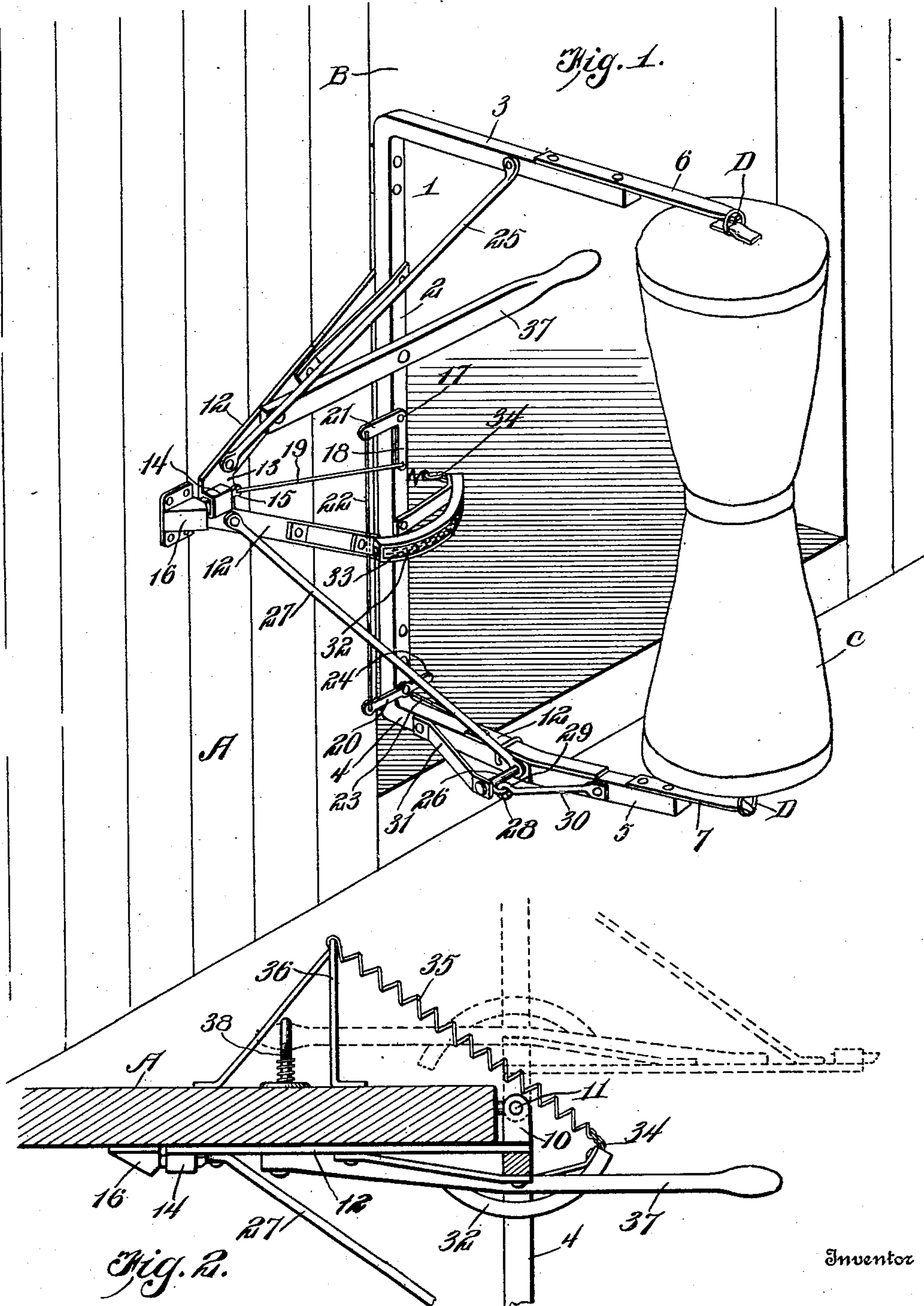


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MAIL BAG DELIVERING AND RECEIVING APPARATUS.
APPLICATION FILED JAN. 26, 1909.

931,524.

Patented Aug. 17, 1909.

