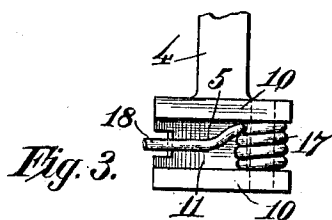
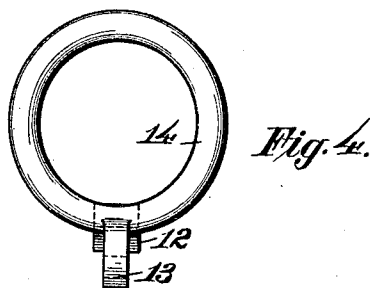
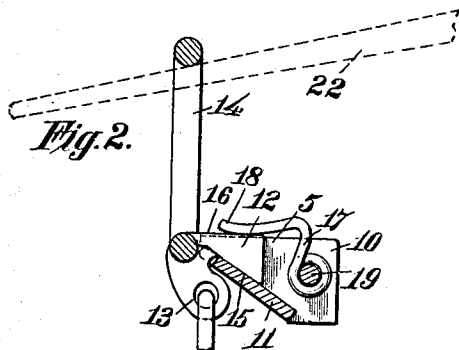
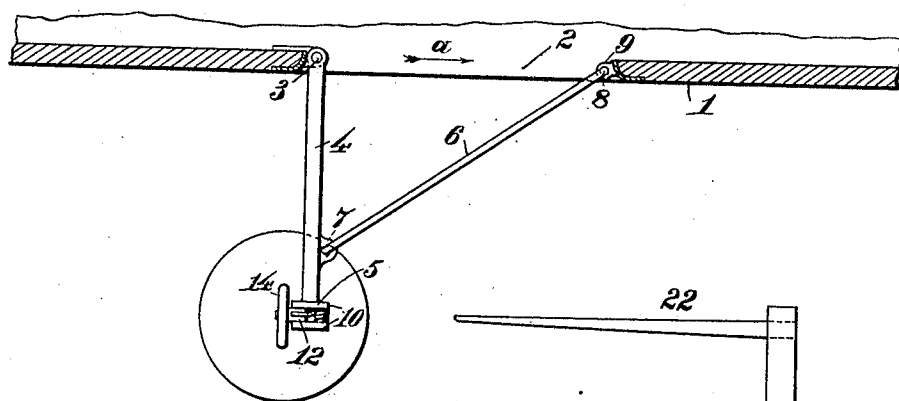


No. 870,878.

PATENTED NOV. 12, 1907.

H. W. GRAFF.
MAIL POUCH DELIVERY DEVICE.
APPLICATION FILED AUG. 31, 1907.



Witnesses:
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UNITED STATES PATENT OFFICE.

HENRY W. GRAFF, OF CHICAGO, ILLINOIS.

MAIL-POUCH-DELIVERY DEVICE.

No. 870,878.

Specification of Letters Patent.

Patented Nov. 12, 1907.

Application filed August 31, 1907. Serial No. 390,881.

To all whom it may concern:

Be it known that I, HENRY W. GRAFF, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Mail-Pouch-Delivery Devices, of which the following is a specification.

My invention relates to devices for mechanically handling mail pouches and has particular reference to devices for delivering the pouches from a moving train to the various stations along the line.

The present method of delivering the mail pouches at the various stations, by tossing the pouches from a moving train, is very destructive to the pouches and they soon become so worn or torn as to necessitate frequent and extensive repairs. Devices have been devised for handling the mail, having in view the idea of prolonging the life of the pouches, but these necessitate an entire change of equipment and generally the use of a special form of pouch.

The object of my invention is to provide means for delivering the pouches from a moving train in such a manner as to subject the pouches to a minimum amount of wear, thereby prolonging their period of usefulness and minimizing the cost of their maintenance.

Another object of my invention is to provide means for handling the pouches as mentioned, which will require but little change in the present equipment of the cars and receiving stations and with which the pouches such as are now in use may be maintained in service.

Other objects will appear hereinafter.

With these objects in view my invention consists generally in a delivery device arranged upon the mail car and comprising an arm hingedly mounted upon said car and having a suitable socket arranged at its outer end, a transfer device adapted to be secured to the pouch which is to be delivered and comprising a block adapted to fit within said socket, means depending therefrom for suspending the mail bag and a ring extending upwardly from said block, and a receiving device consisting of a crane located at the receiving station and having an arm adapted to engage the upwardly extending ring on said transfer device to remove it and the pouch from the delivery arm.

My invention further consists in various details of construction and arrangements of parts all as will be hereinafter fully described and particularly pointed out in the claims.

My invention will be more readily understood by reference to the accompanying drawings forming a part of this specification and in which,

Figure 1 is a diagrammatic plan view illustrating a portion of a mail car equipped with the delivery arm and also illustrating the crane for receiving the mail pouch from said arm, the transfer device with the mail pouch being shown in position upon the delivery arm, Fig. 2 is a sectional view upon an enlarged scale of the

socket on the delivery arm illustrating the transfer device in position to be removed, Fig. 3 is a plan view of the socket, and Fig. 4 is a detail view of the transfer device.

