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 APPLICATION FILED SEPT. 9, 1908.

920,580.

Patented May 4, 1909.
 2 SHEETS—SHEET 1.

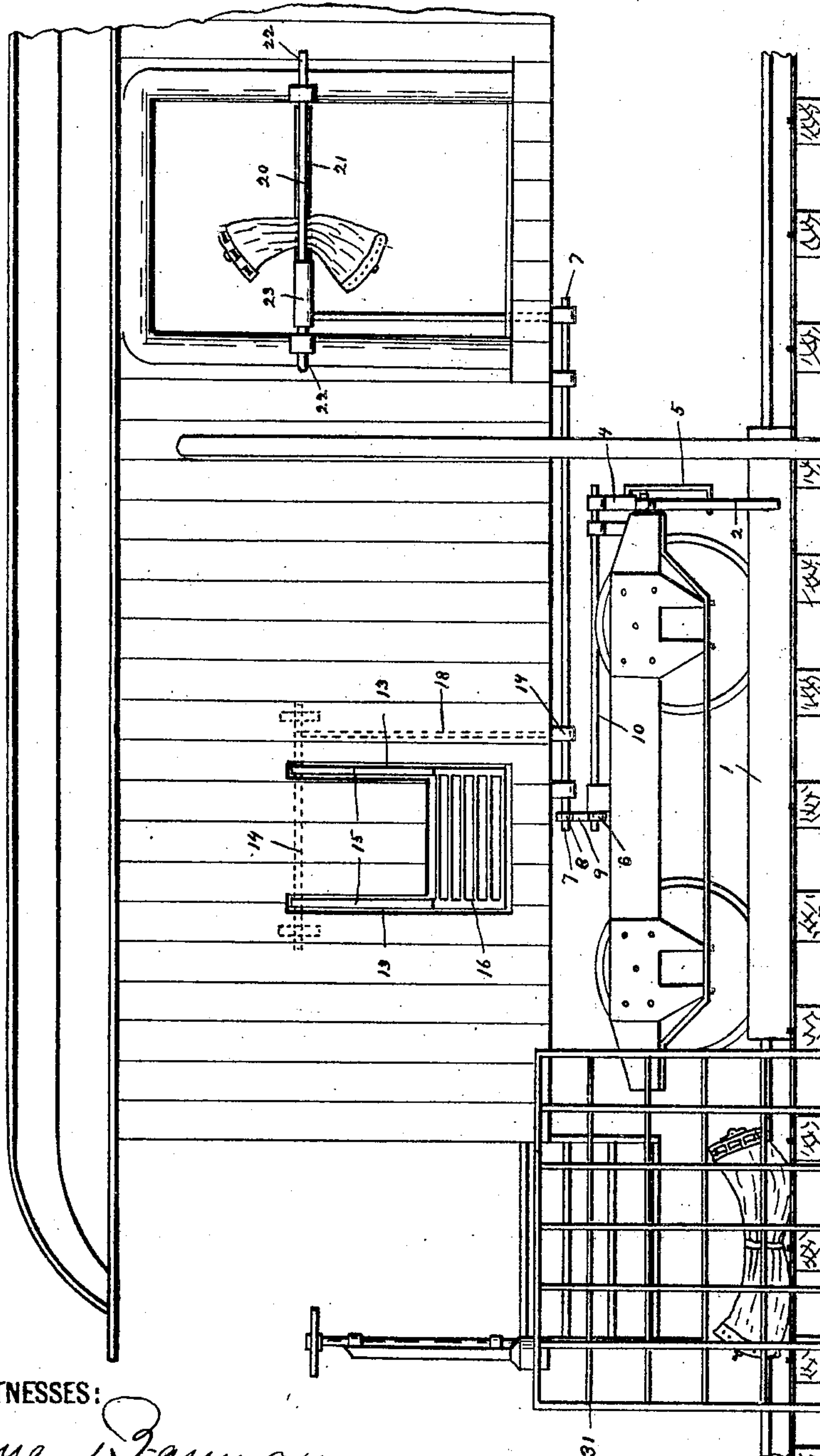


Fig. 1

WITNESSES:

