O. H. VOLDSNESS.

MAIL DELIVERY APPARATUS.

APPLICATION FILED NOV. 7, 1913.

1,086,798.

Patented Feb. 10, 1914.

2 SHEETS—SHEET 1.

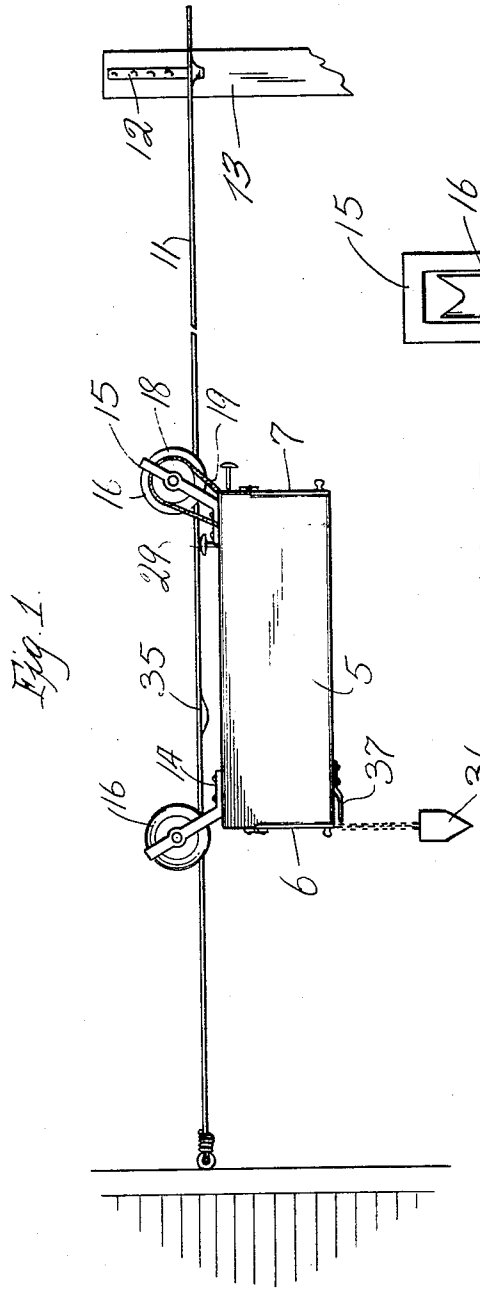

Fig. 1.

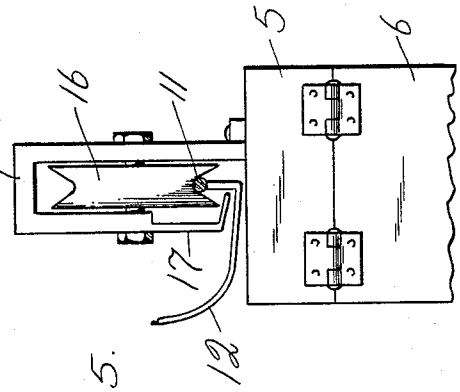

Fig. 5.

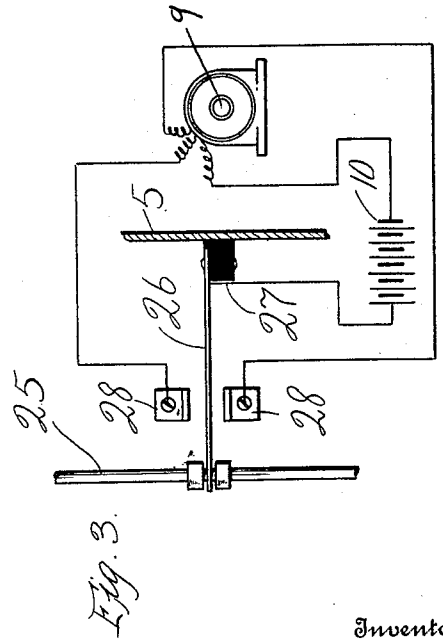

Fig. 3.

