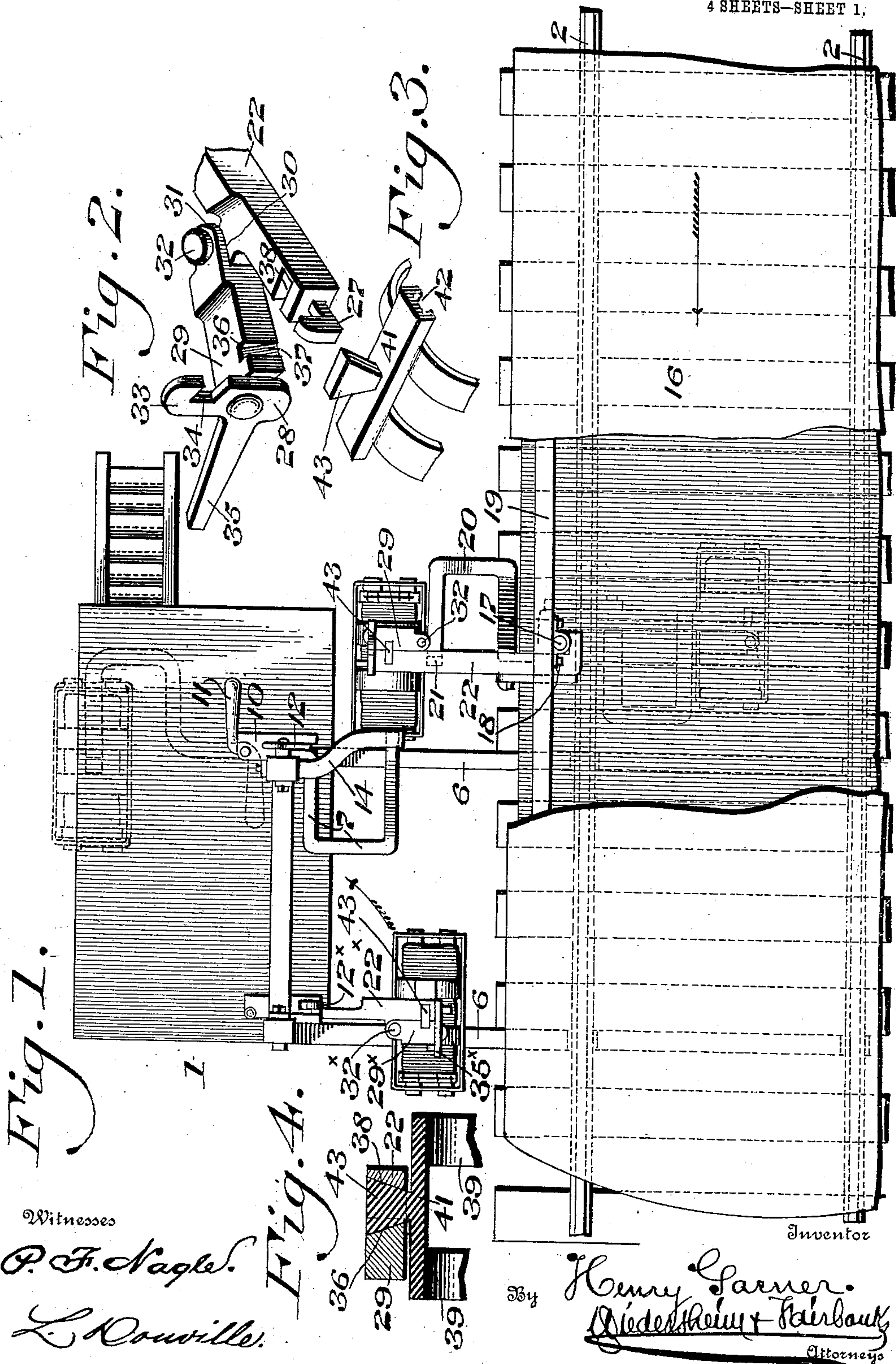


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MAIL BAG CATCHER AND DELIVERER.  
APPLICATION FILED MAY 26, 1908.

915,092.

Patented Mar. 16, 1909.

4 SHEETS—SHEET 1.



Witnesses  
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Fig. 4.

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4 SHEETS—SHEET 2.

Fig. 5.

