

No. 894,596.

J. E. CARTER.

PATENTED JULY 28, 1908.

COMBINED MAIL DESPATCHER AND RECEIVER.

APPLICATION FILED DEC. 19, 1907.

3 SHEETS—SHEET 1.

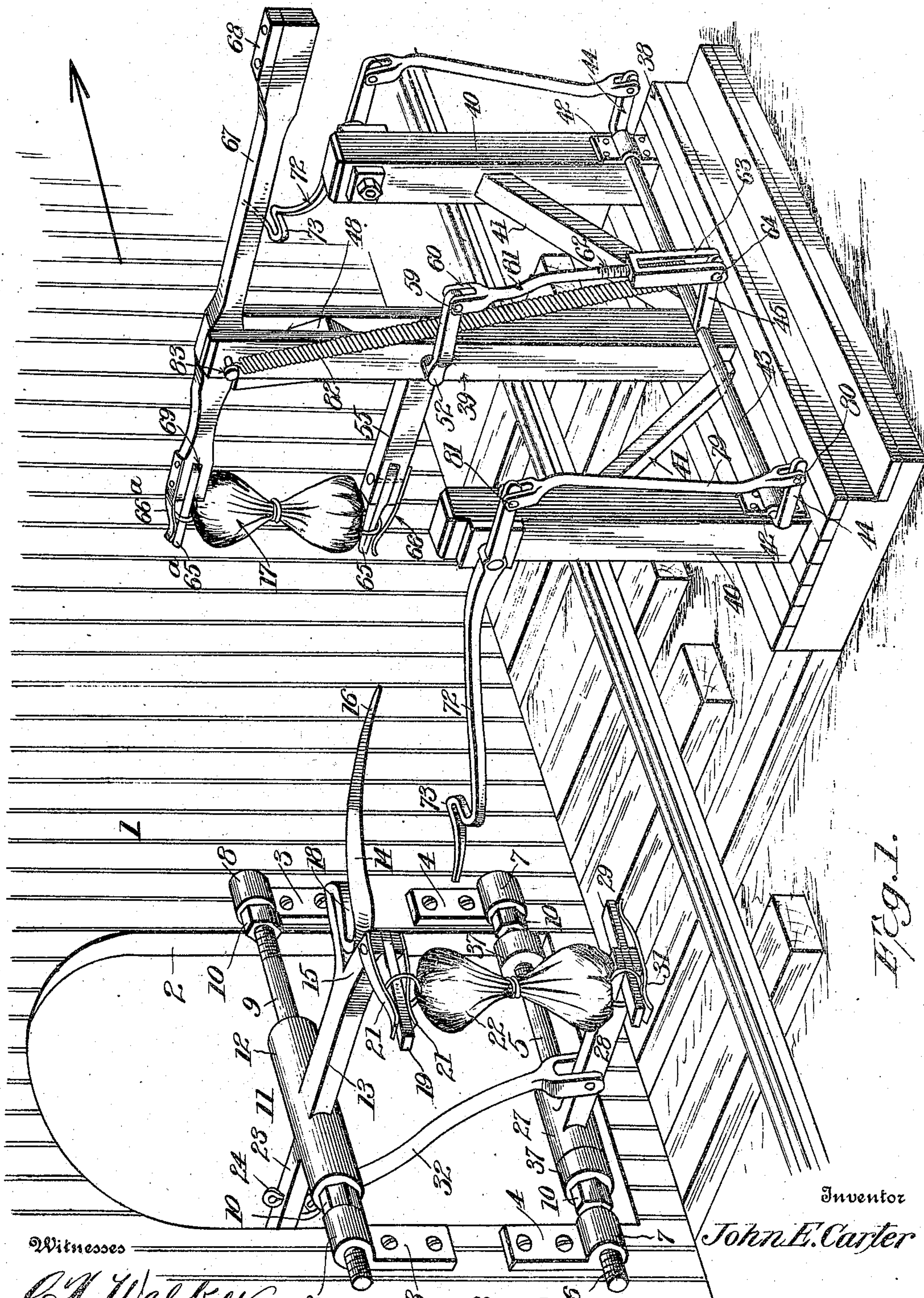


Fig. 1.