2 SHEETS—SHEET 1.



Witnesses
Louis R. Heinrichs
James A. Leach

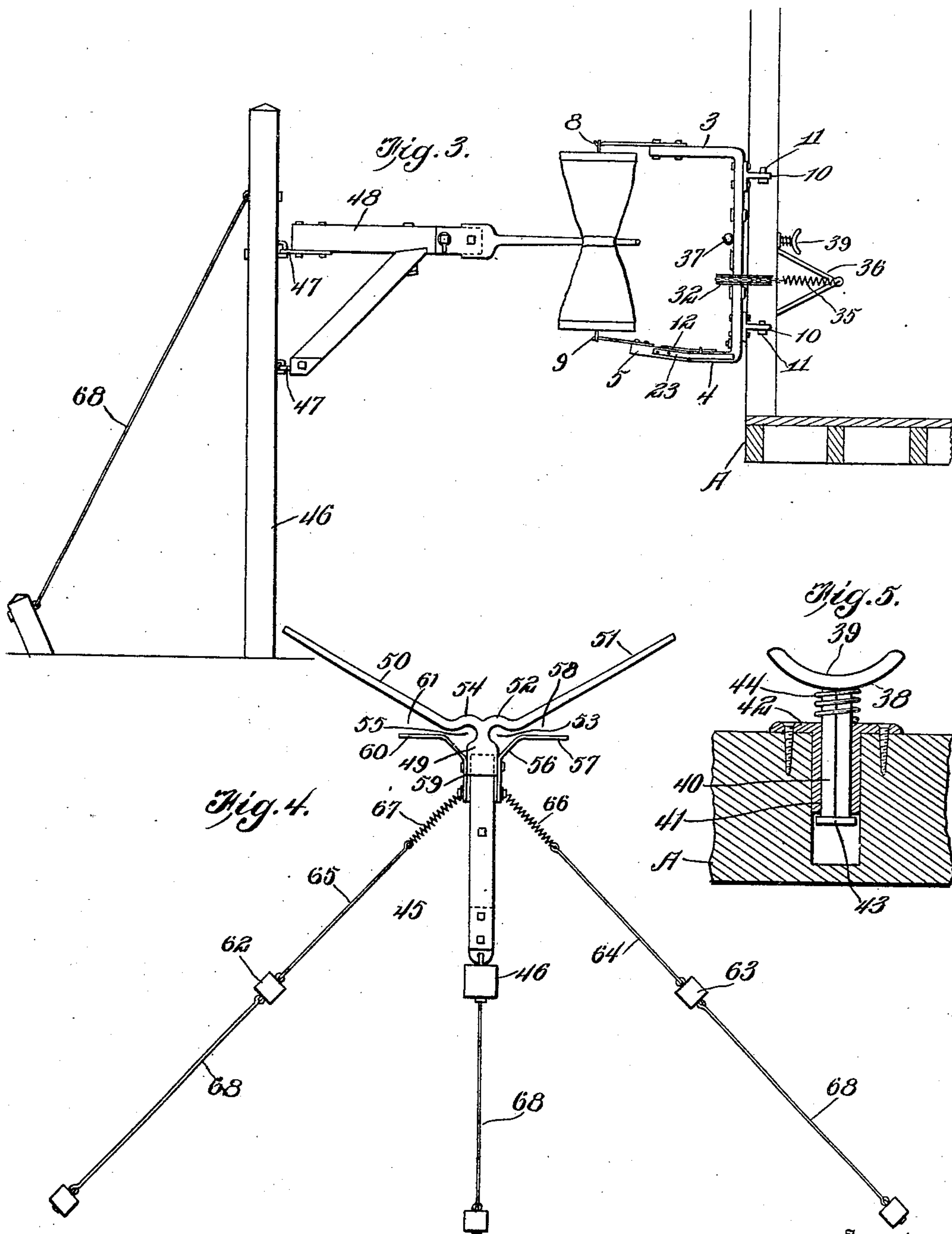
Inventor
Welcome L. Thompson
By Victor J. Evans
Attorney

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UNITED STATES PATENT OFFICE.

WELCOME L. THOMPSON, OF BREMEN, INDIANA.

MAIL-BAG DELIVERING AND RECEIVING APPARATUS.

No. 931,524.

Specification of Letters Patent.

Patented Aug. 17, 1909.

Application filed January 26, 1909. Serial No. 474,334.

To all whom it may concern:

Be it known that I, WELCOME L. THOMPSON, a citizen of the United States, residing at Bremen, in the county of Marshall and State of Indiana, have invented new and useful Improvements in Mail-Bag Delivering and Receiving Apparatus, of which the following is a specification.

This invention relates to mail bag receiving and delivering apparatus, and has for an object to provide apparatus of this character that will embody a frame suspended from a mail car adjacent to the doorway thereof adapted to be conveniently and effectively moved outwardly when a mail bag has been attached to said frame, and to further provide novel means for returning the frame within the car or into its normal position after a mail bag has been delivered.

A still further object of my invention is to provide a novel form of receiving crane located in such position to the frame carried by the car that the said crane will effectively receive a mail bag from the frame in either direction of movement of the car.

Other objects and advantages will be apparent as the nature of the invention is better set forth, and it will be understood that changes within the scope of the claims may be resorted to without departing from the spirit of the invention.

