S. H. ROBY.

DELIVERY APPARATUS FOR DELIVERING MAIL, PARCELS, OR THE LIKE.

APPLICATION FILED JAN. 9, 1908.

905,370.

Patented Dec. 1, 1908.

4 SHEETS—SHEET 1.

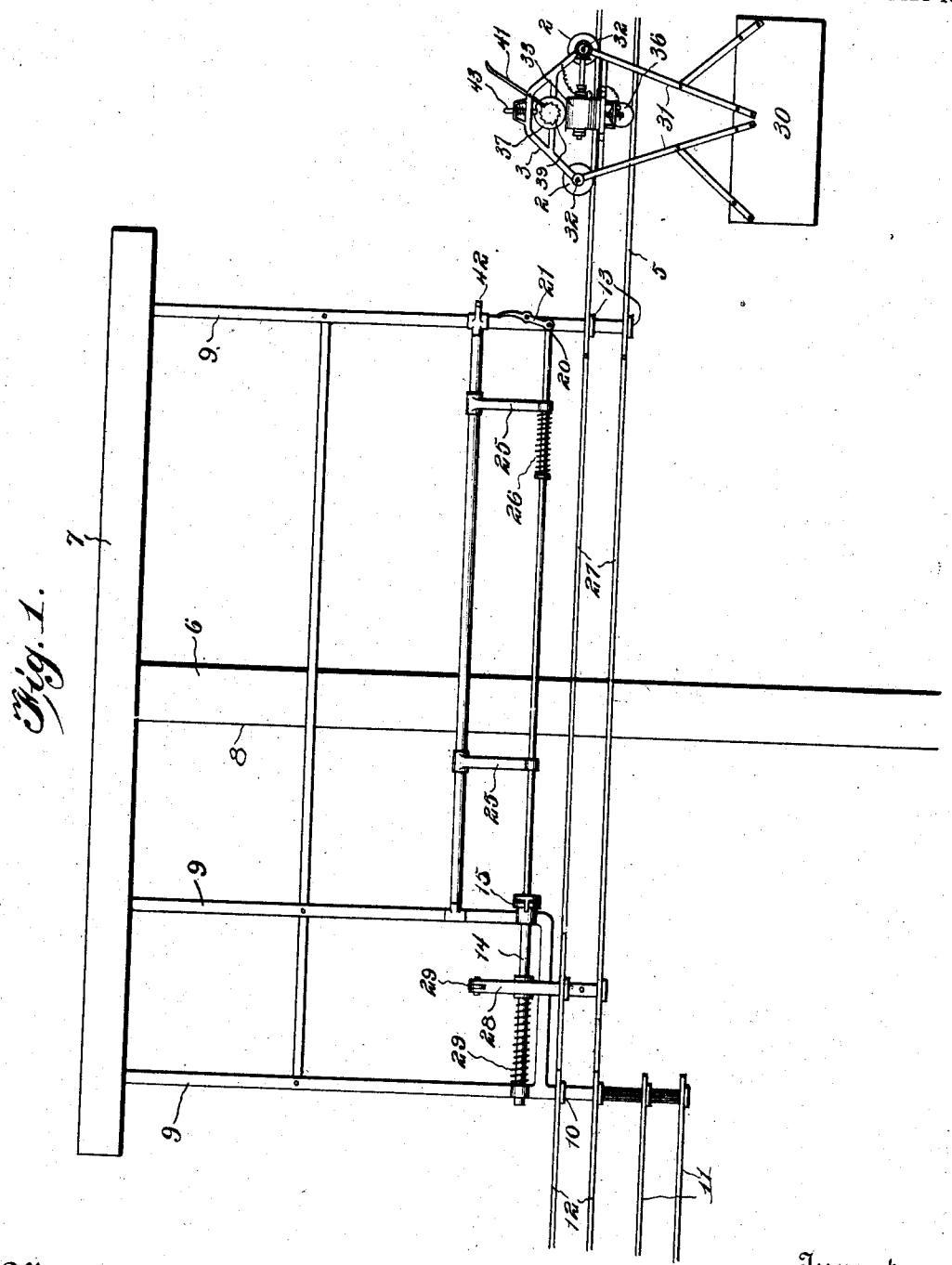


Fig. 1.