Inventor

John E. Carter

Witnesses

C. H. Walker,  
J. T. Walker

E. E. Vrooman,  
his Attorney.



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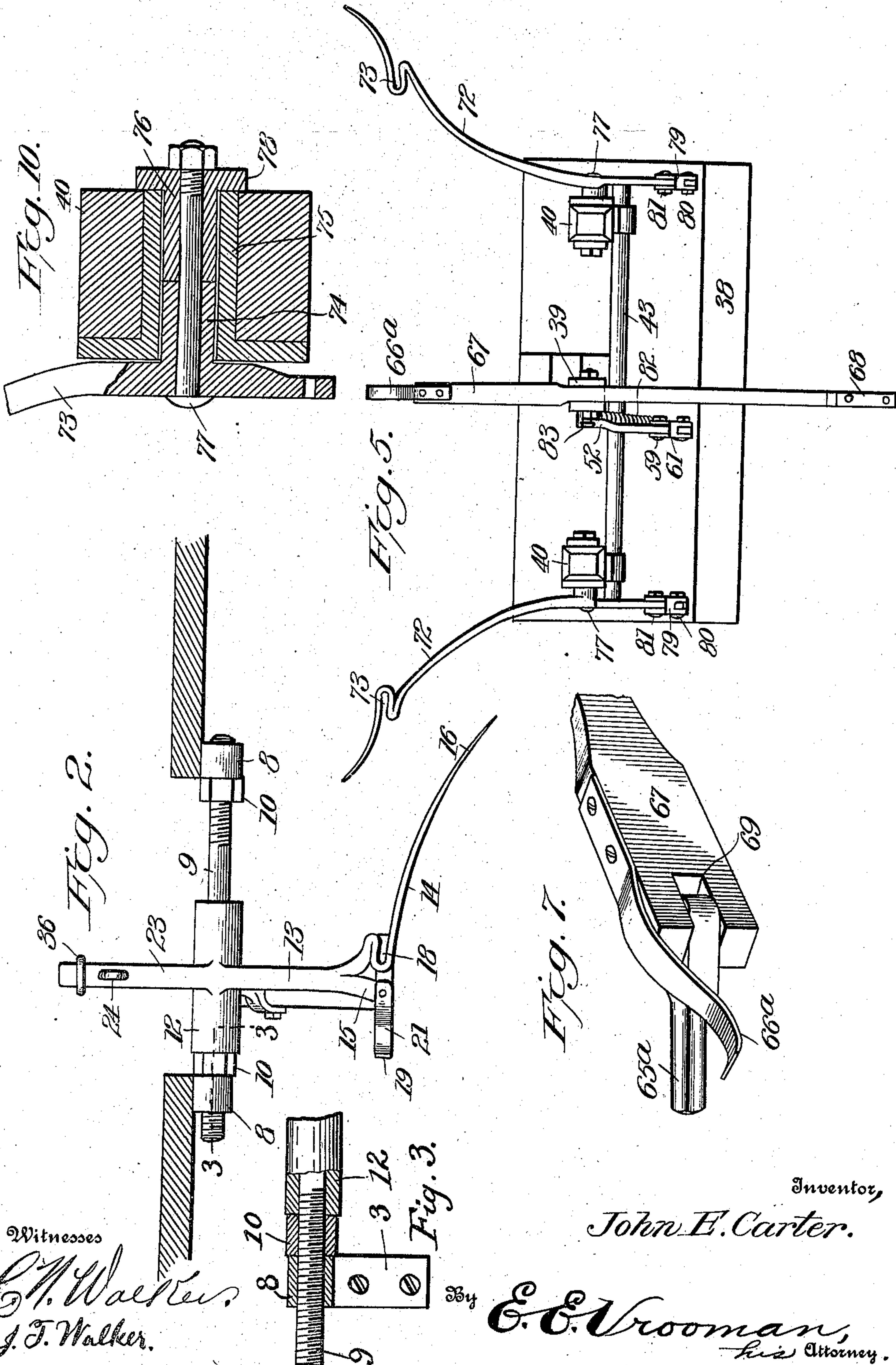
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Inventor,

John E. Carter.

By

E. C. Vrooman,  
his Attorney.

Witnesses

C. H. Walker,  
J. F. Walker.

No. 894,596.