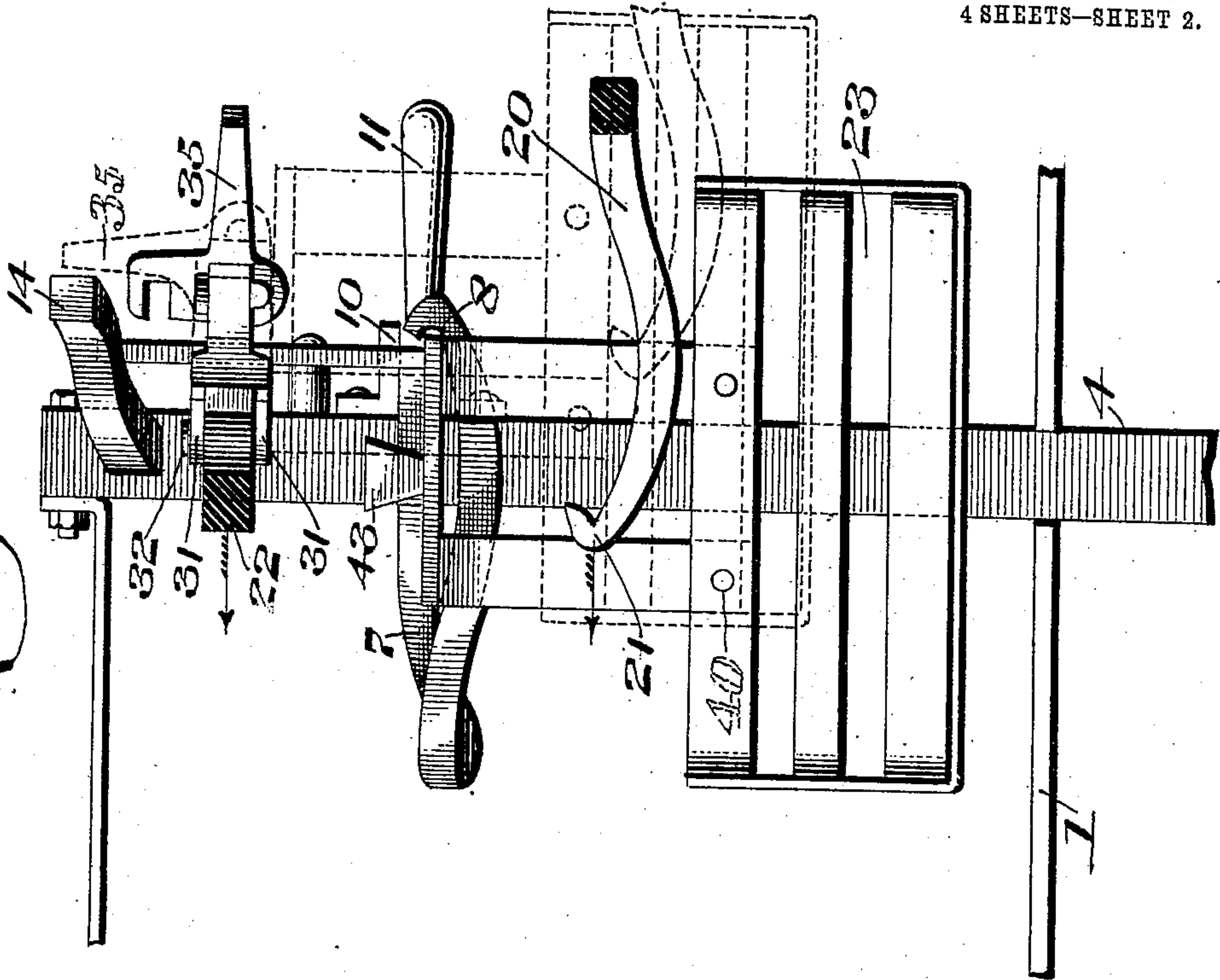
