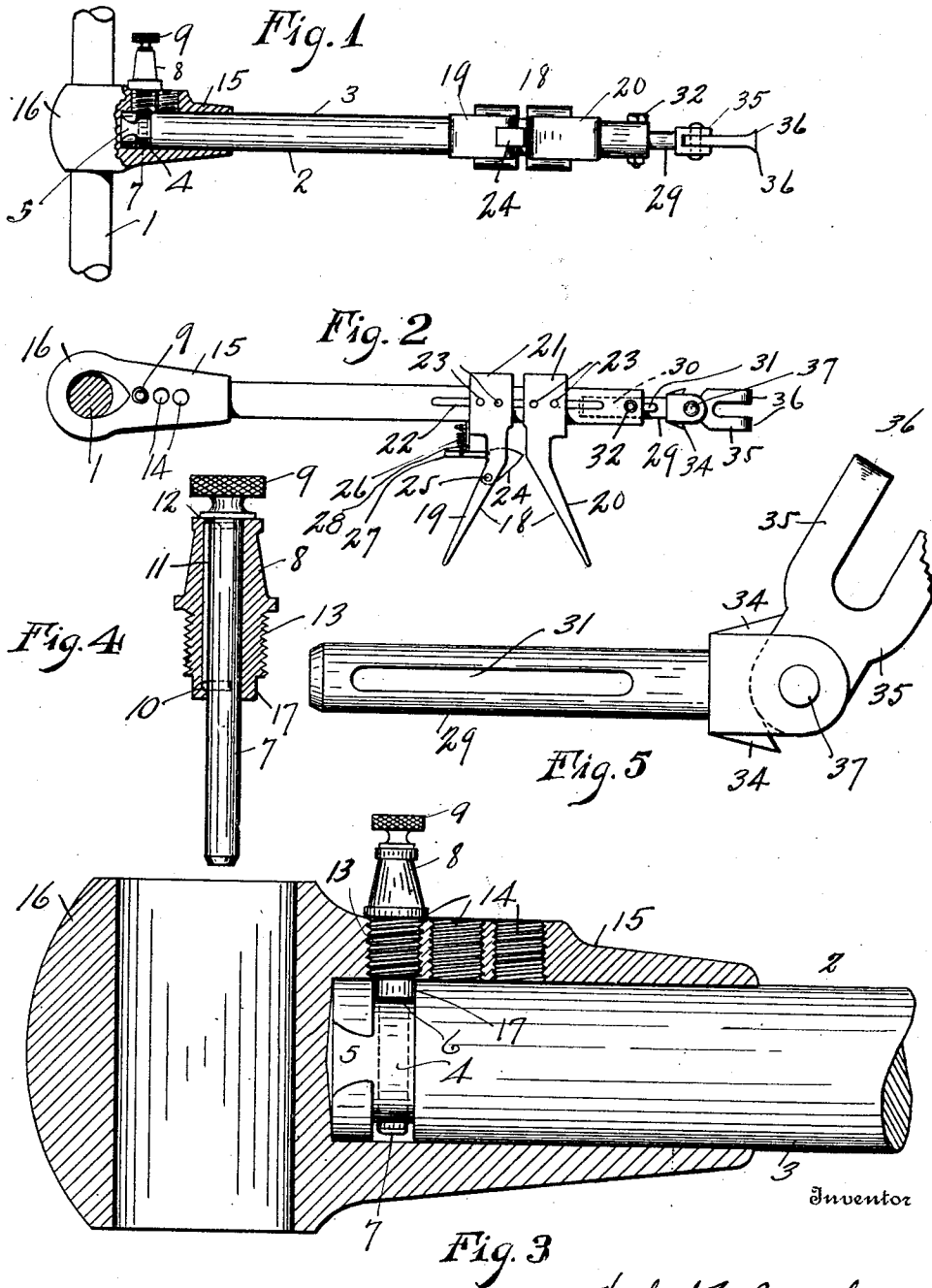


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RAILWAY MAIL DELIVERY.
APPLICATION FILED OCT. 21, 1918.

1,364,591.

Patented Jan. 4, 1921.



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UNITED STATES PATENT OFFICE.

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RAILWAY-MAIL DELIVERY.

1,364,591.