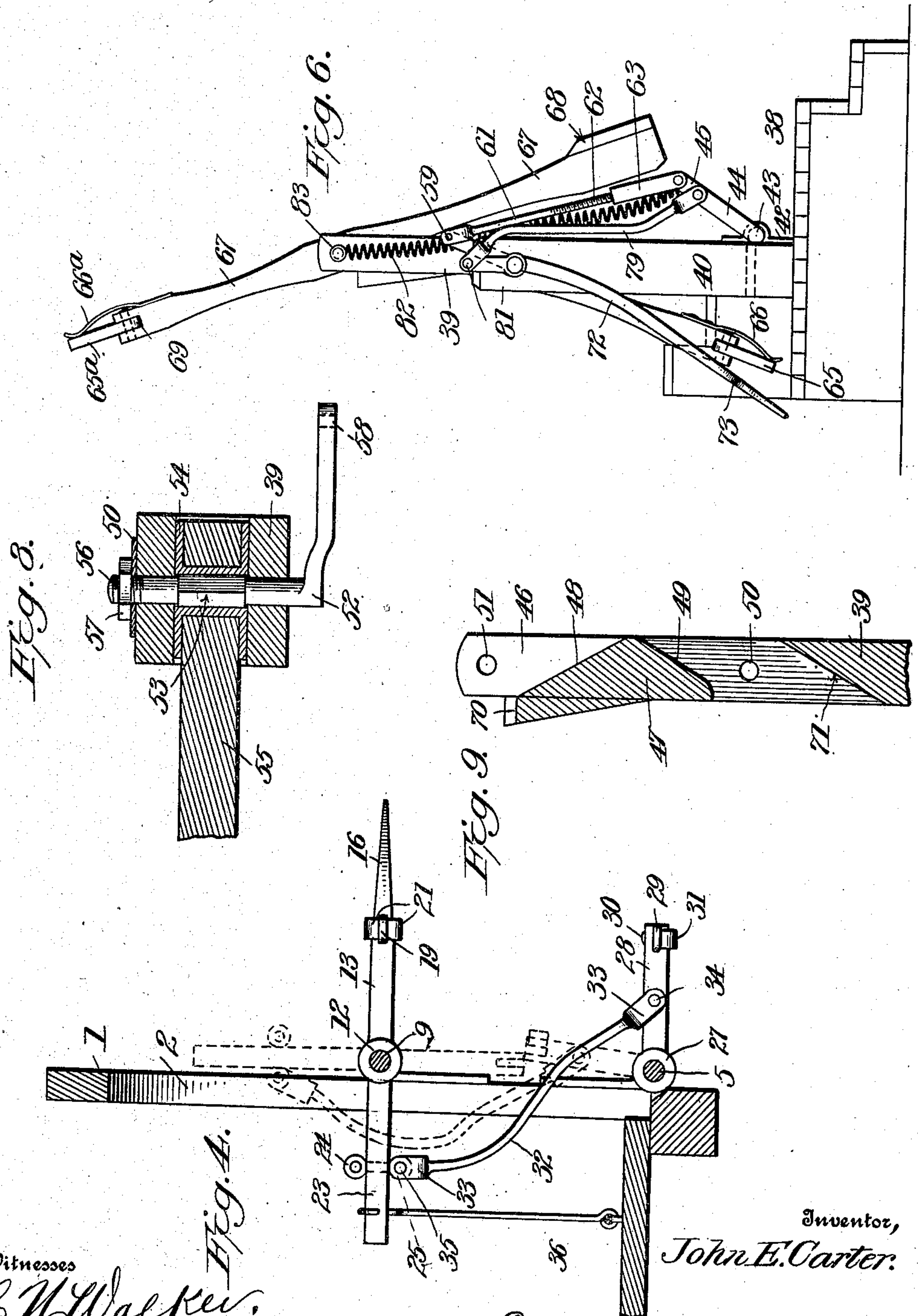
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Witnesses  
*C. H. Walker,*  
*J. T. Walker,*

Inventor,  
*John E. Carter.*  
By *E. E. Vrooman,*  
his Attorney.



# UNITED STATES PATENT OFFICE.

JOHN E. CARTER, OF PITTSBURG, PENNSYLVANIA.

## COMBINED MAIL DESPATCHER AND RECEIVER.

No. 894,596.

Specification of Letters Patent:

Patented July 28, 1908.

Application filed December 19, 1907. Serial No. 407,172.

