F. S. WHITMORE.

MAIL DELIVERING APPARATUS.

APPLICATION FILED JULY 25, 1914.

1,121,438.

Patented Dec. 15, 1914.

2 SHEETS—SHEET 1.

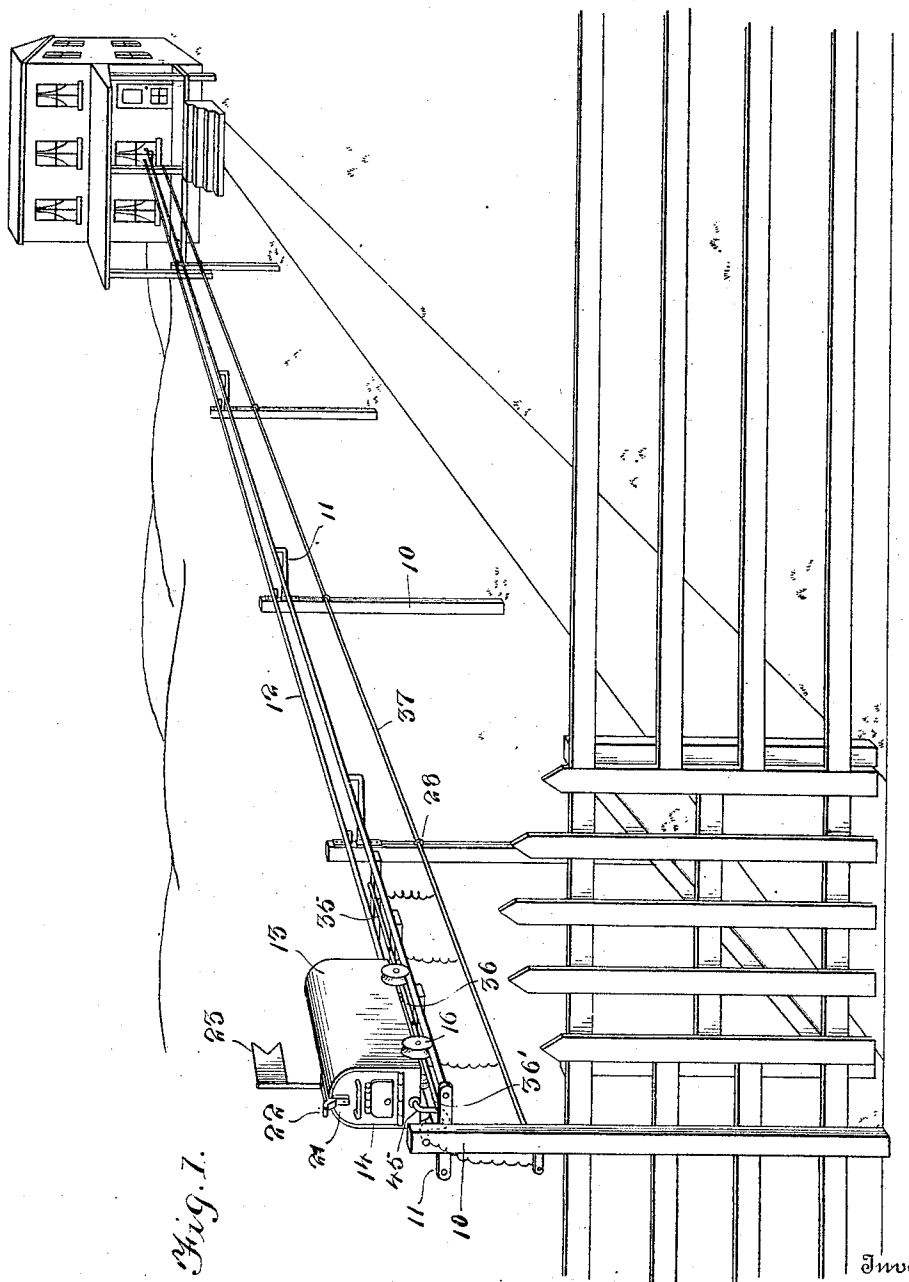


Fig. 1.

Witnesses

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2 SHEETS—SHEET 2.

Fig. 2.