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INVENTORS

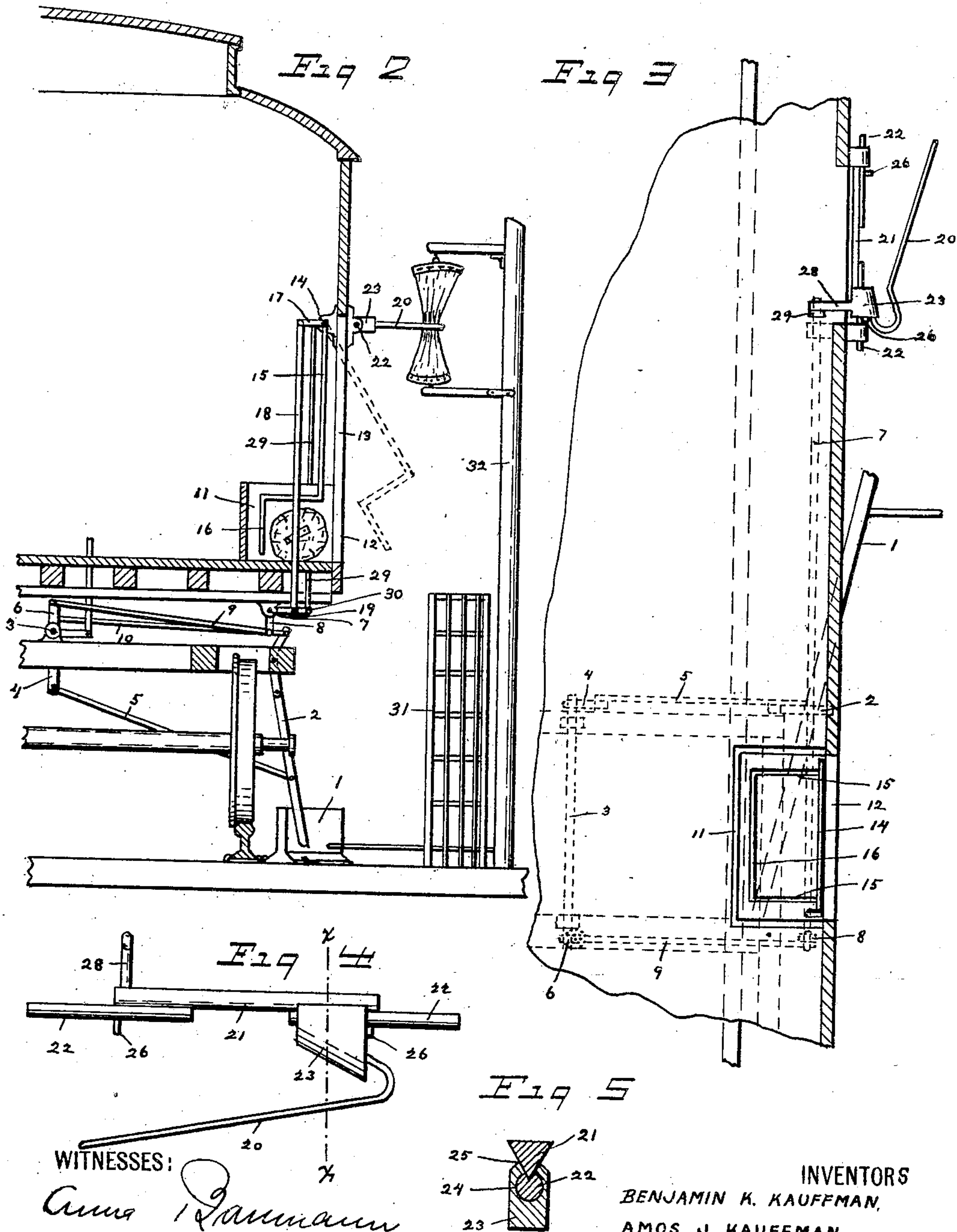
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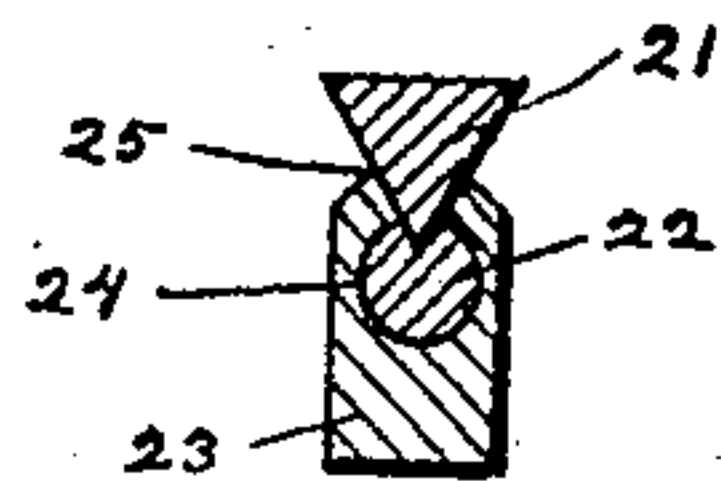
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UNITED STATES PATENT OFFICE.