*To all whom it may concern:*

Be it known that I, JOHN E. CARTER, a citizen of the United States, residing at Pittsburgh, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in a Combined Mail Despatcher and Receiver, of which the following is a specification, reference being had therein to the accompanying drawing.

10 This invention relates to improvements in combined mail despatcher and receiving apparatus, and the object of the invention is the provision of means for facilitating the delivering of mail bags from a moving vehicle  
15 or car, and the delivery of mail bags from a stationary support onto said vehicle or car.

With this and other objects in view, the invention consists of certain novel constructions, combinations, and arrangements of  
20 parts, as will be hereinafter fully described and claimed.

In the drawings: Figure 1 is a perspective view of an apparatus constructed in accordance with the present invention. Fig. 2 is  
25 a top plan view of the car receiving-device. Fig. 3 is a sectional view taken on line 3, 3, Fig. 2. Fig. 4 is a view, in end elevation, of the car receiving-device. Fig. 5 is a top plan view of a stationary delivering and receiving-  
30 device, while Fig. 6 is a view in end elevation thereof. Fig. 7 is a fragmentary, perspective view of the bag-attaching means carried by the outer end of the primary lever-arm. Fig. 8 is a fragmentary, horizontal, sectional  
35 view of the inner end of the auxiliary lever-arm, showing the bearing and the support therefor. Fig. 9 is a detail, vertical, sectional view of the central standard of the delivering and receiving-device frame. Fig. 10  
40 is a sectional view showing the bearings of one of the receiving-arms of the delivering and receiving-device.

Referring to the drawings by numerals, 1 designates, preferably, a car provided with a  
45 door or opening 2. Secured to the sides of the car, are upper brackets 3 and lower brackets 4. Journaled in the brackets 4 is a horizontal rod or bar 5, which is provided with screw-threaded portions 6, at its ends, and  
50 these screw-threaded ends of the rod 5, extend through the apertured, bulged portions 7 of brackets 4. The brackets 3 are also provided with apertured, bulged portions 8, and a rod or bar 9, similarly-constructed to the  
55 rod or bar 5, is also supported in the bulged portions 8. Threaded upon the rods or hori-

zontal members 5 and 9 are locking nuts 10. These nuts are adapted to be threaded against the brackets 3 and 4 for securing the rods 5 and 9 against displacement off of said  
60 brackets.

Rotatably mounted upon the rod 9, is a primary member 11, comprising a body or sleeve 12, having at one side an integral, laterally-extending extension 13, terminating  
65 in a receiving-arm 14, at its outer end, and also in an integral, bifurcated extension 15. The receiving-arm 14 is provided with an outwardly-extending spur 16, for directing the mail bag 17 into the narrow slot 18 of the  
70 receiving-arm 14. A horizontal member or piece 19 is pivotally mounted upon a pin 20, within the bifurcated portion of extension 15; the horizontal member 19 is provided with flat sides engaged by flat springs 21, positioned upon opposite sides thereof and secured upon the bifurcated extension 15 by  
75 said pin or rivet 20. I provide, preferably, two springs 21, because when the car is moving in the opposite direction, and it is necessary to reverse the receiving-device 11, the  
80 upper end of a bag, as for instance, 22, can be supported upon the member or piece 19 and held thereon by the other spring; the reversing of the receiving-device 11 is accomplished  
85 by threading the nuts 10, carried by the rod 9, inward, and removing one end of the bar 9 out of one of the bulged portions 8 of a bracket 3, and then withdraw the other end from the other bulged portion and turning  
90 the whole device. The arm 14 has a spring-action, as the slot 18 is formed by bending portions of the arm substantially parallel, so that the portion at the rear of said slot 18 is positioned contiguous to the extension 15.  
95 Extending into the car from the sleeve or cylindrical body 12, is an extension 23, which is provided with an eye-bolt or loop 24 upon its upper face and with an eye-bolt or loop 25 upon its under face.  
100

An auxiliary supporting-device 26 is carried by the rod 5, and said device 26 comprises an annular sleeve or cylindrical body 27 having an outwardly-extending projection or extension 28, which is bifurcated, at its  
105 outer end, and in the bifurcated portion is positioned a pivotally-mounted plate or member 29, and said plate is held in the bifurcated portion by any suitable fastening means 30, Fig. 4. A spring 31 is bowed, at its center,  
110 and clamps against the under face of the plate 29, near its ends, so that a ring carried



by the bottom of a mail bag can be quickly inserted under the plate 29, upon either side of the extension 28, and said ring is normally held upon the plate prior to the detachment of the bag.

