No. 742,670. PATENTED OCT. 27, 1903.

J. KAISER.

DEVICE FOR RECEIVING MAIL POUCHES FROM MOVING TRAINS.

APPLICATION FILED MAR. 6, 1903.

NO MODEL.

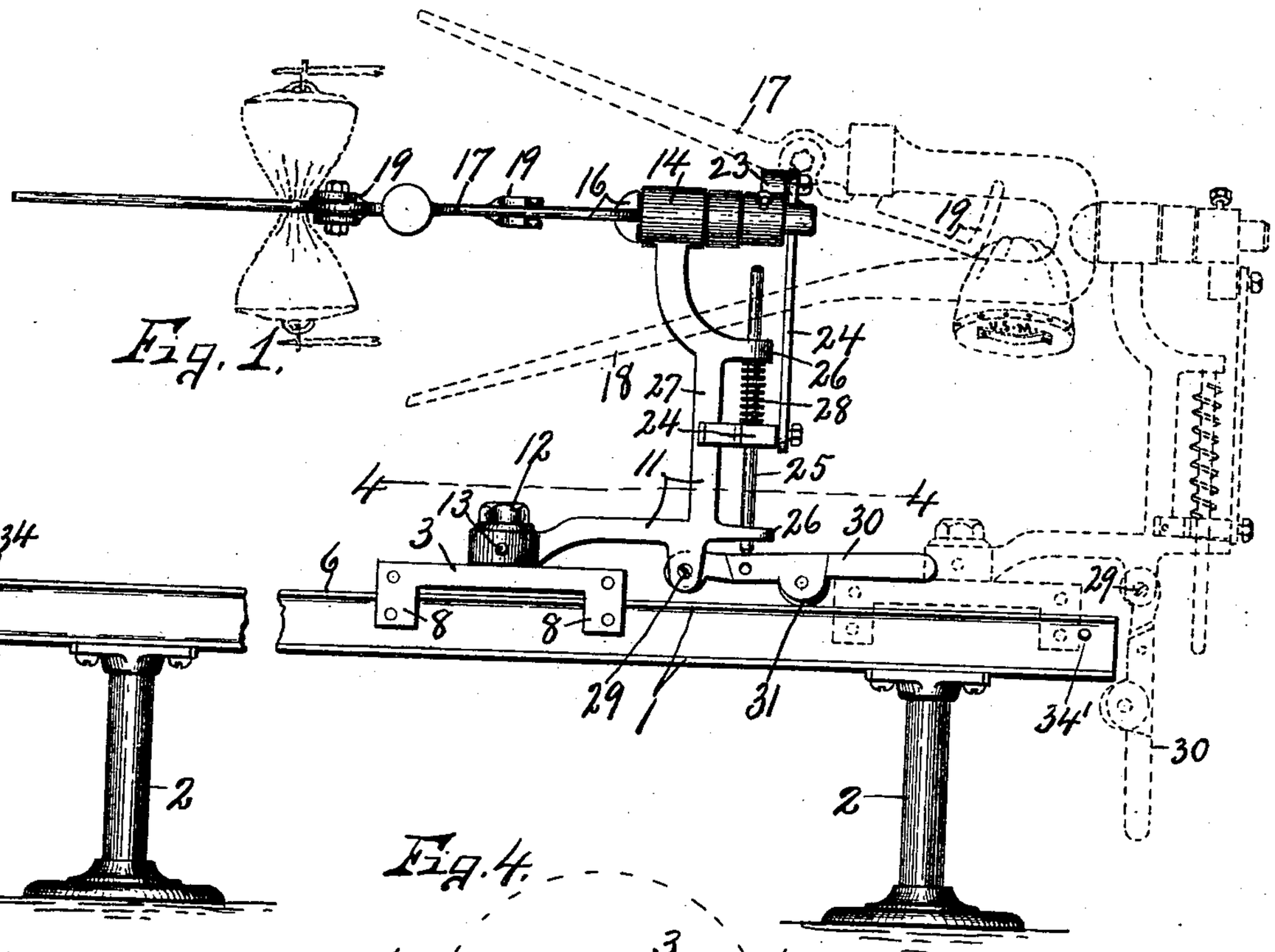

Fig. 1.