In the drawings, forming a portion of this specification and in which like characters of reference indicate similar parts in the several views:—Figure 1 is a perspective view of a mail car showing the mail bag delivering apparatus applied thereto in position to deliver a bag. Fig. 2 is a detail horizontal section taken through a portion of the car showing the apparatus in an operative position in full lines and in an inoperative position in dotted lines. Fig. 3 is a detail vertical section through a portion of the car showing the delivering apparatus and the receiving apparatus or crane. Fig. 4 is a top plan view of the receiving apparatus or crane. Fig. 5 is a detail horizontal section taken through a portion of the car showing the buffer for receiving the lever of the delivering apparatus.

Referring now more particularly to the drawings, there is shown a mail car A provided with the usual doorway B, and as clearly indicated, the car carries adjacent to one side of the doorway my improved mail bag delivering apparatus 1 which prefer-

ably consists of a frame embodying a vertically disposed arm or element 2 provided at its upper end with a right angularly disposed arm 3, and at its lower end with a similar right angularly disposed arm 4 having a hingedly connected or pivoted portion 5. The arm 3 is provided at the outer end thereof with a fixed outwardly extending leaf spring 6, and the portion 5 of the arm 4 is provided with a similar outwardly extending leaf spring 7. The outer extremity of the spring 6 has its side edges beveled toward each other, and the said outer extremity is preferably bent upwardly as indicated at 8. The outer extremity of the spring 7 is correspondingly constructed and is curved downwardly and outwardly as clearly shown at 9 in Fig. 3 of the drawings. The arm 2 of the frame 1 is provided with brackets or the like 10 which are hingedly connected as indicated at 11 to one side of the doorway B of the car so that the frame can be quickly and effectively moved into an operative position when it is desired to deliver a mail bag.

A mail bag of the usual construction is illustrated at C, and at the ends the said bag is provided with rings or suitable suspending elements D adapted to be engaged with the outer extremities of the leaf springs 6 and 7. In order to prevent the mail bag becoming casually displaced from the springs 6 and 7 I provide the arm 4 of the frame 1 with a leaf spring 12 the free end of which being yieldingly engaged with the portion 5 of the arm 4 so that the said portion will be normally forced in a downward direction, thus preventing sagging of the bag C to effect positive means for retaining the rings or elements D to the springs 6 and 7.

The frame 1 has projecting from the arm 2 thereof bars or the like 12 having a connecting outer portion 13 which carries a casing 14 in which is slidably mounted a bolt or latch member 15. The car A is provided upon the outer side thereof adjacent to the doorway B with a keeper 16 for receiving the sliding bolt or latch member 15 when the frame 1 is in the position shown in Fig. 1 of the drawings. The arm 2 has pivoted thereto a bell crank lever 17, and the arm 18 thereof is connected to the sliding bolt or latch member 15 by means of a flexible connection 19. A lever 20 is pivotally connected to the arm 2 adjacent to the

inner end of the arm 4, and the said lever is connected to the arm 21 of the bell crank lever 17 by means of a flexible connection 22. The portion 5 of the arm 4 has secured thereto a trip element 23 having a portion disposed directly beneath the portion 24 of the lever 20. The purpose of the just described construction will be hereinafter more fully explained.

10 In order to provide a more substantial structure for the frame 1 I connect the arm 3 with one of the bars 12 by a brace rod or member 25, and the other bar 12 is connected to the pivot pin 26 by means of a brace rod
15 27. The pivot pin 26 is provided with a horizontally disposed eye 28 which receives an eye 29 upon the inner end of a brace element 30 secured at its outer extremity to the portion 5 of the arm 4. The pivot
20 pin 26 is further braced to the arm 4 by means of an element 31.

A segment 32 is carried by the arm 2 of the frame 1 and is provided with a grooved portion 33 in which is positioned or confined
25 a chain or similar connection 34, the free extremity of said chain or connection 34 being secured to one end of a retractile spring 35, the other end of said spring being secured to a bracket 36 extending
30 inwardly from one side of the car A. The frame 1 is provided with a horizontally disposed manually operated lever 37, and the car A upon the interior thereof is provided with a buffer 38 comprising a crotch
35 element 39 provided with a squared stem 40 slidably mounted in a correspondingly shaped passage 41 in a sleeve 42 secured to the car A in any suitable manner. To prevent the outward movement beyond a pre-
40 determined point, I provide the stem 40 with a head 43 adapted to be yieldingly held against the inner end of the sleeve 42 by means of a helical expansion spring 44.