Witnesses

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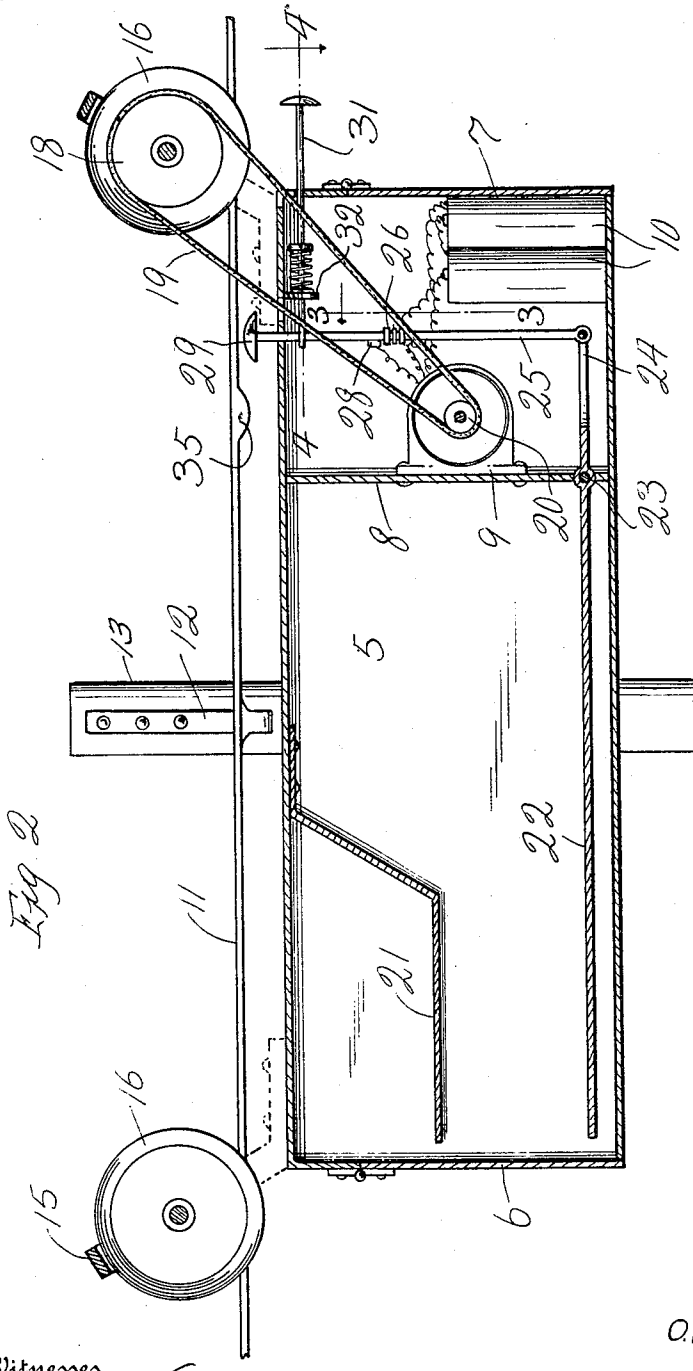

Fig 2

Fig 4

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UNITED STATES PATENT OFFICE.

OSCAR H. VOLDSNESS, OF ELEVA, WISCONSIN.

MAIL-DELIVERY APPARATUS.

1,086,798. Specification of Letters Patent. Patented Feb. 10, 1914.

Application filed November 7, 1913. Serial No. 799,818.

To all whom it may concern:

Be it known that I, OSCAR H. VOLDSNESS, citizen of the United States, residing at Eleva, in the county of Trempealeau and State of Wisconsin, have invented certain new and useful Improvements in Mail-Delivery Apparatus, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to improvements in mail delivery apparatus and has for its primary object to provide simple, efficient and reliable means for transporting mail from a residence to the road traveled by the postman or from a depot to a post office, thereby relieving the owner of the necessity for leaving his residence in inclement weather to remove the mail from the box.