Referring to the drawings, 1 indicates the mail car and 2 the usual door opening in the side thereof. Hingedly connected as at 3 is the delivery arm, 4, having the socket 5 arranged at its outer end. The arm, 4 is swung within the car to receive the mail pouch and the transfer device and is swung outwardly into the position shown in Fig. 1 before reaching the station at which the pouch is to be delivered.

6 indicates a brace for relieving or minimizing the shock on the arm incident to removing the pouch therefrom. This may be a rod pivotally connected as at 7 to the arm, 4 and having its end 8 shaped to enter an eye 9, secured to the side of the car or the door casing. The socket, 5 is defined by the side walls, 10, and the inclined bottom, 11. These may be formed of separate pieces and secured together but I prefer to cast the arm, 4 and the socket in one piece.

The transfer device comprises the block, 12 which fits within the socket, 5, a ring or eye, 13 depending therefrom and an upwardly extending ring, 14. These are preferably cast in one piece and the block, 12 is shaped to conform to the socket, 5, that is, it is substantially the same width as the space between the walls, 10 and has an inclined bottom face, 15 to rest upon the inclined wall, 11. When the block is within the socket its top face, 16 is substantially flush with the top of the socket walls, 10. To prevent accidental dislodgment of the block, I provide a spring, 17, the free end, 18 of which bears upon the face, 16 of the block. The spring may be of any desired form but I prefer that shown in the drawings, which illustrates a coiled spring arranged about the rod, 19 extending between the walls, 10 of the socket. The ring, 14 extends vertically upward from the rear end of the block, 12 and is arranged in a plane at right angles to the direction of movement of the train, in order to be readily engaged by the arm at the receiving station. The ring or eye, 13 is arranged beneath the block and preferably extends under the inclined wall, 11 of the socket when in position. The mail pouch is suspended from the eye, 13 and by locating the eye in the position described, the weight of the pouch assists in holding the block within the socket.

The receiving station is equipped with the usual standpost, 20 approached by the steps, 21, and upon the standpost is arranged the receiving arm, 22 which is inclined as shown in dotted lines in Fig. 2. Referring to Fig. 1 and assuming that the train is moving in the direction of the arrow, *a*, it will be seen that the end of the arm, 22 will enter the ring, 14 and will remove the transfer device and the mail pouch from the arm, 4. The inclination of the arm gradually in-

creases the friction between the arm and the ring until it raises the block out of the socket, and that with comparatively little shock.

It will be seen that by using the device described but little strain is put upon the pouches and that they are not subjected to the wear and tear incident to the present method of delivery. Further, the device is designed so that the pouches such as are now in use may be maintained in service or pouches of any preferred construction may be substituted. Further, but little change is needed in the present equipment of the cars and the receiving stations. The only change in the car equipment is the substitution or the addition of the arm, 4 and a number of the transfer devices, one of said devices being provided for each pouch to be delivered. At the receiving station the only change necessary is the addition of a suitable arm, 22.

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

1. In a mail pouch delivery device, an arm arranged upon a car, in combination with a transfer device adapted to be secured to the pouch which is to be delivered and comprising a portion for attaching the device to the arm on the car, means depending therefrom for securing the pouch and an upwardly extending ring and an inclined arm for engaging said ring to remove said transfer device and the pouch from the car arm, in the manner and for the purpose specified.
2. In a device of the class described, a delivery arm having a socket arranged thereon, in combination with a transfer device adapted to be secured to a mail pouch and comprising a block adapted to fit within said socket, means

for securing the pouch thereto and a ring extending upwardly from said block, and a receiving arm adapted to engage said ring to remove said transfer device and the mail pouch from said delivery arm, substantially as described.

3. In a device of the class described, a delivery arm having a socket arranged thereon, in combination with a transfer device comprising a block adapted to fit within said socket, means for securing a mail pouch thereto and a ring extending upwardly from said block, a spring operable to prevent accidental displacement of said block and a receiving arm adapted to engage said ring, as and for the purpose specified.

4. In a device of the class described, a delivery arm having a socket arranged thereon, said socket having parallel side walls and an upwardly and rearwardly inclined bottom, a transfer device comprising a block adapted to fit within said socket and shaped to conform thereto, means for securing a mail pouch to said block and a ring extending upwardly therefrom, and a receiving arm adapted to engage said ring, as and for the purpose specified.

5. In a device of the class described, a delivery arm having a socket arranged thereon, said socket having parallel side walls and an upwardly and rearwardly inclined bottom, a transfer device comprising a block adapted to fit within said socket and shaped to conform thereto, means for securing a mail pouch to said block and a ring extending upwardly therefrom, a spring arranged in said socket and adapted to normally engage said block to prevent accidental displacement thereof, and a receiving arm adapted to engage said ring, as and for the purpose specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HENRY W. GRAFF.

Witnesses:

F. E. SHEEHY,
HELEN F. LILLIS.