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AUTOMATIC MAIL-BAG CATCHING AND DELIVERING APPARATUS.

No. 920,580.

Specification of Letters Patent.

Patented May 4, 1909.

Application filed September 9, 1908. Serial No. 452,297.

To all whom it may concern:

Be it known that we, BENJAMIN K. KAUFFMAN and AMOS J. KAUFFMAN, citizens of the United States, residing at Kin-
5 zers and Gap, respectively, in the county of Lancaster and State of Pennsylvania, have invented certain new and useful Improve-
ments in Automatic Mail-Bag Catching and Delivering Apparatus, of which the follow-
10 ing is a specification, reference being had therein to the accompanying drawing.

Our invention relates to a mail pouch delivering and catching apparatus of such a
15 class and in a manner as hereinafter set forth for automatically delivering mail matter contained in pouches or sacks from moving postal cars and to deliver such pouch
or sack at the proper moment and with sufficient force to insure its safe deposit at
20 a safe distance from the truck to prevent the pouch or sack from being thrown under the wheels by the suction of the passing train.

A further object of the invention is by the
25 same automatic means to set the catching arm which is attached to the car in such a position that it will catch the pouch or sack from the usual crane and deliver same with-
in the car.

30 Another object of the invention is to provide a catching fork of improved design that may be readily reversed to suit the direction of travel of the car or transferred
35 to the opposite side of the car, and which will be automatically operated in connection with the delivering apparatus so that the catching and delivering of the pouch will
be done at the proper time and in proper relation to each other, or either operation may
40 be conducted independently of the other, as mail is often taken on when none is delivered or delivered when none is taken on.

With these and other objects in view our device consists in certain constructions and
45 combinations of parts that will hereinafter be fully described and claimed, but it is fully understood that slight changes may be made in the construction and combination of parts without departing from the
50 spirit of the invention.

In the drawings like figures indicate corresponding parts in all the views and Fig-

ure 1, is a side elevation of a partial mail car, showing the delivering, catching and
operating mechanism. Fig. 2, is a cross
55 sectional view of a portion of a car, in which the operating mechanism is shown more in detail. Fig. 3, is a top plan view of the operating mechanism, showing the mode of
60 attaching it to the car and the cooperation with that attached to the truck. Fig. 4, is a detail view of our improved reversible catching fork. Fig. 5, is a cross sectional
65 view of the catching fork on the line X X of Fig. 4.

Referring to the drawing, 1, indicates a trip or draft rail which is secured upon the
ties outside the traction rail and in such a position that one of its ends is set near the
70 traction rail and its other end diverges therefrom.

At a suitable position upon the car truck is pivoted the trip arm 2, which extends
75 downward in such a position that its lower end overlaps the top of the draft rail 1, and as it engages the outer side of said draft rail 1, and by the movement of the car is
carried along the outer side of said rail 1, by the angle at which said rail 1, is placed
80 with regard to the traction rails, the trip arm 2, will have its lower end swung outward, and said trip arm 2, is further provided with the rod and spring 10, to retain
it in a vertical position when not in engage-
85 ment with said draft rail.

Mounted in suitable bearings secured to the car truck, midway and parallel to the
traction rails, is secured the shaft 3, to the forward end of which is rigidly secured the
90 crank arm 4, the lower end of which is connected to the trip-lever 2, by the rod 5, and to the rear end of said shaft 3, is rigidly secured the crank 6.

Secured in bearings beneath the car body in a direction parallel to the sides of said
95 car is the main shaft 7, the rear end of which terminates at a point opposite the center of the traction truck and has rigidly secured to the end thereof, a crank 8, the
end of which is attached to the crank 6, by
100 the rod 9, in such a manner that said main shaft 7, will be rocked by the action of the trip-lever 2, without reference to the direction at which the car body may stand with

regard to the track, as would be the case in traveling around a sharp curve.

Within the car at a position preferably beneath one of the mail sorting desks is placed a delivery box 11, having three sides and being placed in connection with the opening 12, in the side of the car, said opening 12, having extending upward, openings 13.