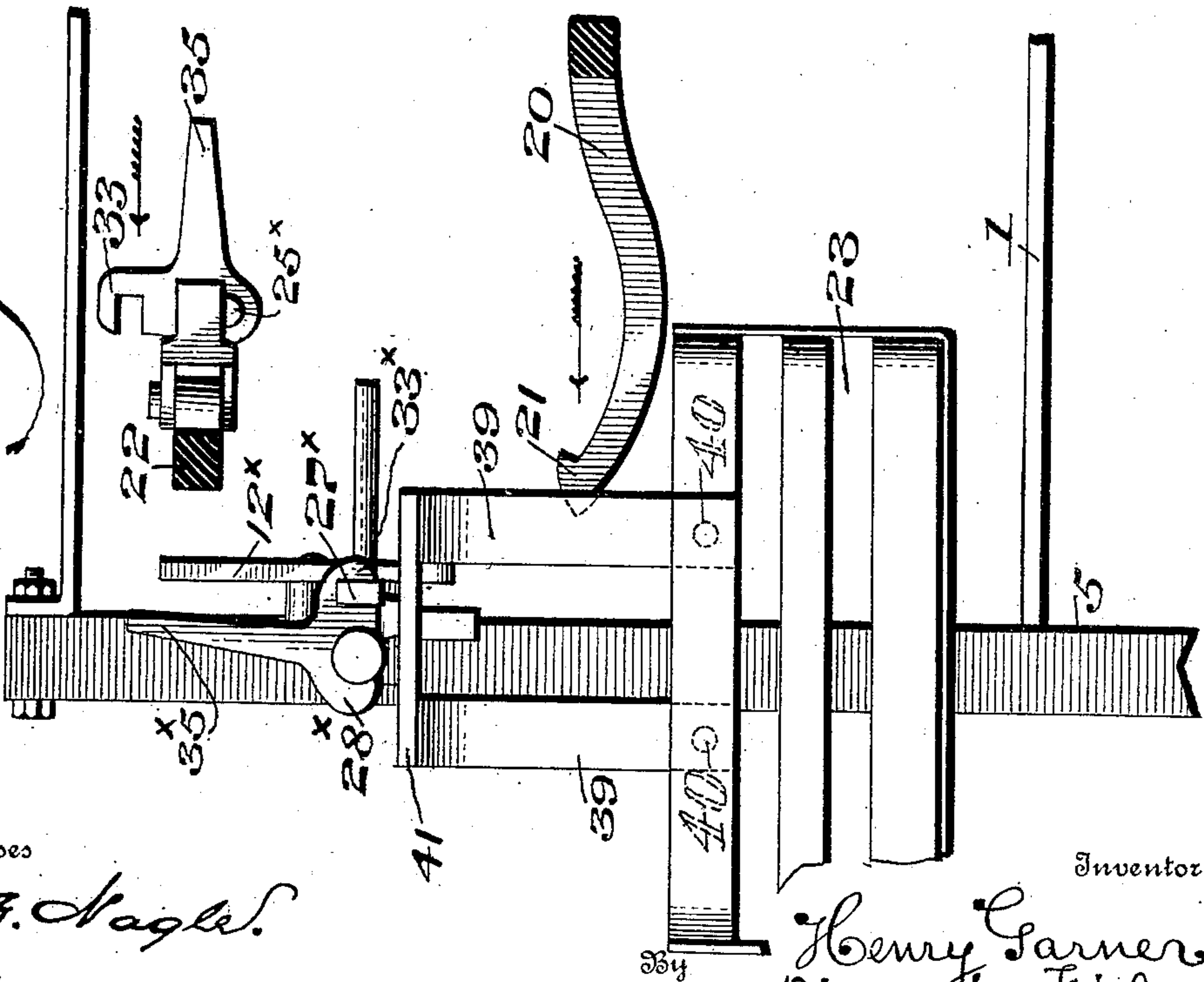