A mail bag receiving apparatus or crane
45 is illustrated at 45 and comprises a vertical standard 46 having hingedly connected thereto as shown at 47 a frame 48 which carries at the outer end thereof a socket member 49 having formed integral there-
50 with outwardly and oppositely extending arms 50 and 51. The arm 51 at its inner end is curved as shown at 52 to provide a recess or pocket 53, and the arm 50 is correspond-
55 ingly curved at its inner end as shown at 54 to provide a recess or pocket 55. The frame 48 is provided at one side thereof with a leaf spring 56 having a portion 57 extending outwardly at right angles to the frame 48 to provide a flaring space 58 between the
60 arm 51 and the said portion 57 of the spring. The frame 48 is provided with a spring 59 identical in construction to the spring 56, and this last named spring is also provided with a right angularly extending portion 60
65 positioned with respect to the arm 50 so that

a flaring space 61 is provided between the said arm and the portion 60 of the spring. Vertical posts 62 and 63 are located at the sides of the post 46, the post 63 being pro-
70 vided with a pivotally connected rod 64, and the post 62 being provided with a similar rod 65. The rod 64 is connected to the frame 48 by means of a spiral spring 66, and the rod 65 is connected to the frame 48 by
75 means of a spiral spring 67. The just described construction is such that the frame 48 is normally held at right angles with respect to the car A so that the said frame will at all times assume an operative position. By providing the springs 66 and 67 I not
80 only accomplish the just described results but these springs also serve as buffers to absorb shock incident to the impact of a mail bag when delivered from the car. The posts 46, 62 and 63 are preferably braced
85 by truss elements 68, but it will of course be understood that I may use my own discretion in providing such truss elements as such construction is only obvious and I do not desire therefore to limit myself. 90

In operation, assuming the parts to be in the position shown in dotted lines in Fig. 2 of the drawings, a mail bag is placed in position as previously described upon the springs
95 6 and 7 carried by the frame 1. After this operation, the handle 37 is engaged by the mail clerk and actuated to swing the frame 1 outwardly of the doorway B. In this position, or when the arms 3 and 4 assume a position at right angles to the car A the
100 bolt or latch member 15 will be engaged with the keeper 16 to hold the frame 1 against the action of the spring 35. After a mail bag has been delivered it will of course be understood, incident to the spring 12 that
105 the portion 5 of the arm 4 will be moved downwardly so that the said portion 5 assumes a common plane with respect to the remaining portion of the arm, and in this movement of the portion 5 the trip element
110 23 will be moved upwardly at its inner end and will engage the portion 24 of the lever 20 to effectively pull the arm 21 of the bell crank lever 17 downwardly, and in consequence of the movement of this arm of the
115 bell crank lever the flexible connection 19 will be actuated to withdraw the bolt or latch member 15 from the keeper 16 so that the frame 1 can be drawn inwardly into the dotted line position by means of the spring
120 35. When the frame has been returned to the dotted line position shown in Fig. 2 of the drawings the lever 37 will engage the buffer 38 to prevent injury to the apparatus as will be readily appreciated. It will of
125 course be understood that the arms 50 and 51 of the frame 48 lie intermediate of the arms 3 and 4, so that in delivering a bag the central portion thereof will pass between the springs 57 and 60 and the arms 50 and
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51 and will be deposited in one or the other of the recesses or pockets 53 and 55, thus effectively holding the bag until it has been removed from the crane or receiving apparatus by the station master.

I claim:—

1. The combination with a car having mail bag delivering means, of receiving means located adjacent to the car and comprising a horizontally disposed frame, said frame having a plurality of oppositely extending arms having recessed inner portions forming mail bag receiving pockets, springs carried by the frame having angularly extending portions forming flaring spaces between said arms and said springs adjacent to said pockets, and elastic means for normally holding the frame approximately at right angles with respect to the car.

2. A car having a pivotally mounted frame, mail bag supporting arms carried by the frame, a latch member carried by the frame, a keeper for the latch member adapted to hold the frame in an operative position, a trip element, connections between the trip element and the latch member adapted to be actuated by said trip element to disengage the latch member from the keeper after a

mail bag has been discharged from the frame, and means for moving the frame interiorly of the car after a mail bag has been delivered.

3. The combination with a car, of a frame hingedly connected thereto adapted for horizontal movement to lie inwardly or outwardly of the doorway of the car, said frame being provided with parallel spaced arms, one of said arms having a pivoted spring pressed portion adapted to be held against the action of the spring by a mail bag, locking means adapted to be engaged with the frame when the same is in an operative position, a lever carried by the frame, connections between the lever and the frame locking means, means carried by the hingedly connected portion of one of the arms for actuating the said lever upon release of a mail bag from the arms, and means operable upon releasing the frame from the locking means for moving the former within the car.

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

WELCOME L. THOMPSON.

Witnesses:

JOHN L. FLETCHER,
JAMES M. RAUSTEAD.