

No. 772,761.

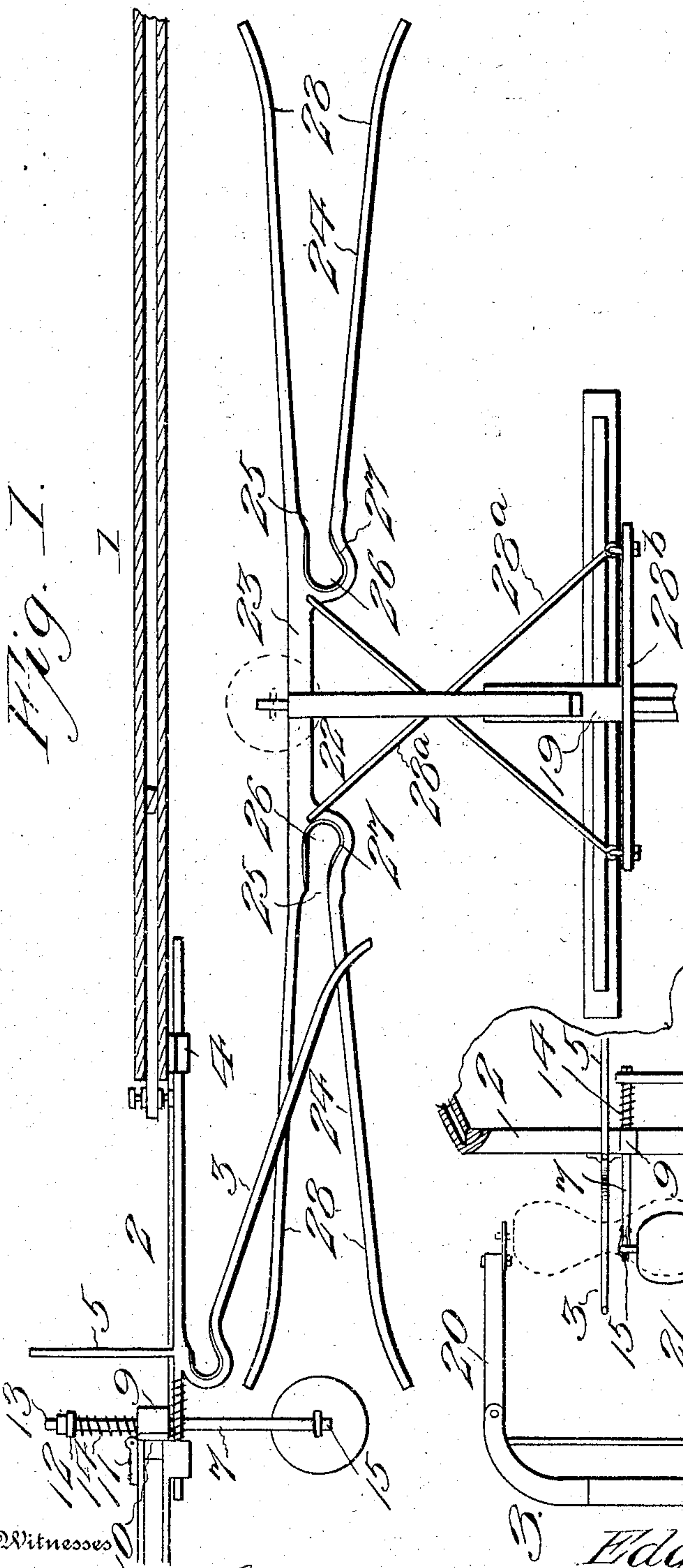
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E. N. TRAINHAM.  
MAIL BAG CRANE.

APPLICATION FILED FEB. 27, 1904.

NO MODEL.