A curved connecting-member 32 is provided with bifurcated ends 33, and the lower, bifurcated end is pivotally mounted, at 34, to the extension 28 intermediate its ends, and the upper, bifurcated end is pivotally mounted, by any suitable fastening means, at 35, to the lower eye-bolt or loop 25 carried by the extension 23; by means of this connecting-rod 32, and its fastening means, when the primary receiving-device 11 is in its horizontal position, Figs. 1 and 4, the lower receiving-device will also be held in a horizontal position, and it is only necessary to hook the upper end of rod 36 over the inner end of the extension 23, and the mail bag receiving-device, carried by the car, will be set; when the device is set, a bag, as for instance, 22, can be held between the clamps, constituted by the members or plates 19 and 29 and springs 21 and 31. On the rod 5, I, preferably, position collars 37, which act as a washer or a buffer; when the car is moving in one direction, the body 27 will be bearing, at one end, against one of the collars or washers 37, whereas, when the car is moving in the other direction, the other end of the body will be bearing against the other end of the washer or collar carried by the supporting member or rod 5.

It is to be noted that the body 27 does not have to be reversed like the body 12 of the primary device. All that is necessary is to remove the suitable fastening means 35, carried by the lower eye-bolt, subsequent to attaching the hook 36, and then screw inward on said nuts 10, and the rod 9 can be quickly detached from its supporting brackets and the device reversed. Of course, if it is desired, the hook or catch 36 need not be used, as the operator can press downward at the inner end of the extension 23, and thereby perform the same function as said hook or catch 36. When the receiving device, carried by the car, is not set, the parts will assume the position shown in dotted lines, Fig. 4, owing to the connecting rod 32 and the fact that the weight of the outer end of the upper member or device is greater than the weight of the lower device or extension 28.

The stationary combined delivering and receiving-device for my apparatus comprises a frame, consisting of a platform or base 38, and secured to said base 38 is a central, primary standard 39 and end or auxiliary standards 40; the end standards 40 are of less height than the central or primary standard 39. Suitable braces 41 are provided between the end standards and the central standard for holding the standards rigid and increasing the durability of the

frame. Brackets 42 are secured to the outer faces of the auxiliary or end-standards 40, near their lower ends. Journaled in brackets 42 is a horizontal crank-arm 43 provided, at its ends, with cranks 44, and near its center with a crank 45. The central standard 39 is provided with a bifurcated portion 46, at its upper end, and within the bifurcated portion, is positioned a block 47, which is beveled upon its upper face, at 48, and upon its lower face, at 49. The bifurcated portion of the central standard 39 is provided with registering apertures 50 and 51. Rotatably mounted in the apertures 50, Fig. 8, is a crank-arm 52, which is provided with a squared portion 53, fitting into a similarly-constructed portion of the sleeve 54; the sleeve 54 fitting around portions of the inner end of the auxiliary lever-arm 55, so that when rotary movement is imparted to the crank-arm 52, similar movement will also be imparted to the auxiliary lever-arm 55. The lever-arm is provided, at one end, with a screw-threaded portion 56, upon which is threaded a nut 57, and its opposite end is apertured, at 58, for receiving any suitable fastening means, as a cotter pin or ring or bolt 59, whereby the upper, bifurcated end 60 of the rod 61 is secured thereto (Fig. 1). The lower end of the rod 61 is threaded, as at 62, and said end 62 is threaded into a U-shaped, inverted member or connection 63; the member or connection 63 is pivotally secured, by suitable fastening means, as at 64, to the central crank-arm 45. Owing to this structure, synchronous, pivotal movement is imparted to auxiliary lever-arm 55 and shaft or rod 43. The auxiliary lever-arm 55 is bifurcated, at its outer end, and within this bifurcated portion, is secured a pivotal member or plate 65, which is engaged by the outer end of a flat spring 66, whereby a ring attached to a mail bag may be detachably secured upon the member or plate 65. The plate or member 65 is capable of pivotal movement, for the reason that when bag 17 is detached therefrom, the arm may be swung to one side.