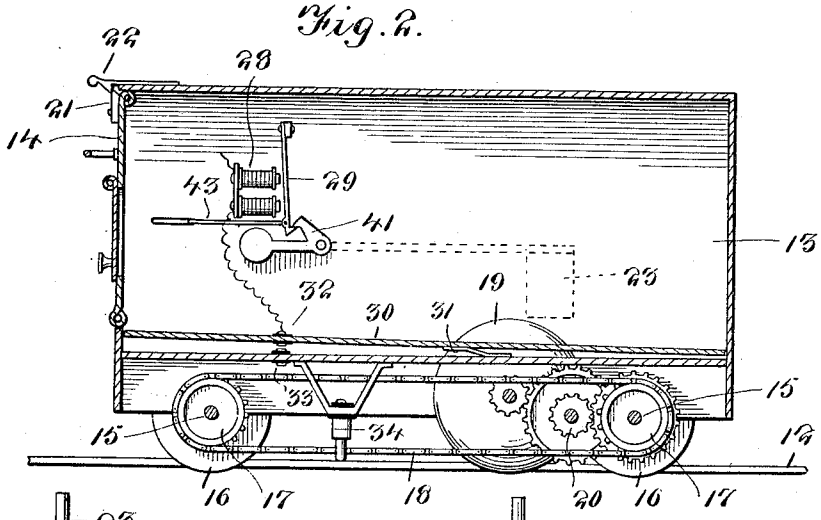


Fig. 3.

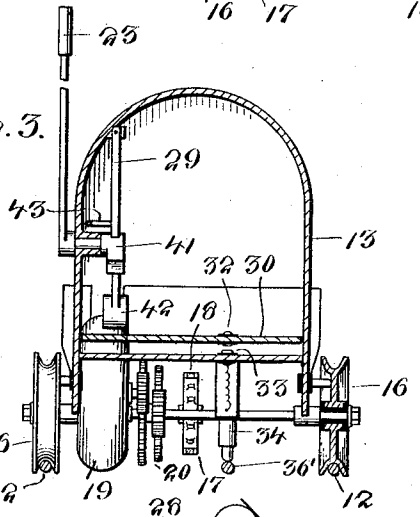
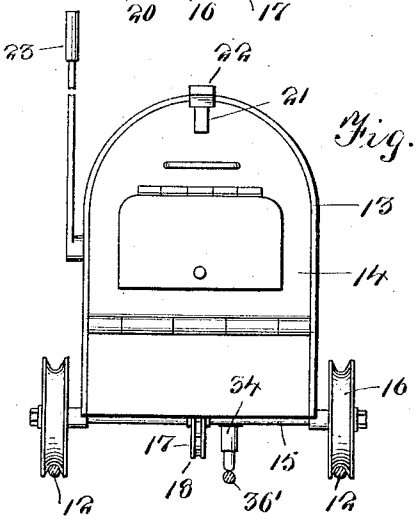


Fig. 5.



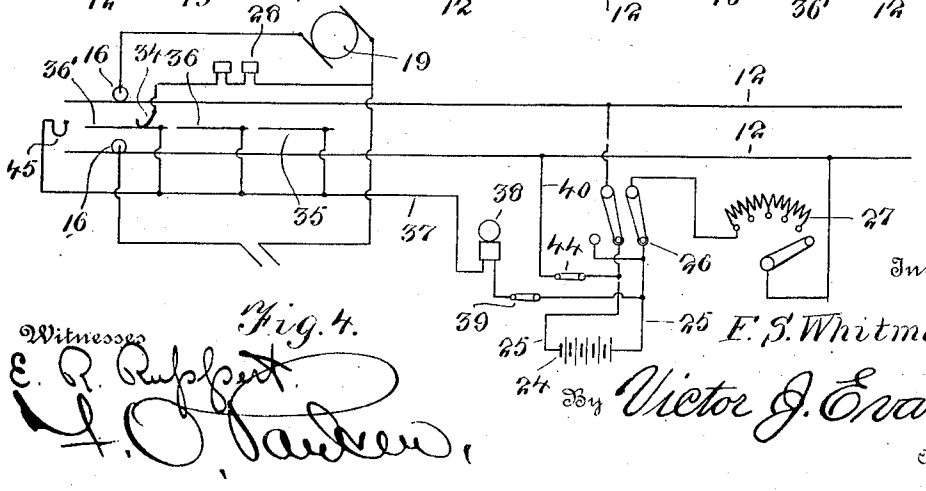


Fig. 4.

Witnesses

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UNITED STATES PATENT OFFICE.

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MAIL-DELIVERING APPARATUS.

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To all whom it may concern:

Be it known that I, FRANKLIN S. WHITMORE, a citizen of the United States, residing at Waynesboro, in the county of Franklin and State of Pennsylvania, have invented new and useful Improvements in Mail-Delivery Apparatus, of which the following is a specification.

The invention relates to a mail conveyer or carrier, and more particularly to the class of electro-mechanically operated mail carriers.

The primary object of the invention is the provision of a carrier of this character which is particularly applicable to rural mail delivering routes in which the delivering points are stationed a considerable distance from a dwelling house so that the mail deposited in the carrier can be transported from the point of delivery to the dwelling house.