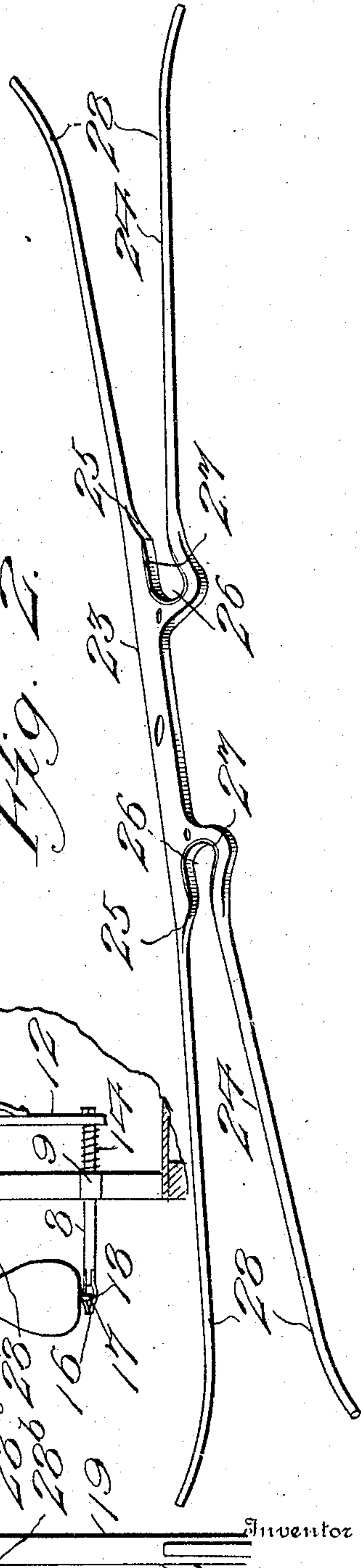
Fig. 1.



Witnesses

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Fig. 2.



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Fig. 3.

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# UNITED STATES PATENT OFFICE.

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## MAIL-BAG CRANE.

SPECIFICATION forming part of Letters Patent No. 772,761, dated October 18, 1904.

Application filed February 27, 1904. Serial No. 195,583. (No model.)

*To all whom it may concern:*

Be it known that I, EDGAR N. TRAINHAM, a citizen of the United States, residing at Washington, in the District of Columbia, have invented new and useful Improvements in Mail-Bag Cranes, of which the following is a specification.

This invention relates to mail-bag-receiving cranes adapted to be erected in proximity to a railway-track and embodying features of construction whereby a mail-bag may be delivered to either end thereof from a rapidly-moving car.

A further important feature of the improved crane is that it can be applied to the ordinary crane construction without interfering with the usual mail-bag-holding means, and a further advantage is to provide a crane having a mail-bag-receiving device which will reliably hold a mail bag or sack disposed therein at an elevation and prevent injury to said sack or bag.

The invention consists in the construction and arrangement of the several parts, which will be more fully hereinafter set forth.

In the drawings, Figure 1 is a horizontal section of a portion of a postal or mail car, showing the sack-holder applied thereto and arranged in operative position to a crane having a receiver thereon embodying the features of the invention. Fig. 2 is a detail perspective view of the receiver. Fig. 3 is an elevation of the upper part of the crane, showing the receiver in end view in its relation to the bag-holding means on the crane.

Similar numerals of reference are employed to indicate corresponding parts in the several views.

The numeral 1 designates a postal or mail car of usual construction having a door-opening 2 in the side thereof. Adjacent to the door is disposed the usual form of catcher-arm 3, rotatably held in bearings 4 and having an inner operating rod or grip 5 for holding the same in proper position to catch a sack from means erected adjacent to a track and embodying features common to the ordinary mail-sack-holding crane. The application of the improved features to the car and usual crane does not in the least change or modify

the ordinary crane attachments with the exception of an additional means carried by the crane and the car to render the operation of delivering a mail-sack from a car and holding said sack in positive position without interfering with the operation and function of the usual catcher-arm and sack-holding means on the crane.

The primary part of the improvement consists of a holder 6, comprising two bars 7 and 8, arranged in vertical alinement and slidably held in sleeves 9, having flanges 10 to bear against one side of the frame of the door 2.

The inner terminals of the flanges 10 are movably connected to hinge-plates 11, secured to the inner portion of the side of the car adjacent to the door-opening, so that the rods or bars 7 and 8 may be swung outwardly and inwardly. The inner ends of the rods or bars are connected by a coupling-bar 12, having a central grip 13 for use by the mail clerk in projecting the holder a sufficient distance outwardly from the car side. Between the terminals of the coupling-bar 12 and the inner ends of the sleeves 9 springs 14 surround the rods or bars 7 and 8 and operate to retract the said rods or bars into the car. The outer end of the rod or bar 7 has a supporting-latch 15 movably secured thereto and slightly upturned at its free end. The rod or bar 8 has two holding-latches 16 and 17 movable thereon with intermediate reversely-disposed bends to form a seat 18. Either one or both of the holding-latches 16 and 17 may be movably secured; but at least the upper one should be so connected. The supporting-latches 15 and holding-latches 16 and 17 are caused to engage the loops at the opposite ends of a mail-bag, as shown by Fig. 2, and when the mail bag or sack has been properly arranged for delivery in the holder the latter is swung outwardly and projected by the mail clerk a sufficient distance to enter a receiving means held adjacent to the track over which the mail-car moves. The holder 6 is in such position that the central contracted portion of the bag or sack will be engaged by the receiving means. Moreover, it will be seen that the holder forming the mail bag or sack delivering means is arranged below the usual



catching-arm 3, so as not to interfere with the operation of the latter when it is necessary to use the same.