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To all whom it may concern:

Be it known that I, HERBERT E. SMITH, a citizen of the United States, residing at Spokane, in the county of Spokane and State of Washington, have invented certain new and useful Improvements in Railway-Mail Delivery, of which the following is a specification.

The present invention relates to improvements in railway mail delivery, and particularly to the supporting member or arm employed to suspend the mail pouches, said arm being fixed to a horizontally rotatable shaft or bar that may be carried by the railway car, or may be operatively supported at the railway station or other designated place.

The primary object of the invention is the provision of a supporting arm that is capable of adjustment to compensate for irregularities in the apparatus due to dislocation or movement of the railway track and consequent alteration of the fixed distance between the stationary support for the apparatus, caused frequently in the spring of the year when the ground is affected by the action of frost, and again, the settling of the railway track at a given point will frequently cause the passing mail car to tip slightly and take with it the delivery and exchange apparatus. These irregularities are overcome by adjusting the supporting arm as herein contemplated, and the arm is capable of further manipulation for adapting it to certain fixed requirements, as will hereinafter be more specifically pointed out. In the accompanying drawings one complete example of the reversible and adjustable supporting arm is illustrated as actually in use, both on the moving train and at the mail station on the railroad, this construction embodying the best mode so far devised for carrying out the principles of the invention.

Figure 1 is a side elevation of the supporting arm of the delivery apparatus, showing the joint member partly in section, and showing a portion of the revoluble, vertical shaft or post of the apparatus.

Fig. 2 is a top plan view of the device of Fig. 1.

Fig. 3 is an enlarged, vertical sectional view of the joint member or head by which the arm is coupled with the shaft, illustrating

the adjustment features between the arm and head.

Fig. 4 is an enlarged view of the retaining pin or pintle for the arm, together with the hollow retaining plug for the arm, the latter being shown in section.

Fig. 5 is a detail view of the pouch supporting and delivering fork and its connection to the arm.

In the preferred embodiment of the invention, as illustrated in the drawings, the vertical post or shaft 1 is revolubly supported in bearings either on the side of the mail car, or forming part of the stationary support for the apparatus, and the supporting arm indicated as a whole by the numeral 2 is adapted to swing or revolve with the shaft in well known manner, when receiving, delivering, or exchanging mail pouches.

The supporting arm comprises a metallic bar or rod 3 formed at one end with an annular groove 4 and a short, longitudinal groove 5 having flaring walls and extending from the annular groove to the edge or end of the bar, and this bar also has a transverse opening 6 which extends therethrough in the plane of the annular groove 4, so that this opening and groove may co-act, respectively, with the retaining pintle 7 and its hollow, incasing plug 8. The pintle has a head 9 resting on the upper end of the plug, and a radially projecting pin 10 on the pintle guides the pintle while traveling in the interior groove 11 of the plug, a transverse slot 12 in the plug, near its head, affording a recess or socket into which the pin 10 may be pushed if it is desired to free the plug from the pintle and its pin. The pintle may be withdrawn, or partly withdrawn through the plug, and during this movement the pin 10 moves in the guide slot or groove 11 in the plug as readily understood. At 13 the plug is provided with exterior screw threads for engagement with one of the threaded openings 14, (three of them being shown) bored radially in the wall of the socket member 15 of the head 16 by which the arm 2 is secured to the shaft 1. The head 16 has a vertical opening therethrough for the shaft 1, and the socket member is bored to receive the grooved end of the arm. Thus, in Fig. 3, the arm is held in the socket, against both rotatable and longitudinal movement, by the pintle and by the shouldered end 17 of the

retaining plug, the pintle passing through the opening 6 and the plug engaging in the annular groove 4. To rotate the arm while still in its socket, the pintle is withdrawn 5 and held in this position by engagement of the pin 10 in the slot 12 of the plug, and then the arm may be revolved, being retained and guided by the shouldered end 17 of the plug in the annular groove. If the 10 arm is to be withdrawn from the socket of the head, the arm may be turned until the plug and longitudinal slot 5 are alined, and then the arm may be withdrawn.

The arm is rotated, or turned through an 15 angle of 180° with relation to the socket, in order that the receiving device, indicated as a whole by the number 18, may be turned out of operative position so that the arm may be swung around to parallel position 20 along the side of the mail car, and of course the arm is held in this position with the receiving device in a vertical plane by the plug engaging the groove 4 in the arm or bar 3. If it is desired to elongate the supporting 25 arm, this can readily be done by removing the screw plug 8, pulling the bar outwardly with relation to the socket member 15 until the groove 4 alines or registers with the desired threaded opening 14 at the right in 30 Fig. 3, then re-inserting the pintle and plug into their respective retaining parts.