The invention has for another important object to provide improved means for operating the mail box or carrier, and means for automatically stopping the operating means when the carrier arrives at the terminus of its travel.

My invention in its more specific aspect includes a suitable car or carrier which is suspended from trolley wheels mounted upon a suitable wire or cable, an electric motor and feed batteries therefor arranged in one end of the carrier, a pivotally mounted mail receiving plate arranged in said carrier, and means actuated by said plate to close the motor-operating circuit when the mail is deposited thereon.

With the above and other objects in view as will become apparent as the description proceeds, the invention consists in certain constructions, combinations and arrangements of the parts that I shall hereinafter fully describe and claim.

For a full understanding of the invention, reference is to be had to the following description and accompanying drawings, in which—

Figure 1 is a side elevation of a car or carrier constructed in accordance with the present invention; showing the same arranged upon the trolley line. Fig. 2 is a longitudinal section through the car; Fig. 3 is a section taken on the line 3—3 of Fig. 2; Fig. 4 is a section taken on the line 4—4 of Fig. 2; Fig. 5 is a detail fragmentary end elevation.

Referring in detail to the drawings, 5 designates the body of the mail carrier which is preferably constructed of sheet metal and is provided in its opposite ends with doors designated 6 and 7 respectively. Adjacent the latter door, a vertical partition 8 is arranged within said carrier and provides a chamber in one end of the carrier to receive a suitable electric motor 9 which is fed from a plurality of batteries 10.

11 designates a suitable wire or cable which is mounted upon the brackets 12 secured to posts 13 arranged at intervals between the residence and the roadway. To each end of the carrier 5, the lower end of a hanger bar 14 is secured. The upper end of each of these hanger bars terminates in a hook 15 and in the hooked end of each bar, a peripherally grooved wheel 16 is rotatably mounted and is adapted to travel upon the wire or cable 11. A guard member 17 is secured to each of the hanger bars 14 and extends below the wheel 16, said guard members effectually obviating all liability of the wheels leaving the suspending line or cable. One of the trolley wheels 16 is provided with a smaller peripherally grooved pulley or wheel 18 which is traversed by a drive belt 19, which extends around a similar drive pulley 20 secured upon one end of the shaft of the motor 9.

Within the casing of the carrier 5, a suitable supporting plate 21 is secured, preferably to the top wall thereof as shown, to receive mail matter which is to be delivered to the postman. A horizontally disposed plate 22 is pivotally mounted as at 23 at one of its ends in the lower end of the vertical partition wall 8. A rod 24 extends longitudinally from the pivoted end of this plate into the motor chamber of the carrier and is vertically extended as indicated at 25, the upper end of the vertical extension being movably disposed through the top wall of the carrier. This portion 25 of the rod is connected to one end of a resilient contact plate 26 which is fixed at its other end upon a suitable insulating support 27, and wired to the battery 10. This plate normally extends between and in spaced relation to the motor field terminals 28. The upper end of the vertical extension 25 of the rod 24 is provided with a head 29 and adja-

cent to said head an opening 30 is formed in the rod.

31 designates a longitudinally movable latch rod mounted in one of the end walls of the carrier 5, said rod being disposed through guide lugs 32 depending from the top wall of the carrier. Between these lugs, the coil spring 33 is arranged, one end of said spring being fixed to the rod 31. The inner end of this rod is provided with a hook and the extremity 34 thereof which is disposed in parallel relation to the rod is adapted to be received in the opening 30 of the rod 24, when said latter rod is forced downwardly as will be clearly understood from reference to Fig. 2 of the drawings.