A lever arm 67 is, preferably, provided at its inner end, with a weight 68, and at its opposite end, with a bifurcated portion 69. In the bifurcated portion 69 is pivotally mounted a plate or member 65<sup>a</sup>, and engaging said plate or member 65<sup>a</sup>, near its outer end, is a spring 66<sup>a</sup>. The spring 66<sup>a</sup> is fixedly secured, at its inner end to the lever, and the plate or member 65<sup>a</sup> is pivotally mounted the same as plate 65, and for the same purpose. When the primary lever arm 67 is not in use, it normally lies against the bifurcated portion 48, and when the arm is in use, as shown in Fig. 1, it bears against portion 70. When the lever arm 55 is not in use, it rests against the bifurcated portion 71. The primary lever arm 67 is held in position, when the bag is on the end of said arm



and on the end of the auxiliary lever arm 55, see Fig. 1, but as soon as the bag is detached, the arm moves to the position shown in Fig. 6, thereby engaging portion 48 of the block 47. The bag 17 also performs the function of a lock for holding the crank arms 48 in a substantially horizontal position, thereby retaining the receiving-arms 72 in a horizontal position for receiving the bag from the supporting means carried by the car.

Each receiving-arm 72 is provided with a bag-engaging portion 73, near its outer end. The arm 73 is provided, intermediate its ends, with an integral, cylindrical extension 74, which extends into a sleeve 75 carried by an end-standard 40. A detachable sleeve 76 also extends into said sleeve 75, and these sleeves 74 and 76 are held together by a bolt 77, Fig. 10. It will be seen that I have provided a rotatable bearing fastened to each arm 76. The sleeve 76 is provided with a flanged portion 78 overlapping the edges of the stationary sleeve 75. Connecting-rods 79 are provided with bifurcated ends. One end of each rod 79 surrounds a crank-arm 44, and is pivotally connected thereto, at 80, whereas its opposite bifurcated end surrounds a portion of an arm 72, and is pivotally connected thereto, at 81, whereby auxiliary lever arm 55 and the arms 72 are synchronously moved. A coil spring 82 is fixedly secured, by a bolt 83, to the central standard, and its opposite end is secured to the central crank arm 45, near its outer end, and, preferably, between the U-shaped member 63. This spring normally exerts an upward pull upon the central-crank arm, whereby, as soon as the bag 17 is removed, the auxiliary lever arm 55 and the receiving-arms 72 are thrown downward, although, the weight of said arms may be such as to cause the same to move downward; the spring facilitating this movement. The bolt 83 constitutes the pivot, or the fulcrum, of the lever 67, as said bolt 83 extends through the registering apertures 51.

Each arm 72 extends in an opposite direction, so that if the car is moving in one direction, the bag can be taken from the car holding-device, and if the car is moving in the opposite direction, the bag can be taken from the car, and synchronously with the removal of the bag from the car, the bag is removed from the stationary supporting device, or in other words, bag 17 is removed by the receiving-arm 14. This transfer of one bag from the stationary support to the car and the removal of the bag from the car to the stationary support is nearly instantaneous, as I have found from practical experience, causing the bag delivered to the car to be brought to the side thereof, if the sleeve or cylindrical body 12 is permitted to rotate, and the arms 72, one of which

carrying the bag delivered from the car, will swing downward, as the lock holding the combined receiving and delivering device, supported upon the standards, is removed, owing to the fact that said lock is the bag which is delivered to the car.

Owing to the rod 61 being provided with a screw-threaded portion 62, the same can be adjusted upon the U-shaped member 63 for holding the lever arm 55 and the bag-receiving arm 72 in the proper position; the adjustment of the connection between the central crank-arm 45 and the auxiliary lever arm can be obtained by removing the fastening means 64 and rotating the member 63, or by removing the fastening means and rotating the link or rod 61.