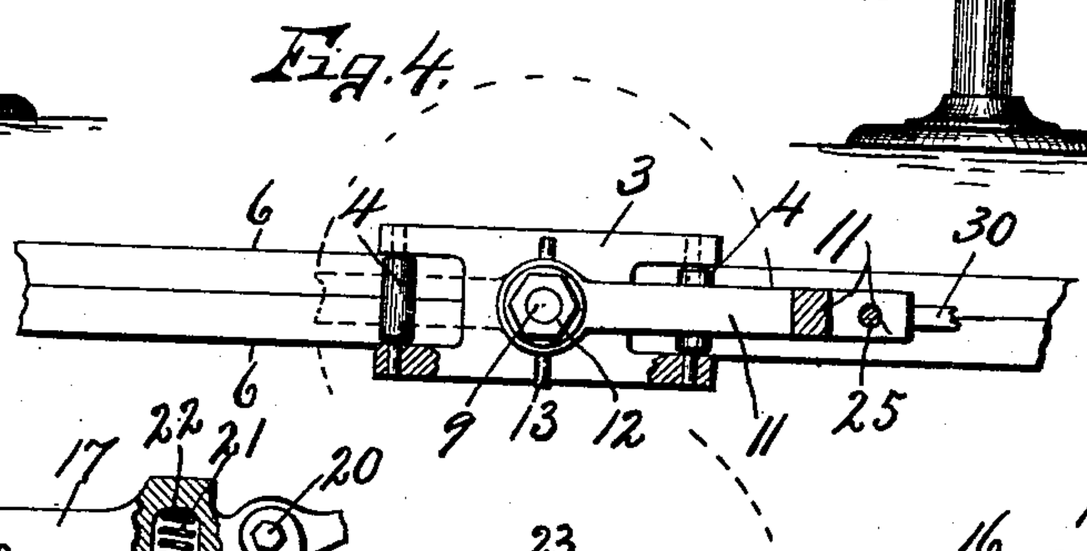

Fig. 4.