Upon the wire or cable 11 adjacent one end thereof, the stop block 35 is secured. This block is adapted to engage the head 29 of the rod extension 24 when the carrier arrives at the terminus of its travel in one direction, and thereby force said rod downwardly to break the operating circuit for the motor 9 and stop the travel of the carrier. In the outward movement from the residence to the road, the outer end of the rod 31 engages the post 13 and said rod is forced inwardly, thereby releasing the rod 24 so that the resilient terminal plate 26 may return to its normal position. After the postman has removed the mail from the support 21 and placed other mail upon the pivoted plate 22, the weight of the mail causes said plate to move downwardly thereby elevating the vertical portion 25 of the rod 24 and forcing the spring contact plate 26 upwardly into engagement with the upper battery terminal 28 whereby the operation of the motor 9 is reversed and the mail carrier moved from the roadway to the house or residence. Upon its arrival at the other terminus of the line of travel, the head 29 of the rod 24 engages the stop block 35 and said rod is forced downwardly against the weight of the mail arranged upon the plate 22 whereby the circuit is broken and the operation of the motor stopped. The carrier is preferably provided at one end with a suitable flag or other signaling device 36 which is adapted when not displayed to be supported in a suitable housing 37 secured upon the bottom wall of the carrier.

From the foregoing, it is thought that the construction and manner of operation of my invention will be clearly and fully understood. By means of the same, it will be appreciated that by simply depositing the mail in the box upon the plate 22, the motor 9 is set in operation and the carrier is caused to travel upon the trolley line or wire from the roadway to the residence. The motor is automatically stopped in the manner above explained and when the mail has been removed from the plate 22, the householder places the outgoing mail upon the support 21 and then forces downwardly upon the rod 24 to reverse the operation of the motor, said rod being held in its depressed position by means of the latch rod 31 as above explained. The car will then be moved outwardly to its position adjacent the roadway.

The construction of my improved mail delivery apparatus is exceedingly simple and it will therefore be appreciated that the device can be manufactured at comparatively small cost. It will be appreciated that the car or carrier may be made in various sizes and forms and I do not therefore, wish to be limited to the particular construction of this carrier as shown in the accompanying drawing. It will also be understood that my invention is susceptible of considerable modification in the form, proportion and arrangement of the several elements employed and I therefore reserve the right to resort to all such legitimate changes as may be fairly embodied within the spirit and scope of the invention, as claimed.

Having thus described the invention, what is claimed is:

1. In an apparatus of the character described, a traveling carrier, means for operating said carrier including an electric motor, a switch for said motor consisting of spaced terminal members, a movable contact plate arranged between said members, a mail supporting plate pivotally mounted within the carrier, a rod connected to the pivoted end of said plate and to said movable contact member to engage the same with one of the terminal members when mail is deposited upon the plate whereby the circuit is closed and the motor operated, means for operating said rod when the carrier arrives at one terminal of its movement to disengage the contact plate from the terminal and stop the motor, said rod being adapted to be manually moved to engage the contact plate with the other of the terminals and reverse the operation of the motor, and a latch device for holding said rod in the latter position.

2. In an apparatus of the character described, a traveling carrier, a cable from which said carrier is suspended, means for operating said carrier including an electric motor, a switch in the motor circuit consisting of spaced terminal members and a movable contact plate arranged between said members, a pivotally mounted mail support arranged within the carrier, a rod connected to said support and to the movable contact plate and extending through the top wall of the carrier, said rod moving the contact plate into engagement with one of the terminal members when mail is deposited upon the support to close the circuit and operate the motor, a stop block secured to the cable to engage and depress the rod against the weight of the mail and break the circuit,

said rod being adapted to be further depressed to engage the contact plate with the other of the terminal members and reverse the operation of the motor, and a spring held latch rod mounted upon the carrier and co-acting with said first named rod to hold the same in its depressed position.

In testimony whereof I hereunto affixed my signature in the presence of two witnesses.

OSCAR H. VOLDSNESS.

Witnesses:
P. K. RISBERG,
ELVIRA LARSON.