What I claim is:

1. In an apparatus of the class described, the combination of pairs of brackets, each bracket provided with a bulged portion, rods provided with threaded ends detachably mounted in the bulged portions of said brackets, nuts threaded upon the rods between the brackets and normally securing said rods upon the brackets, and bag-supporting means carried by said rods between said nuts.
2. In an apparatus of the class described, the combination with a support, of detachable, bodily-movable-bag-supporting means carried by said support, said supporting-means provided with a clamping and a receiving-arm, and the clamping and receiving-arms provided with means for permitting the same to be reversed for positioning the same in different positions.
3. In an apparatus of the class described, the combination with a support, of bag-supporting means carried by said support, said supporting-means provided with an extension terminating at its outer end in a bag-receiving arm and bag-clamping means, said receiving arm provided with a socket, and said clamping means comprising a bifurcated extension, a pivoted member in said extension, and clamp-springs carried by the extension and positioned on opposite sides of said member.
4. In an apparatus of the class described, the combination with a support, of bag-supporting means carried by said support, said supporting-means provided with a shaft or rod, nuts threaded upon said rod, washers or collars carried by said rod between said nuts, and means provided with a bag-engaging device, positioned upon said rod between said collars.
5. In an apparatus of the class described, the combination with a support, of a bag-supporting device carried by said support, said device provided with an extension terminating at one end in an integral bag-receiving arm and an extension, said receiving-arm provided with a bag-receiving slot, and



said extension provided with a pivoted member positioned therein and with clamping means secured thereto upon its outer face and engaging opposite sides of said pivotal member.

6. In an apparatus of the class described, the combination with a support, of a bag-engaging device carried by said support, said device provided with a bifurcated extension, a plate pivotally mounted near its center in said extension and normally extending upon opposite sides of the same, and spring clamping-means secured near its center to the bifurcated end and having its ends engaging said plate near its ends, whereby a bag can be secured upon said plate at either side of said extension.

7. In an apparatus of the class described, the combination with standards, of a lever-arm carried by a standard, a plurality of bag-receiving arms pivotally mounted upon some of said standards, and means connecting said lever-arm and said bag-receiving arm, whereby said arms are synchronously actuated.

8. In an apparatus of the class described, the combination with standards, of a lever arm carried by one of said standards, a bag-receiving arm carried by the other standard, means connecting said arms, and means connected to said connecting means for normally exerting a pull upon said arms for normally retaining the same in an unset position.

9. In an apparatus of the class described, the combination with a plurality of standards, of a rod or shaft mounted upon some of said standards, bag-receiving arms carried by some of said standards, a lever-arm carried by one of said standards, and means pivotally connecting all of said arms to said rod.

10. In an apparatus of the class described, the combination with a series of standards, of bag-receiving arms carried by a plurality of said standards, and said arms extending in opposite directions, bag-holding means carried by one of said standards, means for retaining said bag-receiving arms and said bag-holding means in substantially a horizontal position, and means for synchronously moving all of said arms to an inclined or unset position.

11. In an apparatus of the class described, the combination with a series of standards, a horizontal rod provided with a plurality of crank-arms, journaled upon some of said standards, a plurality of receiving-arms pivotally mounted upon some of said standards, bag-holding means carried by one of said standards, and a plurality of connecting means pivotally connected to said receiving-arms and bag-holding means and to said crank-arms.

12. In an apparatus of the class described, the combination with a plurality of uprights, of a pair of lever arms carried by one of said

uprights, said lever arms provided with bag-holding means, one of said lever-arms provided with an extension, a rotatable member provided with crank arms carried by some of said uprights, a bag-receiving arm pivotally mounted upon one of said uprights, means connecting said extension to one of the crank-arms of said rotatable member, and means connecting the receiving-arm to said rotatable member.

13. In an apparatus of the class described, the combination with a support, of a lever-arm provided with an extension pivotally mounted upon said support, a receiving-arm pivotally mounted upon said support, a rotatable member provided with crank-arms, pivotally mounted upon said support, means connecting one of said crank arms to said receiving-arm, and means adjustably connecting the extension to the other crank-arm.

14. In an apparatus of the class described, the combination with a plurality of vertical uprights, bag holding and supporting means carried by one of said uprights, lever arms pivotally mounted upon the other uprights, and extending outwardly in opposite directions therefrom, a shaft, means connecting said bag-receiving arms to said shaft, and means adjustably connecting said shaft to said bag-holding means, whereby adjustment of all of the arms of said bag-holding means may be obtained.

15. In an apparatus of the class described, the combination with supports, of movable bag-supporting and holding means carried by said support, bag-receiving means positioned upon opposite sides of said bag-supporting and holding means and extending in opposite directions, said bag-supporting and holding means and bag-receiving means capable of being retained in a set position, and means for normally actuating said bag-holding and supporting means and said bag-receiving means for moving the same to an unset or inclined position.