Fig. 6.



Witnesses

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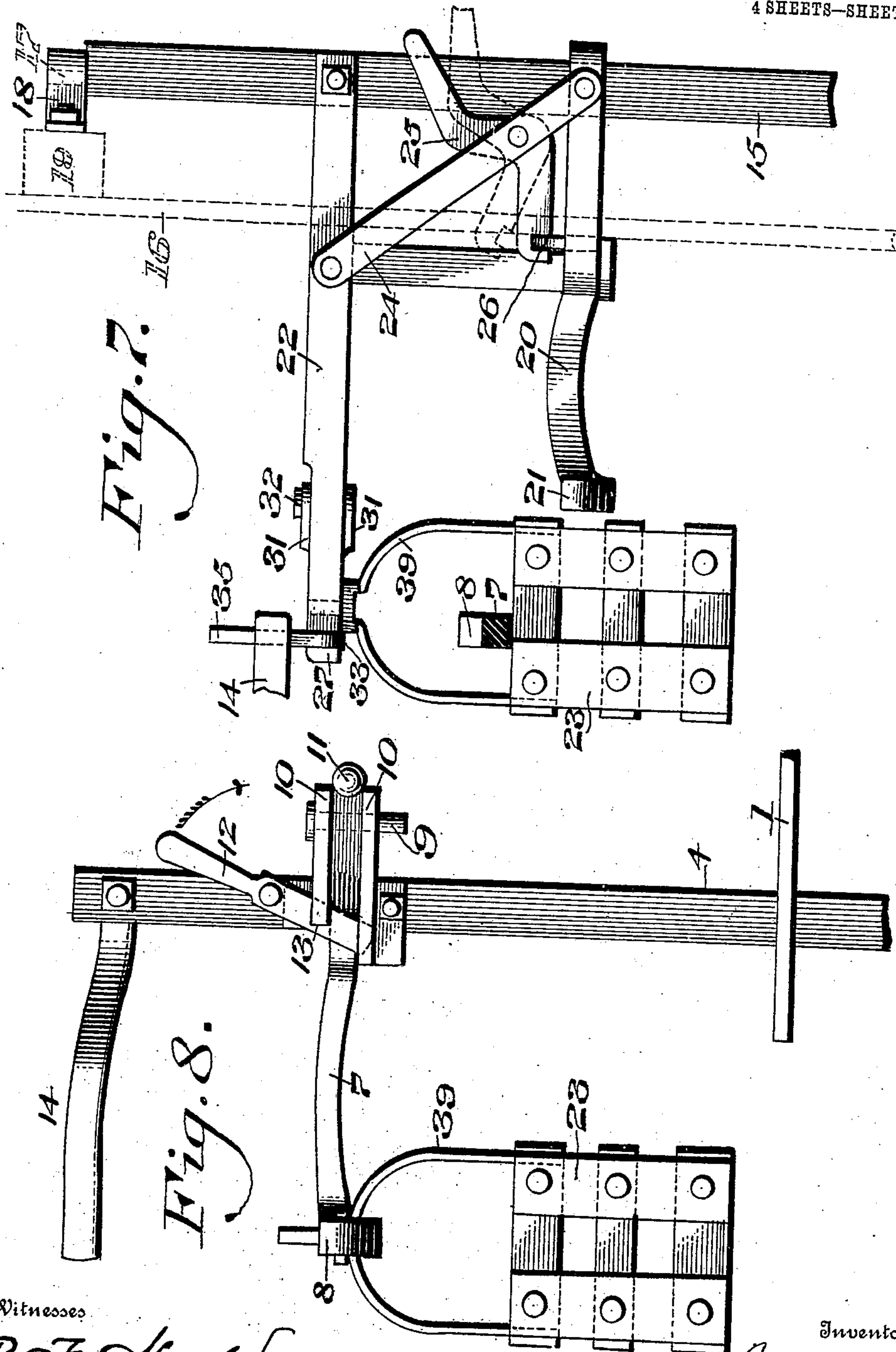


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4 SHEETS—SHEET 3.



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4 SHEETS—SHEET 4.

