No. 822,447. PATENTED JUNE 5, 1906.

E. W. HAMMERSMITH.

MEANS FOR DELIVERING AND CATCHING MAIL POUCHES.

APPLICATION FILED MAR. 31, 1905.

Fig. 1.

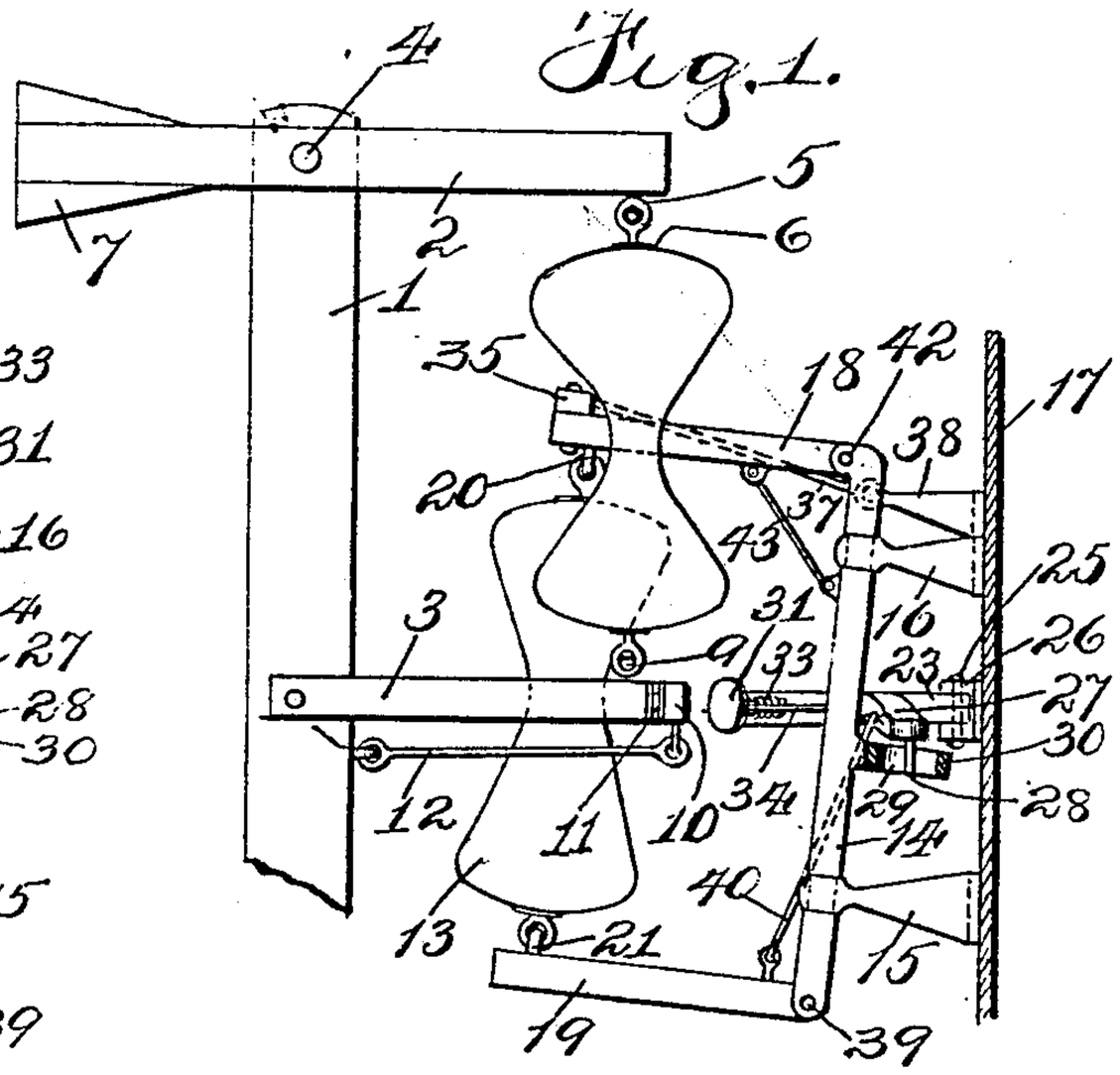


Fig. 3.

