17 of the casing. Another arm 23 extends downwardly from the other end of shaft 21 and projects loosely through an opening 24 formed in the middle portion of the sliding bar 13. Arm 20 normally extends vertically within the neck 18 and may be maintained normally in such position in any preferred manner, as by means of springs 25 connected thereto and to the bottom 17 of the casing. A hook 26 extends outwardly from the upper portion of each end of the casing D, and pivotally connected to the bottom portion of the casing at each end is a lever 27 having a hook 28 at its free end, there being a weight 29 for moving said lever 27 downwardly when the same is unsupported by a bag as shown at the right of Fig. 2. A sheave 30 is mounted upon the upper cross bar 2 of the supporting structure, and extending over this sheave is a chain or other flexible device 31, one end of which is secured to the middle portion of the casing D, while the other end has a weight 32 attached to it.

The mechanism used upon the car in connection with the receiver hereinbefore described consists of a rock-bar 33 having a handle 34 extending in one direction therefrom while a hooked arm 35 extends outwardly from said bar and is provided with the usual obliquely arranged bill 36. Another arm 37 extends outwardly from the bar 33 at a point back of the hooked member 35, and this arm 37 has tines or fingers 38 extending rearwardly therefrom and constituting a rest or support for a sack to be delivered to the casing D.

When it is desired to effect an interchange of mail by means of the apparatus herein described the sack to be delivered from the car is placed upon the fingers 38 and arm 37 and the hooked member 35 swung outwardly beyond the car so as to assume the position indicated in Fig. 1. The sack to be delivered to the car is suspended from the hook 26 located at that end of the casing D farthest removed from the approaching car, the lower end of the bag being engaged by the weighted lever 27. As the car passes the casing D the bill 36 of the hooked member 35 and the arm 37 carrying the sack move into one end of the casing D and as the top and bottom of the casing converge toward the center they will coöperate to push the sack off of the fingers 38 and the said sack will become seated within the contracted portion of the casing as indicated by dotted lines in Fig. 2. As the member 35 continues through the casing D it strikes the upper portion of the arm 20 and causes the shaft 21 to rock. The arm 23 will thus shift the bar 13 longitudinally and remove the heads 14 from their positions within the notches 10 and 11. The weight 32 will thus operate to draw the casing D backward toward the supporting structure C as indicated by dotted lines in Fig. 1. Before the casing D is shifted in this manner however the bill 36 comes into contact with the sack supported within the outlet end of the casing D and the said sack thus becomes engaged by the hooked member 35 and can therefore be drawn into the car.

It will be seen that all parts of the apparatus can be formed of metal and the same is therefore rendered very durable.

Obviously various changes may be made in the construction and arrangement of parts without departing from the spirit or sacrificing the advantages of the invention.

What is claimed is:—

1. In apparatus of the class described a receiver comprising a casing open at one side and at both ends, the top and bottom of said casing converging from the ends toward the center thereof, and a support for the casing.

2. In apparatus of the class described a receiver comprising a casing open at one side and at both ends, the top and bottom of the casing converging from the ends toward the center thereof, and means for supporting a bag in one end of the casing.

3. In apparatus of the class described a receiver open at the side and both ends, said receiver having a central contracted portion, and bag-supporting means at each end of the receiver.

4. In apparatus of the class described a movably supported receiver open at one side and both ends, said receiver having a contracted intermediate portion, means for actuating the receiver, means for holding the receiver against movement, and bag-holding means upon the receiver.

5. In apparatus of the class described a movably supported receiver open at one side and both ends, said receiver having a contracted intermediate portion, means for actuating the receiver, means for holding the receiver against movement, and bag-holding means upon the receiver, and bag-engaging means movable into the receiver for actuating the locking means to release the receiver.

6. In apparatus of the class described a receiver open at one side and both ends, said receiver having an intermediate contracted portion, supporting arms, slides therein connected to the receiver, means for automatically shifting the slides and receiver in one direction, means carried by the receiver for locking the slides against movement, bag-holding means upon the receiver, and means movable into the receiver for engaging the bag, said means constituting means for actuating the locking mechanism to release the receiver and slides.

7. In apparatus of the class described a

receiver open at one side and both ends, said receiver having an intermediate contracted portion, and a bag-support movable longitudinally of the receiver for conveying a bag into contact with one wall of the contracted portion.

8. In apparatus of the class described guide arms, cross heads movably mounted there-between, a receiver secured to the cross heads and open at one side and both ends, said receiver having a contracted intermediate portion, means carried by the receiver for engaging the arms to hold the cross heads and receiver against movement, means for automatically shifting the cross heads and receiver when unlocked, means projecting into the contracted portion of the receiver for transmitting motion to the locking means, and bag-conveying means movable longitudinally of the receiver and into engagement with said projecting means to unlock the receiver.

9. In apparatus of the class described a supporting structure, guide arms extending therefrom, cross heads mounted between the arms, a receiver carried by the cross heads and open at one side and both ends, said receiver having a contracted intermediate portion, gravity-operated means for shifting the receiver and cross heads in the direction of the supporting structure, means for locking the receiver and the cross heads against movement with relation to the arms, power-transmitting means connected to said locking means and projecting into the contracted portion of the receiver, bag-supporting means at one end of the receiver, and means movable into the receiver for successively actuating said power-transmitting means and engaging the bag.

10. In apparatus of the class described a rigid receiver open at one side and both ends and having a contracted intermediate portion.

11. In apparatus of the class described a receiver comprising a casing open at one side and both ends, said casing having a contracted intermediate portion, bag-holding means at one end of the casing, and bag-delivering and engaging means movable longitudinally within the casing and through said contracted portion.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

WILLIAM O. MASSIE.

Witnesses:
W. FRANK THOMPSON,
J. T. MAHONEY.