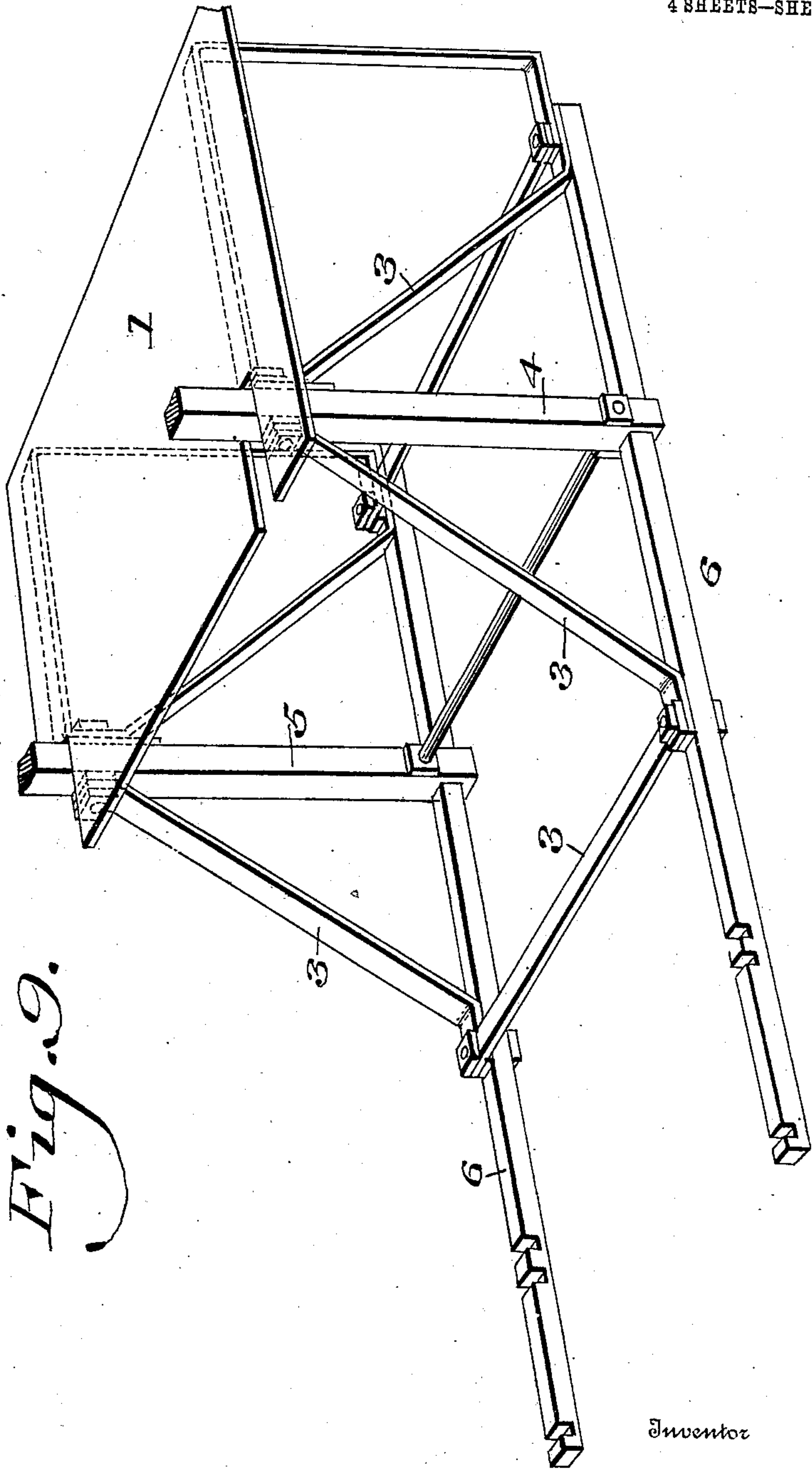


Fig. 9.

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# UNITED STATES PATENT OFFICE.

HENRY GARNER, OF MEDIA, PENNSYLVANIA.

## MAIL-BAG CATCHER AND DELIVERER.

No. 915,092.

Specification of Letters Patent.

Patented March 16, 1909.

Application filed May 26, 1908. Serial No. 435,169.

*To all whom it may concern:*

Be it known that I, HENRY GARNER, a citizen of the United States, residing at Media, in the county of Delaware, State of Pennsylvania, have invented a new and useful Mail-Bag Catcher and Deliverer, of which the following is a specification.

This invention relates to mail bag receiving and delivering apparatus adapted to be used in conjunction with moving trains and has for an object to provide a simple, cheap and efficient means of delivering a mail bag from a moving train to a stationary point or vice versa without subjecting the bag to the slightest rough usage or liability of its becoming torn open or ruined.

It is well known that apparatus in the present day service does not work at all satisfactorily in view of the fact that such apparatus is of a crude nature and the mail bags are subject to rough handling, in many cases being thrown violently against the receiving apparatus so that in a short time they are either destroyed or are cut to pieces by missing the receiving apparatus and being ground under the wheels of the moving train.

My apparatus consists of a strong stiff framework mounted adjacent a railroad track and firmly braced to resist the impact of the heaviest mail bags traveling with a maximum momentum received from a moving train. This framework coöperates with a suitable apparatus on the car for delivering and receiving the mail bags which are themselves placed in a novel receptacle, whereby they are protected from all the wear and tear incident to like apparatus used in the present practice.

It further consists of other novel features of construction, all as will be hereinafter fully set forth.

For the purpose of illustrating my invention I have shown in the accompanying drawings those embodiments thereof which are at present preferred by me and which have been found in practice to give satisfactory and reliable results, although it is to be understood that the various instrumentalities of which my invention consists can be variously arranged and organized and that my invention is not limited to the precise arrangement and organization of these instrumentalities as herein set forth.

Figure 1 represents a plan of an apparatus embodying my invention. Fig. 2 represents

a perspective view of my novel releasing clamps. Fig. 3 represents a perspective view of a portion of a coöperating part. Fig. 4 represents a section through the same in operative position. Fig. 5 represents a side elevation of the apparatus receiving a mail bag receptacle. Fig. 6 represents a side elevation of the apparatus delivering a mail bag receptacle. Fig. 7 represents an end view of a car delivering and receiving apparatus. Fig. 8 represents an end view of Fig. 5. Fig. 9 represents a perspective view of a portion of the apparatus located beside a railroad track.