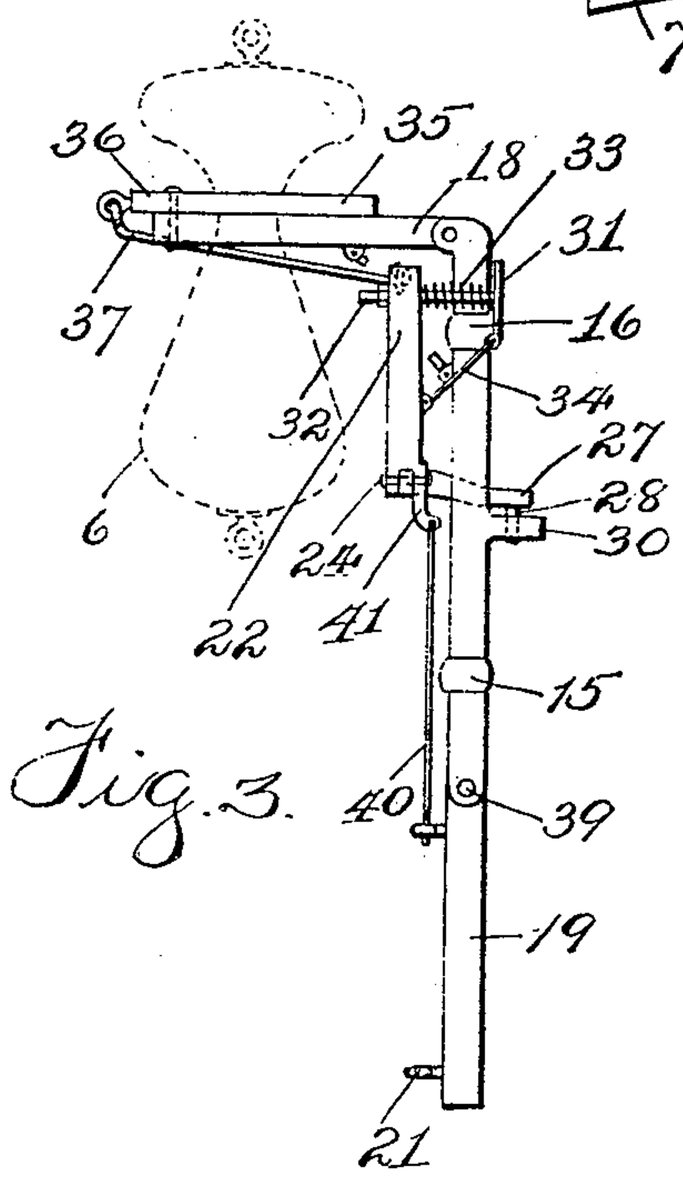


Fig. 2.