Another object of the invention is the provision of a carrier of this character wherein on the deposit of mail matter therein a signal will be operated to give notice to the occupants of the house of the deposit of mail matter within the carrier, which can be readily and conveniently set in action for conveying its contents from the point of deposit to the point for the distribution thereof.

A further object of the invention is the provision of a carrier of this character wherein the same is electrically driven, and its speed of travel is under the control of the user, and is readily stopped and started at terminal points of the route thereof.

A still further object of the invention is the provision of a carrier of this character which enables the rapid transportation of mail matter from one point to another.

A still further object of the invention is the provision of a carrier of this character which is simple in construction, reliable and efficient in operation, and inexpensive in manufacture and installation.

With these and other objects in view, the invention consists in the construction, combination and arrangement of parts as will be hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereunto appended.

In the drawings:—Figure 1 is a perspective view showing a dwelling house located a distance from a roadway, with the apparatus constructed in accordance with the invention installed therebetween. Fig. 2 is a vertical longitudinal sectional view through the carriage or car for the mail matter. Fig. 3 is a vertical transverse sectional view thereof. Fig. 4 is a fragmentary diagrammatic view showing the electric system with the reversing switch and rheostat, which are adapted to be located within the dwelling house at a convenient point therein. Fig. 5 is an end elevation of the carriage or car.

Similar reference characters indicate corresponding parts throughout the several views in the drawings.

Referring to the drawings in detail, the improved apparatus is designed particularly for conveying mail or other matter from a post road to a residence or dwelling house at a distance from the said road, and comprises a series of posts 10 which are arranged at intervals apart between the road and the dwelling house, the said posts being vertically disposed and anchored in the ground in any ordinary well-known manner. Mounted upon the said posts 10 at a suitable elevation are brackets 11 supporting suspended electric current wires 12, which extend from the post road to the dwelling house located at a distance therefrom, and form a track for supporting a carriage which is movable thereover, the same being hereinafter fully described.

The carriage comprises a box-like body 13 having hinged at one end a door 14 so that access may be had thereto, the said body being supported upon axles 15 carrying flanged wheels 16 adapted to travel upon the wires 12, and on the said axles 15 are fixed sprocket wheels 17 over which is trained an endless sprocket chain 18 for the driving of the axles in unison with each other. Located within the body 13 is an electric motor 19 which is wired in any suitable manner to receive electric current from the current wires 12 through the wheels on one of the axles 15, the motor being connected with one of the axles through a train of reducing gears 20 so that when the said motor becomes active the carriage will be driven thereby.

Mounted on the door 14 is a catch 21 which is adapted to engage a keeper 22 on the body 13 for the fastening of the door closed, while pivotally connected to the body 13 without the same is a signal flag 23, which when raised indicates the deposit of mail matter within the body, and on the

lowering of the flag it is indicative of no mail matter being deposited within the body of the carrier, the said flag being both manually and electrically operated for signaling purposes.

Arranged within the house at a convenient point therein is an electric current producer which in this instance comprises a series of dry batteries 24 from which lead the feed wires 25 to the current wires 12, the same being joined thereto in any suitable manner, and form the electric circuit for operating the motor 19 within the body 13 of the carrier. Arranged within the electric circuit is a pole changer or reversing switch 26, and a rheostat 27, the latter being designed to regulate the electric current and to open and close the circuit, while the pole changer or switch 26 reverses the current to the motor 19 for driving the car in two directions, that is to say, from the post road to the dwelling house, or vice versa, the pole changer or reversing switch 26 and the rheostat 27 being regulated by the user of the apparatus.

Within the box-like body 13 and supported in any suitable manner is an ordinary electromagnet 28 which is tapped onto one lead of the motor 19, and this magnet when energized acts upon an armature 29 swingingly supported within the carriage adjacent thereto and is tapped to a false bottom 30 located within the said body 13, and is normally held in a raised position through the medium of a spring 31 so that the said bottom will be depressed under the weight of the contents of the body, for instance, on the placing of mail matter therein. The bottom 30 carries a contact 32 which is adapted to engage a contact 33 mounted in the bottom of the body 13, and this latter contact is tapped to a brush 34 suitably supported beneath the bottom, which is arranged to sweep independent third rails 35, 36 and 36′, respectively, which are insulated from each other and arranged between the main current wires 12, the rails 35, 36 and 36′ being connected with a return wire 37 which has arranged therein a signal bell 38 and a switch 39, the wire 37 being tapped to one of the feed wires 25, while the other feed wire 25 has tapped thereto an auxiliary feed wire 40, which is also tapped to one of the main current wires 12 so that the circuit will be closed through wires 37 and 40 when the switch 26 is open so that on the sweeping of the brush 34 over either rail the electromagnet 28 will be energized, which controls the flag 23. The pivot of the flag 23 has formed thereon a catch 41 which is adapted to engage the armature 29 to normally hold the flag in lowered position prior to the energizing of the magnet 28, one end of the staff of the flag 23 carrying a weight 42 which serves to automatically lift the flag to upright position for signaling, and when the catch 41 is engaged with the armature the flag is sustained lowered. Connected with the armature 29 is a hand operated pull rod 43 which extends beyond one end of the body 13 so that the armature can be moved manually for releasing the catch 41 to permit the automatic swinging of the flag to signaling position should it be desired. The auxiliary feed wire 40 has arranged therein a switch 44 which controls the circuit therethrough.