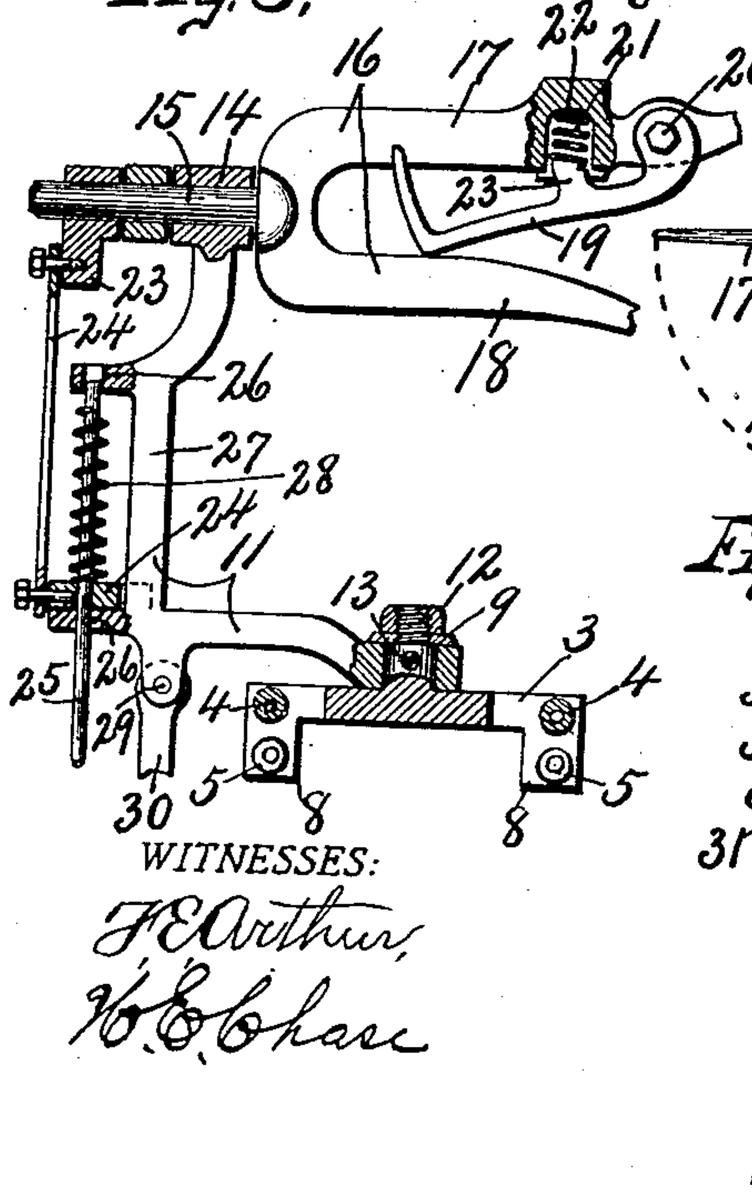

Fig. 3.

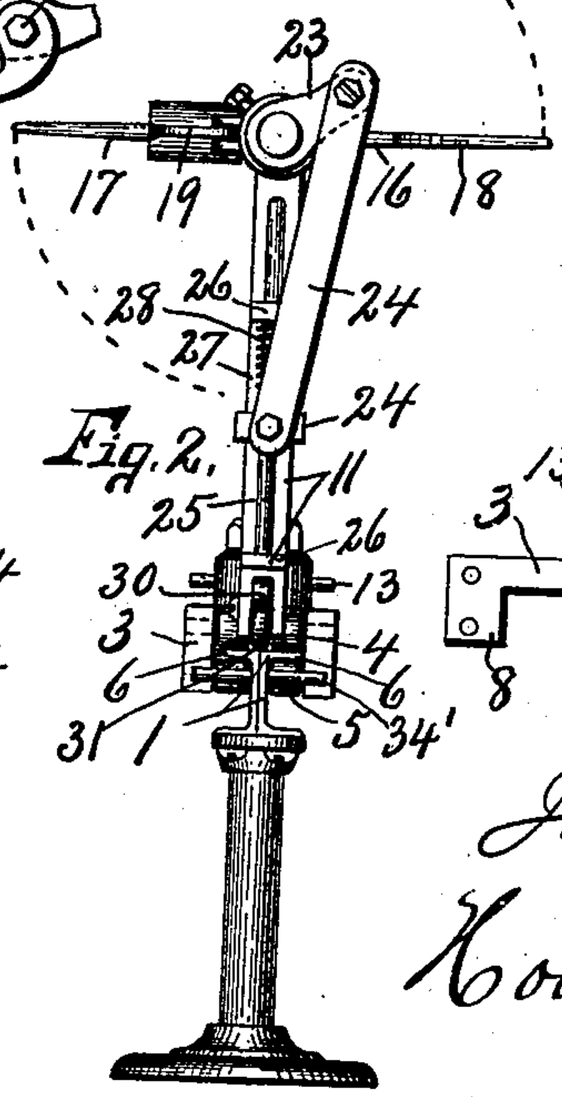

Fig. 2.