Witnesses

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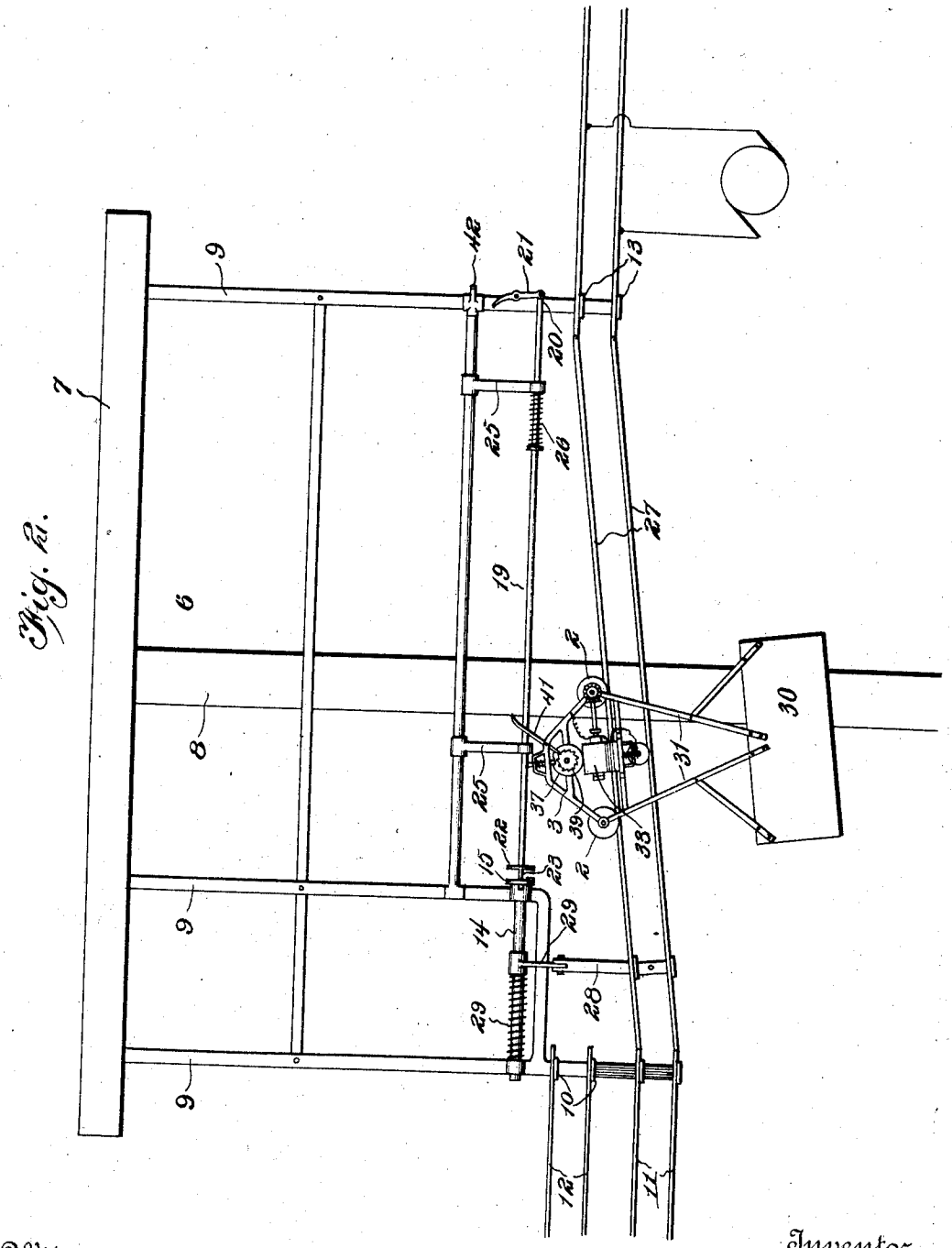
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4 SHEETS—SHEET 2.

Fig. 2.