Adjacent to the track a crane 19 is erected  
5 and has outwardly-projecting upper and lower arms 20 and 21, provided with means for holding a mail bag or sack for engagement with the catching-arm 3 and embody well-known constructions. (Clearly shown by Fig. 2.) The  
10 details of construction of the crane will be similar to devices of this class now in use, and in addition thereto the lower arm 21 has a receiving means 22 secured thereto and consists of a central attaching shank or body 23, applied and fastened to the under side of the  
15 end of said arm 21 and provided with opposite end forks 24, having contracted throats 25 adjacent to their inner terminals and leading to reduced seats 26, the seats and throats  
20 having rubber lining-strips 27 applied thereto to form adhering means for effectively engaging the bag or sack forced into the seats and also to avoid wear on the bag, the rubber strips 27 also serving as cushions. The members 28 of the forks 24 flare outwardly toward their free ends, the greater portions of the forks being located inwardly beyond the plane of the outer edge of the intermediate body 23, so as to avoid too great projection  
30 of the receiving means adjacent to the track and render the delivery of the bag more effective. By having the receiving means formed with receiving-forks at opposite ends it will be serviceable for receiving mail sacks  
35 or bags from cars moving in reverse directions over the track adjacent to the crane. It will be understood that the receiving means 22 will be constructed of suitable metal and that the members of the forks 24 will yield  
40 sufficiently to permit mail sacks or bags to be forced thereinto and also afterward withdrawn therefrom by a properly-authorized person. The receiving means 22 is held rigid in connection with the arm 21 by crossed  
45 brace-rods 28<sup>a</sup>, connected at their front terminals to said means adjacent to the seats 26 and at their rear terminals to the opposite ends of a longitudinal brace-bar 28<sup>b</sup>, secured to the inner edge of the crane-upright 19.  
50 A mail bag or sack having been arranged in the holder 6, the latter is projected from the side of the car by the mail clerk a sufficient distance to cause the said sack to enter either one of the forks 24 and be forced back into  
55 the adjacent seat 26. When the mail bag or sack reaches the seat 26, the rods 7 and 8 immediately become disconnected from the extremities of the mail bag or sack by the tension exerted thereon, and at the same time a  
60 mail-bag suspended in the upper portion of the crane may be caught by the arm 3. After delivery of a mail bag or sack the mail clerk

or operator releases the holder, and the latter is thrown inwardly into the car by the springs 14 and may then be turned against the inner  
65 portion of the side of the car and avoid material obstruction of the door-opening. The springs 14 also take up the shock or jar that may result from a quick delivery or disposition of the bag within either fork and compensate for pulling movement exerted on the  
70 rods 7 and 8 when the bag or sack is disconnected from the rods after arriving in the seat 26, and thereby overcome any tendency to fracture or breakage of the parts of the  
75 holder.

The improved attachments are advantageous not only in performing the functions set forth, but also in view of the fact that they may be applied without in the least modifying the general structure of mail holding and catching devices now commonly used. A further advantage is that the delivering attachments carried by the car may be operated simultaneously with the catcher-arm 3 by one  
85 person.

Changes in the proportions, dimensions, and minor details may be resorted to without in the least departing from the spirit of the invention.

Having thus fully described the invention, what is claimed as new is—

1. A crane having a mail-bag receiver secured thereto and disposed in horizontal position, said receiver consisting of an intermediate body with forks continuous therewith and projecting in opposite directions therefrom, each of the forks having an inner contracted seat, the maximum projection of the forks being innermost, and means carried by  
95 a car for delivering a mail-bag into the opposite forks of said receiver.

2. A crane having a mail-bag receiver rigidly held thereby and disposed in horizontal position, said receiver consisting of a fork  
105 with a contracted seat at its inner terminal, an elastic lining for the said seat, and means carried by a car for delivering a mail-bag into the receiver.

3. A crane having means for detachably  
110 holding a mail-bag, a receiver below the said means consisting of an intermediate body with forks integrally projecting in opposite directions therefrom, the maximum projections of the forks being innermost with respect to the  
115 body, and a car having a mail-bag catcher and an independent mail-bag-delivering means to cooperate with the opposite forks.

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

EDGAR N. TRAINHAM

Witnesses:

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