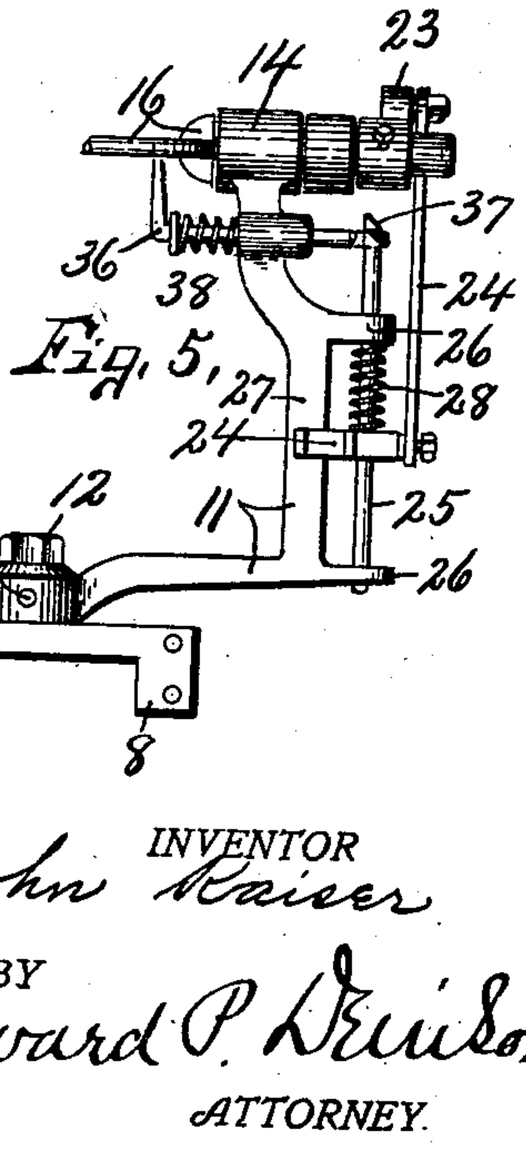

Fig. 5.

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No. 742,670. Patented October 27, 1903.

UNITED STATES PATENT OFFICE.

JOHN KAISER, OF SENECA FALLS, NEW YORK.

DEVICE FOR RECEIVING MAIL-POUCHES FROM MOVING TRAINS.

SPECIFICATION forming part of Letters Patent No. 742,670, dated October 27, 1903.

Application filed March 6, 1903. Serial No. 146,452. (No model.)

To all whom it may concern:

Be it known that I, JOHN KAISER, of Seneca Falls, in the county of Seneca, in the State of New York, have invented new and useful Improvements in Devices for Receiving Mail-Pouches from Moving Trains, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to improvements in railway-mail-pouch receivers which are adapted to receive and retain a mail-pouch delivered thereto from the moving car or train.

The primary object of this invention is to mount the receiver upon a carriage which is movable along a track or guide parallel with the railway-tracks, so that a mail-pouch or equivalent packet may be delivered at any station from a car or train under high speed without liability of injury to the pouch or its contents, the receiver being constructed and arranged so as to retain the pouch to prevent any possibility of accidental displacement by which the pouch or packet might fall under the wheels of the car or train.

The principle underlying this invention is that the momentum of the pouch when delivered from the train into the receiver operates to impel the carriage along its track or guide until it comes to rest by its own inertia, thus reducing the force of the impact of the pouch with the receiver.

Another important purpose of this device is to provide means whereby the receiver is automatically tilted from its normal receiving position at about the same time or before the carriage comes to a position of rest, so that the arms of the receiver when at rest awaiting the arrival of the attendant to remove the pouch stand in a vertical position, and thereby avoid any liability of injury to the passengers or employees of the passing train.

Referring to the drawings, Figure 1 is a side elevation of a mail-pouch receiver embodying the various features of my invention. Fig. 2 is an end view of the mechanism seen in Fig. 1. Fig. 3 is an enlarged detail sectional view of the detached carriage and the pouch-receiver mounted thereon. Fig. 4 is a sectional view taken on line 4 4, Fig. 1. Fig. 5 is a detail view of a slightly-modified form of trip mechanism for releasing the rocking receiver-arms.

Similar reference characters indicate corresponding parts in all the views.

In devices of this character it is important that the receiver be of such construction as to prevent injury to the bag or pouch and its contents and also to reduce the liability of injury to the occupants of passing trains, particularly when the receiver is used in connection with double-track railways, in which instance the device is located between the tracks, and consequently in close proximity to the moving cars.