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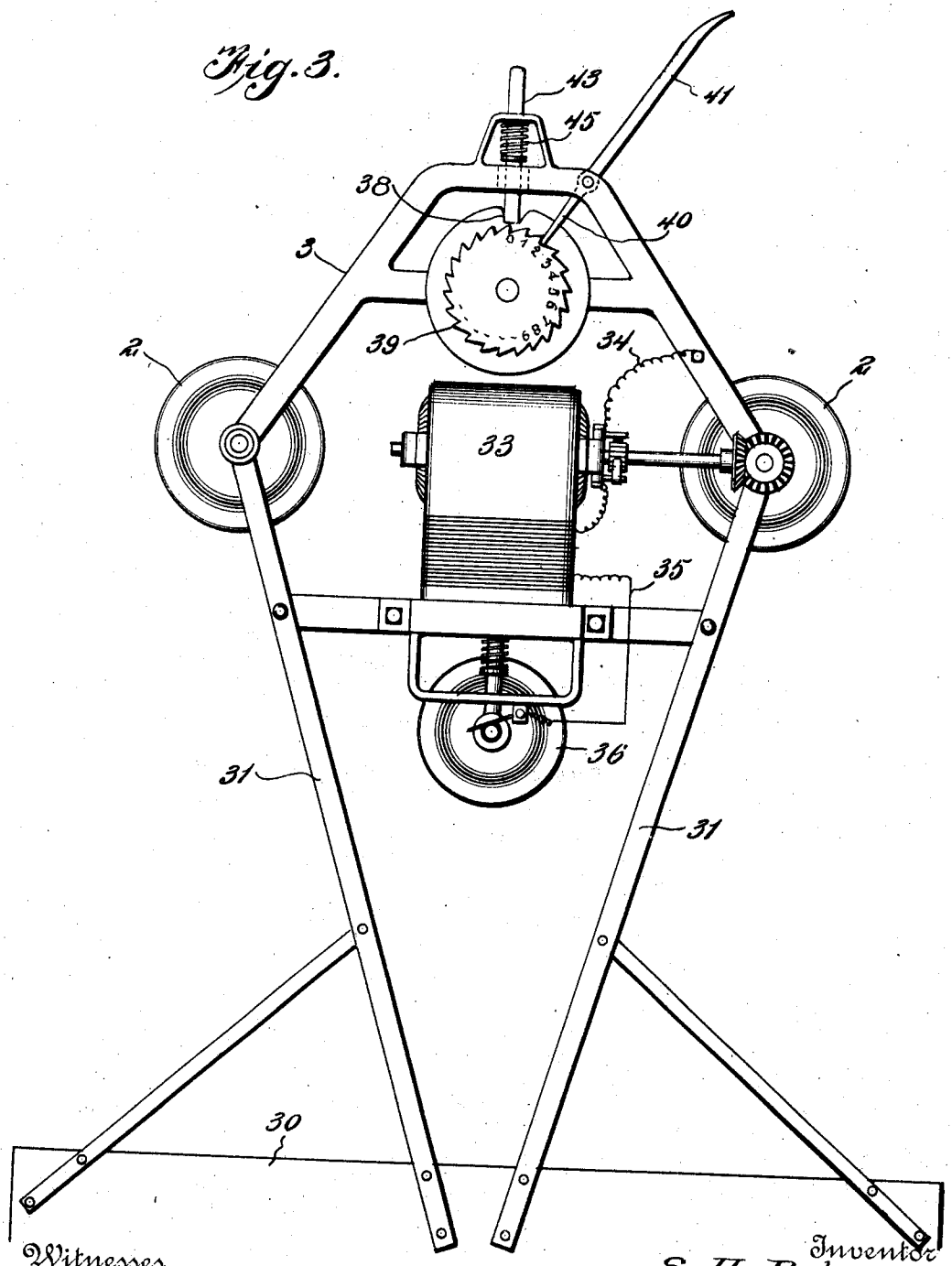
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4 SHEETS—SHEET 3.

Fig. 3.



Witnesses

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4 SHEETS—SHEET 4.

Fig. 10.

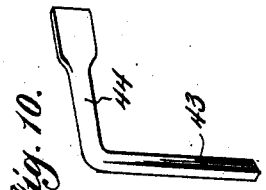


Fig. 9.

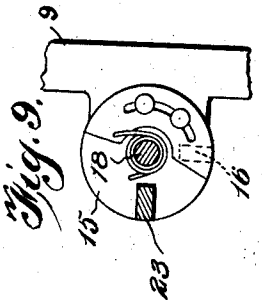


Fig. 6.