The receiver 18 comprises a pair of diverging, flat, tines 19 and 20 each formed with an integral sleeve 21 that is grooved 35 interiorly, to slide on the key or feather 22 fixed in and extending longitudinally of the bar 3 of the arm, and these sleeves may be held in adjusted position on the bar by means of the pins 23, two to each sleeve, so 40 that the tines of the fork may be adjusted with relation to each other, as well as being capable of adjustment as a pair in relation to the bar 3 or its key 22.

The tine 19 of the fork is provided with 45 a retaining latch 24, pivoted at 25, and the spring 26 carried by the tine holds the latch in closed position with relation to the other tine. The location of the latch on the inside 50 finger 27 to be placed in accessible position so that the pouch supporting member may be released quickly after having been received by the forks, and a stop or abutment 28 is provided to limit the movement of the 55 latch beyond a proper point.

The delivery device which is located at the free end of the arm comprises a bar 29 60 that is slidable in a socket 30 in the end of the rod, and the slot 31 of the rod accommodates the adjusting bolt 32. The head of the rod is provided with shoulders 34 to limit the swinging movement of the forked and pivoted supporting member 35, and the 65 ends of the forked member are fashioned with lugs 36, 36, to prevent displacement or

loss of the supporting chain by means of which the mail pouch is suspended from the supporting arm.

It will readily be seen that the supporting 70 arm may be reversed and changed to the opposite side of a car door for use when the car travels in the reverse direction. The supporting fork 35 is capable of swinging through an arc of 180° to insure proper operation of the device in case the pouch sus- 75 pending device is improperly placed on the fork 35. Thus the point of suspension of the pouch is always beyond the pivot point 37 of the fork, and if the fork is improperly pointing in the direction in which the car 80 is traveling, yet the fork will deliver the pouch because the impact of the catcher will swing the fork around to position so that the pouch suspending device may be freed from the delivery fork. The double lugs 36 85 on the delivery fork guard against displacement of the pouch suspending device when the supporting arm is in either of its two operative positions. The location of the 90 latch 24 between the two flat tines of the receiving fork insures and guards the latch against accidental displacement and consequent loss of the received pouch, for the reason that the latch is protected against all 95 other contact. The device as a whole is specially adapted for facility in adjusting its parts to adapt it for varying condition arising in the delivery of railway mail, and is compactly arranged within small compass, and withal highly efficient in performing the 100 functions for which it is intended.

Claims:

1. The combination with the swinging head formed with a socket and a bar retained in the head and supporting a receiver and 105 said bar and socket having coacting means whereby the receiver may be turned to inoperative position when the bar is to remain inoperative.

2. The combination in a supporting arm 110 comprising a head having a socket member and a bar carrying mail exchanging devices, said bar having an annular groove and the socket having a detent to engage the groove.

3. The combination in a supporting arm 115 comprising a head having a socket member with openings therein and a hollow plug in one of the openings, of a bar formed with an annular groove to receive the plug and having a transverse opening, and a pintle 120 operatively associated with the hollow plug and passing through said transverse opening.

4. The combination with the head having the socket member with openings therein, of 125 a supporting bar reversible and detachable and provided with an annular groove and a longitudinal groove opening at its end, a hollow plug detent in one of said openings engaging said annular groove and adapted to 130

pass through the longitudinal groove, a radial opening in the bar, and a pintle carried by the plug to engage in said last opening.

5 5. The combination with a bar carrying mail exchanging devices and having a socket at its free end, of a delivery device comprising a head having a stem adjustably held in the socket, and a pivoted pouch supporting member carried by the head.

10 6. The combination with a bar carrying mail exchanging devices and having a socket

at its end, of an adjustable, pivoted, supporting delivery device secured in said socket.

7. The combination with the bar having 15 an end socket, of a delivery device comprising a head having shoulders and a forked supporting device pivoted between the shoulders, and a slotted stem on the head adjustably retained in the socket. 20

In testimony whereof I affix my signature.

HERBERT E. SMITH.