To the inside of said car at a suitable height from the floor is mounted the shaft 14, which extends parallel to the floor of the car and which passes the delivery orifice 12, at a point near the top thereof, while suspended from said shaft 14, and rigidly secured thereto, are the two kicker arms 15, of the deliverer which are made in the form of a Z with the ends of their long legs secured to the shaft 14, and their short legs joined to each other by the grating 16, which when said deliverer is in a closed position said grating 16, stands in a vertical position against the back of the box 11, in such a manner that the mail pouch may be placed in the box and ejected therefrom by the action of the deliverer. Said deliverer being operated by a crank 17, which is rigidly secured to the end of said shaft 14, and to which is secured a rod 18, which is connected to a crank 19, which is rigidly secured to said main shaft 7.

Within the doorway of the car and mounted in suitable bearings attached to the outer side of the door jambs is the catcher fork 20, which consists of the bar 21, square or triangular in cross section and to which are secured and integral therewith the bearing bars 22, upon either of which is detachably secured the arm block 23, which is formed with the orifice 24, and communicating slot 25, to allow of its being slipped over either of the bars 22, and the slot 25, engaging the bar 21, and thus retaining said block 23, from turning, while the stop-pins 26, retain said block 23, from entirely slipping over the ends of the bars 22, and to the opposite side of said block 23, is secured integral therewith the catcher hook 27. Secured to said bar 21, and at right angles therewith, is the crank arm 28, extending inwardly from the bar 21, and having its end connected by the rod 29, to a crank 30, on the shaft 7, in such a manner that by the rock of the shaft 7, the catch fork will be extended at right angles to the car and in a position to receive the pouch from the crane. In this manner it will be readily seen that a mail pouch having been hung on the crane 32, and a mail pouch having been deposited in the delivery box, that as the trip-lever becomes engaged by the draft rail and is swung outward and the connecting rods and cranks are thus pulled which will rock the shaft 7, that the catcher fork will be extended to catch

the bag as it passes the crane and at the same time the delivering apparatus will eject the mail pouch from the box which will be secured by a suitable guard 31, may be situated alongside the truck to stop the outgoing pouch.

It may be further stated that the trip-lever 2, may be mounted on a crane 32, as shown in Fig. 2, and by the rods 10, and 33, which can be operated from any suitable part of the car, said lever 2, may be lifted up so that it will be out of engagement with the draft rail, and also by the rod 34, attached to the end of the draft rail 1, and which may be operated by the setting of the crane or by hand, said rail may be thrown in or out of engagement or set to operate the trip-lever.

Having thus described our invention what we claim as new and desire to secure by Letters Patent is:—

1. In an automatic mail pouch delivering and catching apparatus, a draft rail secured to the road bed without the traction rails and diverging therefrom, a trip-arm mounted upon the car truck with its lower end adapted to be engaged and operated by said draft rail, a horizontal rocker shaft mounted upon said truck, a crank-arm secured to the forward end of said rocker shaft, a connecting rod joining said crank to said trip-arm, a rocker arm mounted to and beneath the car body and parallel thereto, a crank secured to said rocker arm, and a connecting rod joining said crank to a crank secured to the rear end of said rocker arm upon the truck, means for delivering a pouch by the rocking of said arms, and means for catching a pouch by the action of said rocker arm and trip-arm.

2. In an automatic mail pouch delivering and catching apparatus, a delivery box secured within the car and communicating with an orifice in the side of said car, an ejecting grate having a lateral motion through said box and the orifice in said car, Z-shaped levers formed with a long leg and a short leg, the short legs of said levers secured to the ends of said ejecting grate, a rocker shaft secured to the ends of the long legs of said levers and mounted upon the inner side of said car, means for rocking said rocker arm and means for automatically operating said rocking mechanism.

3. In a mail pouch delivering and catching apparatus, a reversible and detachable catching fork pivotally mounted without the doorway of the car, and comprising a triangular bar, bearing bars parallel to said triangular bar and integral therewith, a slide block secured upon the shut end of the fork arm and formed with a longitudinal orifice in the body thereof and a longitudinal slot in the side thereof and adapted to

embrace said triangular and said bearing bars, stop-pins extending at right angles from said bearing bars and limiting the engagement of said slide block, a lever secured to said triangular bar at right angles thereto and adapted to be engaged and operated by a series of bell-cranks and rods actuated by automatic apparatus.

In testimony whereof we affix our signatures in presence of two witnesses.

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AMOS J. KAUFFMAN.

Witnesses:

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MABEL L. LEFEVRE.