In carrying out the objects stated I provide a track or guide 1, which is mounted upon suitable supports or standards 2 in proximity to and parallel with the railway-tracks. (Not shown.) This track or guide may be of any desired construction adapted for use in connection with a sliding carriage 3, and preferably consists of an I-beam or a T-beam, of iron or equivalent material, which may be made from old rails or parts of bridges and other structures which have been discarded as unfit for heavier uses. These tracks or guides 1 are preferably of sufficient length to permit the carriage to move freely until the momentum imparted thereto is substantially spent. The carriage 3 is preferably mounted upon the upper T-shaped head of the track, and its opposite ends are provided with upper rollers 4 and lower rollers 5, the upper rollers resting upon the top face of the track 1 and the lower rollers engaging the under faces of the laterally-projecting flanges, as 6, of said track or guide, whereby the carriage is not only free to move endwise of the guide, but is held from upward or lateral displacement, it being understood that the main portion of the carriage is superimposed above the track and is provided with depending lugs 8, which lie in close proximity to the edges of the flanges 6. This carriage 3 is provided with a substantially central vertical stud or bearing 9, upon which is mounted a horizontally-swinging bracket 11, the upper end of the stud being threaded and provided with a nut 12, which holds the bracket in its operative position. The object of mounting this bracket upon

the carriage to swing horizontally is to permit the receiver to be shifted to different or reverse positions for receiving the mail-pouches from trains moving in opposite directions, and in order that the receiver may be held in its adjusted position I provide the stud 9 and the adjacent portion of the bracket 11 with apertures into which is removably inserted a locking pin or key 13, which serves to hold the bracket and carriage in fixed relation to each other.

The bracket 11 rises a considerable distance above the carriage 3 and is provided with a substantially horizontal bearing 14 in its upper end, in which is journaled a shaft or spindle 15 of a receiver 16. This receiver overhangs the carriage 3 and is provided with diverging-arms 17 and 18, united at their meeting ends to the spindle 15, the arms 17 being provided with a latch or detent 19, which is pivoted at one end at 20 to the arm 17, and its other end is bifurcated and normally rests upon the adjacent face of the other arm, 18, a suitable spring 21 being inserted in the socket 22 in the arm 17 and engages a lug 23 of the latch 19 for holding said latch against the arm 18. This latch is adapted to rock between the arms 17 and 18, and the bifurcated extremity 22 normally extends entirely across the space between the arms 17 and 18, forming an abutment to prevent the displacement of the bag or pouch when once inserted into the receiver by the moving car or train.

When the receiver is placed in operative position to receive the pouch from the moving train, the arms 17 and 18 are normally disposed in a substantially horizontal plane, the bag being supported in any desired manner upon the car in such position as to enter between the arms, during which operation the pouch engages the latch 19 and moves it laterally and continues to move beyond the free end of the latch into the closed end of the receiver, whereupon the latch is automatically forced to its normal position across the opening between the arms by the spring 21, thereby holding the pouch from accidental displacement.

It is evident that the impact of the bag or pouch against the closed end of the receiver imparts a momentum to the carriage which impels it along the track 1 until the momentum is spent. Either during this movement of the carriage or at the end of its movement it is desirable to automatically shift the receiver-arms 17 and 18 from a horizontal to a substantially vertical position, so as to occupy a minimum space laterally to reduce the liability of accident by contact of the passengers or trainmen with the receiver.