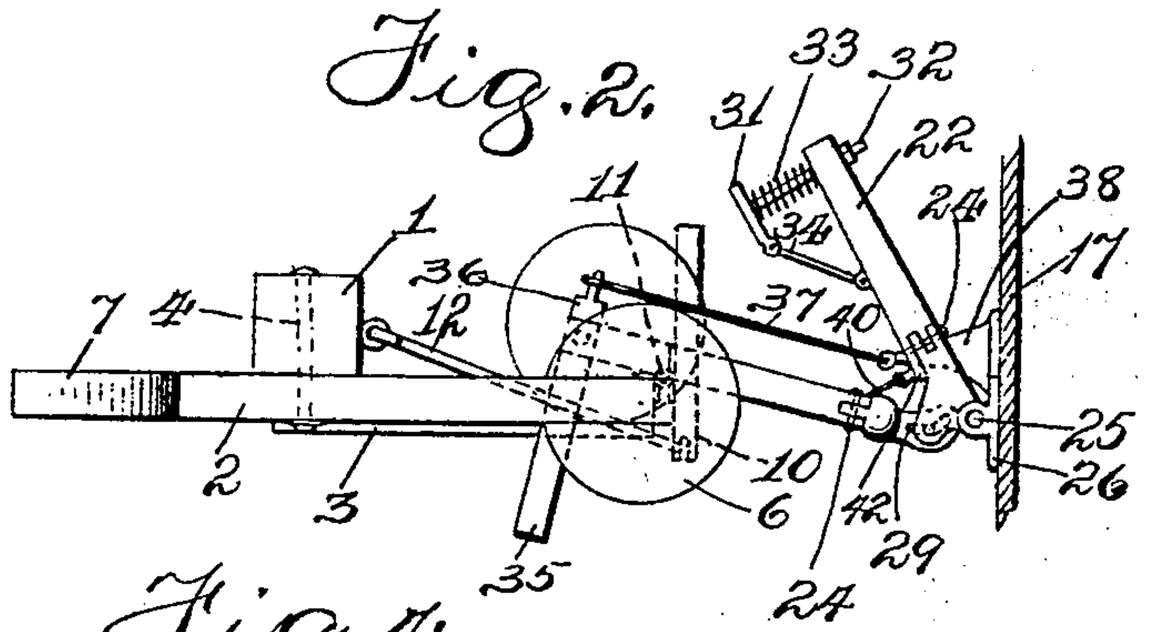
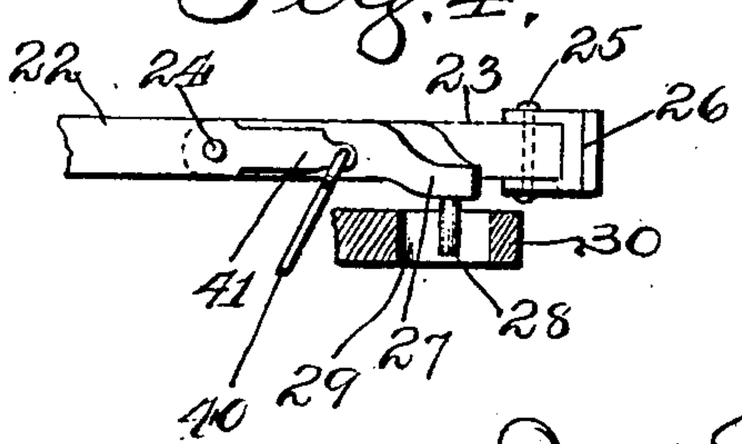


Fig. 4.



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UNITED STATES PATENT OFFICE.

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MEANS FOR DELIVERING AND CATCHING MAIL-POUCHES.

No. 822,447. Specification of Letters Patent. Patented June 5, 1906.

Application filed March 31, 1905. Serial No. 253,159.

To all whom it may concern:

Be it known that I, EDWARD W. HAMMERSMITH, a citizen of the United States, residing at Congress Park, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Means for Delivering and Catching Mail-Pouches, of which the following is a full, clear, and exact specification.

My invention relates to means for delivering mail-pouches either to or from or both to and from the car of a moving train; and it has for its primary object to provide improved and efficient means for either receiving or catching the pouch at the station or receiving or catching the pouch delivered from the car or for simultaneously delivering the pouch from the car and receiving the pouch at the station.

With a view to accomplishing these objects and certain other objects which will hereinafter appear the invention consists in the features of novelty which will now be described with reference to the accompanying drawings and then more particularly pointed out in the claims.

In the said drawings, Figure 1 is a front elevation of my improved apparatus, showing the same in the act of delivering a pouch from the car and catching and receiving a pouch at the station, this view being taken in the opposite direction to that of the movement of the train. Fig. 2 is a plan view thereof. Fig. 3 is a side elevation of the mechanism looking toward the side of the car and showing the position thereof after the pouch at the station has been caught; and Fig. 4 is an enlarged detail side elevation, partly in section, of an arm or lever and its connection hereinafter described.

1 is the post, usually employed as the main standard of the crane, located at the station, and 2 3 are the horizontal arms of such crane. The arm 2 is pivoted at 4 to the post 1 and is provided at one end with a hook 5 or other support for the upper end of the station-pouch 6, while the other end of the arm 2 has a weight 7 or otherwise made heavier than the hook end, so that when the pouch is removed the arm 2 will assume an upright position out of the way. The arm 3 is pivoted at 8 to the post and is adapted to fold downwardly, it being held in its horizontal position by hook 9, connected in the usual or any suitable way to the lower end of pouch 6, so that when pouch 6 is removed arm 3 will drop. On the end of arm 3 is a hinged member or arm 10, adapted to fold toward that side of the arm 3 from which the train approaches, the member 10 being connected to arm 3 by a suitable hinge 11, and the extension of the member 10 in one direction beyond this hinge is connected by a rod 12 with the post 1, so that as the arm 3 drops said extension will be given a relative outward movement and the member 11 thereby caused to fold toward the arm 3, and consequently grip the pouch 13 as it is forced thereagainst by the apparatus on the car.