Similar characters of reference indicate corresponding parts in the figures.

Referring to the drawings:—1 designates a platform located adjacent a railroad track 2 and supported on a suitable framework at a sufficient distance from the ground to bring the platform at a convenient height relative to the floor of a mail car so that receptacles may be interchanged between the two very readily.

It will be noted that the framework comprises, besides suitable braces 3, a pair of uprights 4 and 5, vertically secured relative to a pair of bars 6, the end portions of which are adapted to pass adjacent the ties and beneath the rails to which they are firmly secured in any desired manner to prevent relative distortion between the framework and the rails. Particular attention is called to this feature in view of the fact that it frequently happens, through spreading of the rail, displacement of the track or other cause, that the distance of a train passing over the tracks is slightly altered relative to stationary objects alongside the track. Should such displacement occur relative to the platform 1 and the rails 2, coöperation between the parts of my novel mail bag delivering apparatus on the car and the receiving apparatus on the framework 4 would be prevented and the device rendered inoperative. By passing the bars 6 under the rails 2, it will be seen that whatever change in position of the rails 2, the uprights 4 and 5 of the framework 3 will still maintain their correct relation relative to the side of a car passing over the rails, that is, in a plane substantially parallel to the sides of the car.

7 designates an arm having a hook-shaped end 8 adapted to receive mail bag receptacles and is pivoted in any suitable manner, as by



the pin 9, to the lugs 10, mounted upon the upright 4. The arm 7 terminates at the end adjacent the platform 1 in the handle 11, whereby the same may be swung about the upright 4 so that the hook end 8 is brought directly over the platform 1, thus allowing the removal of a mail bag receptacle in a convenient manner. In order to secure the arm 7 in operative position adjacent the railroad track and also to prevent improper movement thereof, a latch 12 is pivoted to the upright 4 and is so positioned as to swing downwardly and engage recesses 13 in the lugs 10 and thereby lock the arm 7 in open position. Positioned above the arm 7 and mounted on the upright 4 is an outwardly projecting trip arm 14 which extends to a point approximately directly over the hook 8. The function of these several parts will presently be described in connection with the cooperating parts on the car, which will now be taken up in detail.

15 designates a bar pivotally secured to one side of the interior of a car 16 adjacent a door-way, in the present instance the ends thereof forming journals 17 mounted in bearings 18 secured to a side frame 19 of the car 16. Fixedly secured to the bar 15 is an arm 20 having a hook end 21 similar to the arm 7 on upright 4 and performing a like function. Of course it will be understood that both the arms 7 and 20 are adapted to engage their respective receptacles while the car is in motion, one receptacle being deposited on the stationary arm 7 and the other carried off by the arm 20 on the car.

22 designates an arm fixedly secured in any suitable manner to the bar 15 and located above the arm 20 and extending beyond the hook 21 a sufficient distance to make room for a mail bag receptacle 23 adapted to be suspended from the end of this arm 22. Suitable braces 24 are located between the arms 20 and 22 in order to form a strengthening frame well adapted to withstand the severe shocks incident to receiving a mail bag receptacle, while the car is running at very high speed. In order to prevent swinging of these arms, a latch 25 is suitably pivoted to one of the braces 24 or any other suitable place, so as to engage a lug 26 on the frame formed by the braces 24 and thereby lock the arms in open position outside the car body. It will be clear that by swinging the latch 25 about its pivot, it will be released from the lug 26, when the arms and bar 15 may be swung so as to enter entirely within the car body. The arm 22 terminates in a projecting hook 27 adapted for engagement with a latch 28 suitably pivoted on a swinging member 29 pivoted to a projection 30 on the arm 22. In the present instance, this pivot comprises knuckles 31 on the member 29 engaging opposite sides of the projection 30 and being secured for a swinging

movement by means of a pin 32 passing through suitable apertures in the respective parts. The latch 28 comprises a hook 33 formed by a recess 34 which is adapted to engage and lock the member 29 to the arm 22 when it is swung into engagement with the hook 27. It will be noted that the latch 28 has a lever arm 35 of some considerable length providing a means for releasing the latch when desired, the operation of which will be presently described.