In the drawings, Figs. 1 to 4, inclusive, I have shown a device for automatically shifting the position of the receiver, which consists of an eccentric or crank-arm 23, secured to the spindle 15, and a connecting rod or link 24, having one end connected to the crank-arm 23, and its other end is pivotally attached to a vertically-sliding cross-head 24, which is adjustably secured to a vertically-sliding rod 25. The rod 25 is guided in vertical bearings 26 in the bracket 11, and the cross-head 24 is usually bifurcated and moves with a sliding fit upon an upright portion 27 of the bracket 11 between the bearings 26. A spring 28 encircles the rod 25 between the upper bearing 26 and the cross-head 24, said spring acting to depress the cross-head 24 and bar 25, attached thereto, which in turn transmits a rocking motion to the receiver 16 through the medium of the connecting rod or link 24 and crank-arm 23, this rotary motion being equal to substantially one-quarter of a circle and serving to rock the receiver-arms 17 and 18 from a horizontal to a vertical position, and vice versa, the spring 28 serving to hold the receiver in its vertical or inoperative position. Pivotally secured at 29 to the lower part of the bracket 11 is a lever 30, which is adapted to swing with the bracket 11 and has an independent movement upon its pivot 29, said lever being operable manually for engaging and elevating the vertically-sliding rod 25 and cross-head 24 against the action of the spring 28, and thereby shifting the position of the receiver-arms 17 and 18 from a vertical position to a substantially horizontal position through the medium of the connecting rod 24 and crank-arm 23. This lever is provided with a roller 31, which when the device is placed in operative position ready to receive the mail-pouch rests upon the top face of the track 1, and thereby holds the lever in its operative position and at the same time permits it to slide freely along the track when the carriage is moved by the impact of the mail-pouch with the receiver.

In the operation of my invention the carriage 3, with the receiver thereon, is moved manually along the track to its extreme end toward an approaching train, this movement being limited by a stop 34 upon the track in the path of the carriage. In this position the roller 31 rides along the top face of the track, and the lever 30 is held in its up position for shifting and holding the receiver-arms in a substantially horizontal position with the opening toward the approaching train ready to receive the mail-pouch. Now when the pouch is delivered from the car into the jaws of the receiver the impact impels the carriage along the track until it is stopped by an abutment 34′ at the other end of the track, whereupon the lever 30, which is in advance of the carriage, automatically drops over the end of the track and releases the cross-head 24 and rod 25, so that the spring reacts upon the same and automatically shifts the receiver-arms to a vertical position with the bag still retained by the latch 22.

In some instances it has been discovered that the momentum imparted to the carriage

by the impact of the mail-pouch to the receiver is insufficient to move the carriage to the farther end of the track, in which instance I dispense with the lever 30 and hold the cross-head 24 and rod 25 in its operative position by a modified form of detent (seen in Fig. 5) adapted to be tripped by the first impact of the pouch with the receiver, which immediately permits the receiver-arms to tilt from a horizontal to a vertical position. This detent is shown as consisting of a sliding bar or rod 36, which is normally held in engagement with a tooth 37 upon the upper end of the rod 25 by a spring 38, one end of the bar being normally located in the path of the incoming mail-pouch, so that when the mail-pouch passes the latch 19 it immediately strikes the end of the rod 36 and operates the same against the action of the spring 38 to release the bar 25.

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

1. A device for receiving mail-pouches from moving railway-cars comprising a pouch-receiver and a support therefor, the receiver having a rocking motion to and from its receiving position, and means controlled by the entrance of the pouch to the receiver for causing said rocking motion from the receiving position.

2. A device for receiving mail-pouches from moving railway-cars comprising a pouch-receiver and support therefor, the receiver having a limited movement in the direction of motion of the car and actuated by the impact of the mail-pouch therewith, said receiver having an independent rocking movement to and from its receiving position, and means controlled by the entrance of the pouch to the receiver for causing said rocking movement from the receiving position.

3. A device for receiving packets from moving cars comprising a track or guide, a carriage movable upon the track or guide, a horizontally-swinging bracket mounted on the carriage, and a forked arm mounted on the bracket to receive the packets.

4. A device for receiving packets from moving cars comprising a track or guide, a carriage movable upon the track or guide, a horizontally-swinging bracket mounted on the carriage, a forked arm journaled on the bracket to move to and from its receiving position, and automatic means controlled by the entrance of the packet to the receiver for rocking the receiver from its receiving position.

In witness whereof I have hereunto set my hand this 3d day of March, 1903.

JOHN KAISER.

Witnesses:
T. J. ELLIOTT, Jr.,
S. G. FRISBIE.