14 is an upright rocker-shaft supported on and journaled in suitable brackets 15 16 on the side of the car 17, and it is inclined in a vertical plane extending transversely of the car with the lower end outward. In the upper end of this shaft is secured a substantially horizontal arm 18 and in the lower end a similar arm 19; but these arms are normally set at substantially right angles to the shaft 14, so that when they swing out of a vertical plane at right angles to the line of movement of the train they will have a tendency to continue their movement in that direction until they fold against the side of the car out of the way of objects along the line.

The upper arm 18 is provided near its outer end with a pouch-supporting hook 20 and the lower arm 19 near its outer end with a pouch-supporting hook 21 so constructed and arranged that when the pouch 13 is supported from the upper arm and hooked to the lower arm it will strike the arm 3 as the train approaches, and the pouch 13 will be displaced from the hooks 20 21 and caught by the hinged member 10, as before described the arms 2 3 and 18 19 being so proportioned and positioned that the arm 3 will be about midway between the arms 18 19, while the arm 18 will be about midway between the arms 2 3, and consequently the arm 18 will be in position to strike the station-pouch 6 as the car-pouch 13 strikes the arm 3.

Prior to arrival at the station-pouch the operator on the car places the pouch 13 between the arms 18 19, as now shown in Fig. 1, but folds the arms 18 19 backwardly against the side of the car. As the arms 18 19 swing to the side of the car an actuating-arm for bringing them forward again is automatically projected outwardly from the car in position to strike the end of the member

10. This actuating member or lever is composed of two main sections 22 23, pivoted together on a horizontal axis 24, while the section 23 is pivoted on an upright axis 25 in a bracket 26, secured to the side of the car. The section or member 23 is formed with a lug 27, which carries a pin 28, engaging in a slot 29, formed in a short arm 30 on back of shaft 14, and these parts are so proportioned and arranged that when the lever-arm 22 23 is projected outwardly from the car the arms 18 19 will be folded backwardly against the side of the car, and vice versa, and consequently when arms 18 19 are against the side of the car and lever 22 23 is moved toward the back end of the train by encountering the member 10 on the crane the arms 18 19 will be thrown outwardly or exchange places with lever 22, and the pouch 13, carried by arms 18 19, will be automatically carried against the arm 3, while at the same time the arm 18 will be thrown against the pouch 6. In order that the shock of the contacting parts may be sufficiently reduced to avoid damage, the arm 22 is provided with a cushion in the form of a buffer 31 on a rod 32, passing through arm 22 and having a coil-spring 33 sleeved thereon. The buffer 31 is steadied by a hinged link 34, and it is projected a considerable distance forwardly from arm 22, so as to remain longer in contact with member 10 while the train is passing, and thereby afford ample opportunity for the arm 22 being oscillated the requisite degree.

The force of the pouch 6 against the arm 18 causes arm 18, together with arm 19, to instantly fold again against the side of the car, and as it does so the pouch 6 is clutched by arm 35, pivoted to the arm 18 and having an extension 36 connected by a rod 37 to any suitable connection or bracket 38 on the side of the car in such a way that as the arm 18 approaches the side of the car the rod 37 will force the extension 36 outwardly and move the arm 35 inwardly to grip the bag, and as the arm 18 moves outwardly again the arm 35 will also move outwardly into about the position shown in Fig. 2 for embracing the pouch 6.

When the pouch 13 is removed from the arms 18 19, the arm 19, which is pivoted or hinged to the shaft 14 at 39, drops by gravity into substantially an upright position, so as to be out of the way of objects along the line, and as it does so it also lifts the hinged section 22 of the intermediate lever or arm to an upright position, as shown in Fig. 3, carrying that also out of the way and holding it in a position close to the side of the car. For that purpose the arm 19 is connected by rod 40 to an extension 41 on the inner end of section 22, and the parts are so proportioned and arranged that the weight of arm 19 will be sufficient to thus lift section 22, and when arm 19 is elevated to position shown in Fig. 1 for attachment to the bottom of the pouch the section 22 is automatically lowered to a horizontal position. It is understood, of course, that the section 22 projects a less distance from the car than the arms 18 19, so that the buffer 31 will strike member 10 and not be caught by the latter. When the pouch is caught by the arm 18 and the resultant force swings the apparatus back against the side of the car, the parts will assume the position indicated in Fig. 3, with the station-pouch 6 gripped between the arms 18 36.