16. In an apparatus of the class described, the combination with a support, of bag-holding means positioned upon said support, bag-receiving means positioned at opposite sides of said holding means, said holding and receiving-means provided with means for retaining the same in a set position when a bag is carried by said holding means, and means for synchronously moving all of said bag-holding and said bag-receiving means when a bag is removed off of said bag-holding means.

17. In an apparatus of the class described, the combination with a support, of a bag-receiving arm carried by said support, a plurality of lever-arms carried by said support, means carried by said lever-arms for supporting a bag thereon, and means adjustably connecting one of said lever-arms to said bag-receiving arms.



18. In an apparatus of the class described, the combination with a standard, of a sleeve mounted in said standard, a crank-arm positioned in said sleeve, means  
5 engaging said crank-arm and sleeve for preventing independent, rotary movement thereof, a lever-arm carried by said sleeve, a lever-arm positioned above said first-mentioned lever arm, bag-attaching means se-  
10 cured to said arms, and means connected to said crank-arm for moving the lever-arm attached thereto downward when a bag is removed from said bag-attaching means.

19. In an apparatus of the class described,  
15 the combination with a support, of a sleeve carried by said support, a bag-receiving arm provided with an integral sleeve, the sleeve of said arm positioned in the first-mentioned sleeve, a detachable sleeve positioned in said  
20 first-mentioned sleeve and having its inner end positioned contiguous to the inner end of the sleeve of said arm, and means extending through the sleeve of said arm and the detachable sleeve and securing said arm  
25 upon said support, and means for holding said arm in a set position.

20. In an apparatus of the class described, the combination with a support, of bag-  
holding means provided with a pivoted arm,  
30 said arm provided with a sleeve having a squared recess, an arm or shaft provided with a squared portion fitting into the similarly-constructed portion of said sleeve, and means engaging the last-mentioned arm for  
35 holding the same in an unset position.

21. In an apparatus of the class described, the combination with a support, of means  
for holding a bag in position for being re-  
40 moved by a passing object, and bag-receiving means upon opposite sides of said bag-holding means and adapted to be synchronously actuated when a bag is removed from the bag-holding means.

22. In an apparatus of the class described,  
45 the combination with a support, of a plurality of separate, movable arms extending in opposite directions and carried by said support, a shaft carried by said support, said shaft provided with crank-arms and means  
50 connecting said crank-arms to said bag-receiving arms, whereby said arms are swung synchronously.

23. In an apparatus of the class described, the combination with a plurality of stand-  
ards, of bag-receiving arms positioned upon 55 the standards and extending outwardly therefrom in opposite directions, means connecting said arms, and bag-holding means connected to said connecting means and adapted to hold said arms in a set position, 60 when said holding-means is in a set position.

24. In an apparatus of the class described, the combination of a plurality of bag-receiv-  
ing means, bag-holding means positioned  
between said bag-receiving means, and 65 means cooperating with said bag-holding means and bag-receiving means and adapted to hold said bag-receiving means in a set position, when said bag-receiving means is in a  
like position. 70

25. In an apparatus of the class described, the combination with a car provided with an  
opening, of an interchangeable bag-support-  
ing device extending across said opening,  
said supporting-device comprising a rod de- 75 tachably secured to said car, bag-supporting means rotatably mounted upon said rod, means carried by said rod for detachably securing said bag-supporting means thereon, and means adapted to hold said bag-sup- 80 porting means in a set position independent of the rod.

26. In an apparatus of the class described, the combination with a standard, of a bag-  
receiving arm carried by said standard, said 85 bag-receiving arm provided with an integral hollow portion extending into said standard, a bolt extending through said arm and hollow portion and through said standard, and se-  
curing said arm upon said standard. 90

27. In an apparatus of the class described, the combination with a standard, of bag-  
holding means carried by said standard, said  
bag-holding means comprising an arm, a  
crank-arm secured to said standard, means 95 for exerting a pull upon said crank-arm, and means connecting said crank-arm to the first-mentioned arm.

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

JOHN E. CARTER.

Witnesses:

FRED J. STARK,  
GEO. COCHRAN.