In order to prevent the latch from swinging a considerable distance beyond the unlocking pin and thus interfering with other parts of the apparatus, a stop lug 25<sup>x</sup> is provided at a suitable point on the pivoted member 29 in order to limit the backward swinging of the lever arm 35.

A recess 36 is formed in the member 29 having an inclined wall 37 and a similar recess 38 with a like wall therein is formed in the member 22, both recesses being so placed that when the parts are swung together and latched, a wedge-shaped opening will be formed therebetween.

The upright 5 carries a delivering apparatus precisely similar to that mounted on the arm 22 which forms the delivering part of the apparatus on the moving car and therefore it is thought unnecessary to describe the several parts in detail and they are, accordingly, provided with similar reference numerals having the exponents "x" in order to make a clear description between the several parts. The description already given may be read on one as well as the other.

It will be noted that the arm 22<sup>x</sup> is pivoted in a manner similar to the arm 7 and is provided with a like latch 12<sup>x</sup> whereby it may be located and locked in operative position. The mail bag receptacle 23 consists of a basket-like body portion having bails 39 swingingly connected thereto by means of the pivots 40 in order that the shock resulting from the impact with its cooperating part will be somewhat reduced. These bails 39 have preferably formed integral therewith, a top cross-bar 41, the lower portion of which has a recess 42 therethrough of substantially the same width as the receiving hooks 8 and 21 so that when the receptacles are dropped upon one or the other of these hooks, this recessed portion will effectually prevent any side swing tending to upset the receptacles and throw out the mail bags.

43 designates a projecting member having inclined sides corresponding to the sides of the recesses 36 and 38 so that when this member is placed in alinement with the recesses and the part 29 closed, and latched against the arm 22, the receptacle will be firmly held suspended from the end of the arm 22<sup>x</sup> or 22 as the case may be. When in this position it will be clear that if the lever 35 meets with any obstruction, the latch 28 will immediately



be released from the hook 27 and the mail bag receptacle 23 will instantly drop by gravity.

The operation of the device is as follows:—

5 The framework 4 carrying the platform 1 is secured in place beneath the rails 2 of an ordinary railroad track, and the apparatus correctly positioned relative to the movement of the cars on the said track. As soon as it is  
10 desired to receive and despatch a mail bag to a moving train, the arm 7 for receiving a receptacle 23 from a moving train is swung out in position adjacent the tracks and locked therein by means of the latch 12, of course it  
15 being understood that the projecting trip arm 14 is stationary and fixed, as illustrated in Fig. 8. The mail bag to be delivered to the moving train is then placed in a similar receptacle 23 and the projection 43 thereon  
20 inserted in the recess 38 of the arm 22<sup>x</sup> and locked therein, by swinging the member 29 into engagement therewith and bringing the hook member 33<sup>x</sup> over the hook 27, thereby raising the lever 35<sup>x</sup> into a vertical position.  
25 In the meantime, the mail to be delivered at this station is being made ready in the approaching train and is placed in a receptacle 23 which is projected from the door of the car and located in extended position outside  
30 the car and in alinement with the hook 8 on the fixed arm 7.

It will here be noted again that the lever arm 35 is projecting upwardly and is in alinement with the stationary trip arm 14.  
35 It will be apparent that as the car comes opposite the upright 4 the projecting trip arm 14 will engage the lever 35 and quickly release the catch 33, whereupon the swinging member 29 will open and allow the receptacle 23 to drop by gravity and since at  
40 this moment the hook arm 7 has entered beneath the bails 39 of the receptacle 23, it will drop directly upon this arm and be ready for removal, as desired. The car, of course,  
45 passes on to a position opposite the upright 5 where the arm 22 on the car acts as a trip for the lever 35<sup>x</sup> and releases the receptacle which is to be delivered to the moving train. In an exactly similar manner this is released  
50 from the locking catches and drops by gravity to land upon the projecting hook arm 20 which at this time has passed within the bails of the receptacle. As soon as the train has passed the station, the operator upon the  
55 platform 1, may release the latch 12 and swing the arm 7 around into position as indicated in dotted lines in Fig. 1, over the platform 1 and remove the bags of mail from the receptacle. Substantially the same operation takes place on the train, the latch 25 being released and the framework swung around into the interior of the car and the bags taken from the receptacle 23 and passed to the sorting clerks.