In order that the arm 18 may also be folded downwardly for making the apparatus compact when not needed for use, it also is hinged, as shown at 42, to the shaft 14 and is supported in its horizontal position by a brace 43, detachably connected thereto and to shaft 14.

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

1. The combination of a pouch-holding means on a car normally out of delivery position, an actuating member on the car for throwing said holding means into delivery position and so operatively related thereto that when it is projected from the car the delivery means will be retracted, and means at the station for engaging said actuating member.

2. The combination of means on the car and means at the station for respectively holding two pouches, one to be delivered to the station and the other to the car, said holding means on the car being adapted to be retracted toward the car; a member on the car for throwing the pouch-holder of the car outwardly, means held in position by the station-pouch for engaging and actuating said member, and means on the car actuated by the extension and retraction of said pouch-holder of the car, for clutching the pouch at the station.

3. The combination of means on the car and means at the station for respectively holding two pouches, one to be delivered to the station and the other to the car, said holding means on the car being adapted to be retracted toward the car, a member on the car for throwing the pouch-holder of the car outwardly, means held in position by the station-pouch for engaging and actuating said member, means on the car actuated by the extension and retraction of the said pouch-holder of the car for clutching the pouch at the station, and means held open by the pouch at the station for receiving and clutching the pouch delivered from the car.

4. The combination of means hinged to swing from the side of the car for holding the pouch to be delivered, an arm arranged to project from the car when said holder is retracted to the car, means operatively connecting said arm with the said holder where-

by the two will alternately assume extended and retracted positions when either is moved, means at the station for engaging said arm when extended, and means at the station for receiving the pouch from the said holder.

5. The combination of means hinged to swing from the side of the car for holding the pouch to be delivered, an arm arranged to project from the car when said holder is retracted to the car, means operatively connecting said arm with the said holder whereby the two will alternately assume extended and retracted positions when either is moved, means at the station for engaging said arm when extended, means at the station for receiving the pouch from said holder, and means for holding said arm horizontal by the pouch on the car pouch-holder.

6. The combination of means hinged to swing from the side of the car for holding the pouch to be delivered, an arm arranged to project from the car when said holder is retracted to the car, means operatively connecting said arm with the said holder whereby the two will alternately assume extended and retracted positions when either is moved, means at the station for receiving the pouch from said holder, and means whereby the delivery of the pouch from the car pouch-holder also causes said arm to retract.

7. The combination of means hinged to swing from the side of the car for holding the pouch to be delivered, an arm arranged to project from the car when said holder is retracted to the car, means operatively connecting said arm with the said holder whereby the two will alternately assume extended and retracted positions when either is moved, means at the station for engaging said arm when extended, means at the station for receiving the pouch from said holder, and a forwardly-extended cushion on said arm.

8. The combination of two arms on the car having means for supporting the pouch to be delivered, both hinged on an upright axis, and the lower one also on a horizontal axis, a lever hinged on both horizontal and upright axes, an operative connection between said lever and arms whereby the arms may be turned on their upright axis, an operative connection between the lower arm and lever whereby the falling of the said arm will move the lever on its horizontal axis, and means at the station for engaging the lever when projected from the car.

9. The combination of two arms on the car hinged on an upright axis and adapted to swing toward the car, a pouch-clutching member hinged to one of said arms for clutching the pouch at the station, a rod pivoted to said member at one end and to the car at the other end whereby the oscillation of said arms will cause said member to open and close with relation to the arm to which it is pivoted, and means at the station for holding the pouch in position to be struck by the last said arm.

10. The combination of a post at the station, an arm hinged thereto on a horizontal axis, means whereby said arm is held horizontally by the pouch at the station, a member hinged to said arm on an upright axis, and means connecting said member to the post whereby the falling of the arm will cause said member to close toward the arm and clutch the pouch.

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