Arranged on the post 10 at the roadside or at the terminal of the track is a spring contact 45 which is adapted to be engaged by the body 13 of the car when reaching this terminal, and this contact has connection with the return wire 35 so that when the body 13 engages therewith and the false bottom 30 is in raised position breaking the contacts 32 and 33 an audible signal will be had from the bell 38.

In the operation of the device, assuming that the car has reached the terminal of the track next to the roadside, the body 13 thereof engages with the spring contact 45 so that a circuit is closed for the sounding of the bell 38 to indicate the arrival of the car at such terminal to the occupants of the house, it being understood of course that the false bottom 30 is in raised position by reason of no weight thereon, thus the contacts 32 and 33 are out of engagement with each other so that the circuit cannot be closed therethrough between the rails 36′ and the return wire 37, so that the circuit is closed through the body of the car and the contacts 45 at the said terminals. Now, the mail carrier opens the door 14 and introduces mail matter into the body 13, it being understood of course that the signal at this time is in lowered position, the armature 29 engaging the hook 41 to hold it in such position, the weight of the mail placed upon the false bottom 30 causes it to lower, bringing the contacts 32 and 33 into engagement with each other so that the circuit through the electromagnet 28 is closed for energizing the magnet which attracts the armature 29, thereby automatically releasing the flag 23, which is shifted to signaling position under the action of the weight 42. The instant the occupants of the house receive the signal from the bell 38 the switch 26 is thrown to close the circuit through the main wire 12, thus starting the motor 19 for propelling the carriage, causing it to travel toward the house. When the carriage passes over the third rails 35 and 36, the brush 34 sweeps the same, thereby causing the sounding of the bell 38 intermittently for the reason that all of the third rails are insulated from each other so that three separate and distinct signals will be had during the travel of the car to indicate the approach thereof

to the house. When the car has arrived at the house the mail is removed therefrom, thus the false bottom 30 will rise, thereby disengaging the contacts 32 and 33 so that when the car is started in its travel toward the roadside the bell 38 will not be sounded because the circuit is opened through wires 37 and 40 by reason of the contacts 32 and 33 being out of engagement with each other, it being understood of course that the pole changer or reversing switch 26 is operated for changing the direction of the current for the reverse travel of the carriage.

From the foregoing description, taken in connection with the accompanying drawings, it is thought that the construction and manner of operation of the device will be clearly understood, and therefore a more extended explanation has been omitted.

What is claimed is:—

1. An apparatus of the class described comprising a track forming an electric current conveyer, a carriage forming a depository movable over the track and having a motor arranged in circuit with said track, an electric current supply connected with the track and having arranged in the circuit therebetween a rheostat and pole changer, means for suspending the track between a post road and a dwelling house, an electrically operated audible signaling mechanism extended from the dwelling house to the post road, and an electrically controlled visible signal supported on the carriage and active on the deposit of mail matter within the depository.

2. An apparatus of the class described comprising a track forming an electric current conveyer, a carriage forming a depository movable over the track and having a motor in circuit with said track, an electric current supply connected with the track and having arranged in the circuit therebetween a rheostat and pole changer, a signal device on the carriage, and an electrically operated means normally holding the signal device lowered and actuated on the placing of mail matter within the depository.

3. An apparatus of the class described comprising a track forming an electric current conveyer, a carriage forming a depository movable over the track and having a motor in circuit with said track, an electric current supply connected with the track and having arranged in the circuit therebetween a rheostat and pole changer, a signal device on the carriage, an electrically operated means normally holding the signal device lowered and actuated on the placing of mail matter within the depository, and an audible signal operated on the passing of the carriage over predetermined points in the track.

In testimony whereof I affix my signature in presence of two witnesses.

FRANKLIN S. WHITMORE.

Witnesses:
W. C. ERNST,
AUSTIN DE LAUTER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."