65 It will be apparent that I have devised a

construction which is very simple in operation, one which works efficiently no matter how slow or how fast the train may be moving and one in which the shock upon the mechanism is reduced to a minimum point. 70 Special attention is directed to the means provided for carrying the mail bags as the basket-like receptacles constituting this means are preferably made of metal and are subjected to all rough knocks and blows incident to the service while the bags which are  
75 carried therein are absolutely protected and are in no danger of being cut, or torn open, whereby the contents are scattered about and destroyed.

It will now be apparent that I have devised a novel and useful construction of a mail bag catcher and deliverer, which embodies the features of advantage enumerated as desirable in the statement of invention 85 and the above description and while I have in the present instance shown and described a preferred embodiment thereof which has been found in practice to give satisfactory and reliable results, it is to be understood 90 that the same is susceptible of modification in various particulars without departing from the spirit and scope of the invention or sacrificing any of its advantages.

Having thus described my invention, what 95 I claim as new and desire to secure by Letters Patent, is:—

1. In a device of the character described, a frame adjacent a railroad track, a receiving hook on said frame, a trip arm adjacent said 100 receiving hook, a delivery arm on a car, a pivoted member on said delivery arm, means to lock a mail bag receptacle between said member and said arm, and means adapted when in locked position to project into aline- 105 ment with said trip arm, whereby said mail bag receptacle is released to engage said hook.

2. In a device of the character described, a frame adjacent a railroad track, a receiving 110 hook on said frame, a trip arm adjacent said receiving hook, a delivery arm on a car, a pivoted member on said delivery arm, a mail bag receptacle, means thereon cooperating with said hinged member and said delivery 115 arm, whereby said mail bag receptacle is suspended when said hinged arm is closed, a latch on said hinged arm, and means on said latch disposed in alinement with said trip arm to release said mail bag receptacle to 120 engage said hook arm.

3. In a device of the character described, a delivery arm having a recess therein, a member pivoted to said arm, a latch securing said pivoted member and arm together, a mail 125 bag receptacle having a lug adapted to fit said recess, and means to lock said lug in said recess.

4. In a device of the character described, a delivery arm having a member pivoted 130



thereto, having a recess therein, a latch securing said pivoted member and arm together, a mail bag receptacle having a lug adapted to fit said recess, and means to lock 5 said lug in said recess.

5. In a device of the character described, a delivery arm having a recess therein, a member pivoted in said arm having a recess adapted to aline with the first mentioned re- 10 cess when the parts are in closed position, a mail bag receptacle having a lug thereon adapted to enter said recesses, and means to lock said lug within the said recesses.

6. In a device of the character described, a 15 delivery arm, a member pivoted thereto, a latch adapted to lock said parts together, a mail bag receptacle adapted to be secured to said delivery arm, and means to release said mail bag receptacle.

20 7. In a device of the character described, a delivery arm, a member pivoted thereto, means to secure a mail bag receptacle therebetween, a latch adapted to lock said pivoted member to said delivery arm, and means on 25 said latch to engage a stationary member to release said mail bag receptacle.

8. In a device of the character described, a frame adjacent a railroad track, a delivery arm on said frame, a pivoted member on said 30 delivery arm, means to lock a mail bag receptacle between said member and said arm, a receiving hook on a car, a trip arm adjacent said receiving hook, and means on said pivoted member adapted to project into aline- 35 ment with said trip arm to release a mail bag receptacle.

9. In a device of the character described, a delivery arm swingingly mounted on a sup-

port, a member pivoted thereto, a latch adapted to lock said parts together, a mail 40 bag receptacle adapted to be secured to said delivery arm, and means to release said mail bag receptacle.

10. In a device of the character described, a support pivotally mounted on a car, a de- 45 livery arm and a receiving hook fixedly mounted on said support, a member pivoted to said delivery arm, a latch adapted to lock said parts together, a mail bag receptacle adapted to be secured to said delivery arm, 50 and means to release said mail bag receptacle.

11. In a device of the character described, a support pivotally mounted on a car, a de- 55 livery arm and a receiving hook fixedly mounted on said support, a lock for holding said arm and hook exterior of said car, a member pivoted to said delivery arm, a latch adapted to lock said parts together, a mail 60 bag receptacle adapted to be secured to said delivery arm, and means to release said mail bag receptacle.

12. In a device of the character described, a support pivotally mounted in a car, a de- 65 livery arm and a receiving hook fixedly mounted on said support, a member pivoted to said delivery arm, a latch adapted to lock said parts together, a mail bag receptacle adapted to be secured to said delivery arm, and a trip arm adjacent said car to release 70 said mail bag receptacle.

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