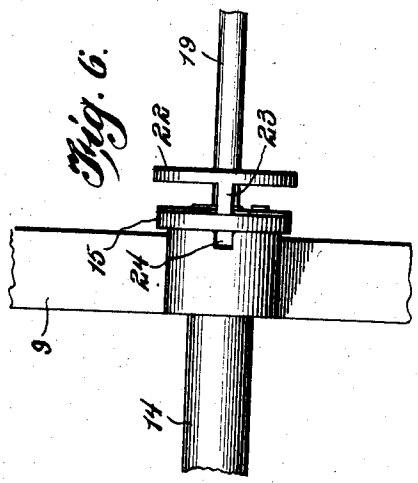


Fig. 8.

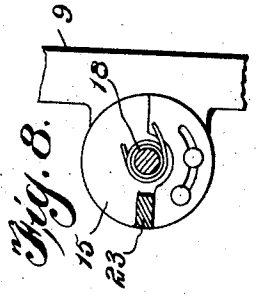


Fig. 4.

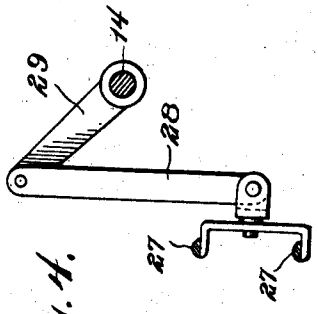


Fig. 5.

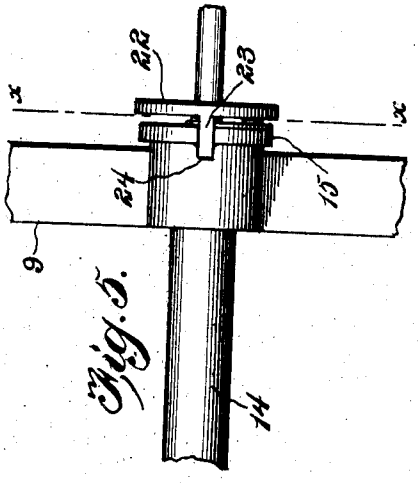
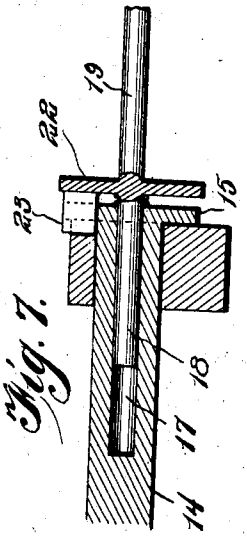


Fig. 7.



Witnesses

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UNITED STATES PATENT OFFICE.

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DELIVERY APPARATUS FOR DELIVERING MAIL, PARCELS, OR THE LIKE.

No. 905,370. Specification of Letters Patent. Patented Dec. 1, 1908.

Application filed January 9, 1908. Serial No. 409,973.

To all whom it may concern:

Be it known that I, SHELTON H. ROBY, a citizen of the United States, residing at Dublin, in the county of Laurens and State of Georgia, have invented certain new and useful Improvements in Delivery Apparatus for Delivering Mail, Parcels, or the Like; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to new and useful improvements in delivery apparatus, and while it is especially designed for delivering mail along rural routes or in cities, it may be employed for delivering parcels or other articles, as may be desired, the invention essentially comprising a car adapted to travel on an energized wire and having means whereby it may be set to be switched or side-tracked from the main line at any station along the route.

In the accompanying drawings,—Figure 1 is a view of one of the switch-actuating mechanisms, and one of the mail delivering cars or carriers, the former being about to be actuated by the latter; Fig. 2 is a similar view of the switch mechanisms after having been thrown or actuated to switch the car; Fig. 3 is an enlarged view of the mail car or carrier; Fig. 4 is a detail view of the track supporting hanger; Fig. 5 is a fragmentary view of the rock shaft locking means, the same being shown in locking position; Fig. 6 is a similar view, the locking mechanisms in unlocked position; Fig. 7 is a central longitudinal sectional view of Fig. 5; Figs. 8 and 9 are detail views illustrating the two positions of a stop constituting a part of the rock shaft locking means; and Fig. 10 is a detail perspective view of a locking pin employed in connection with the invention.

In the accompanying drawings, the numeral 1 indicates the feed or supporting wire, the same constituting a track for the supporting wheels 2 of the car or the carrier 3 to travel on, said wire being energized by a dynamo 4, or other suitable source of electrical energy, the circuit between the positive wire 1 and the dynamo being established by the negative or return wire 5.

In carrying out the invention, a suitable supporting frame or structure 6 is arranged at each of the stations along the mail route, this frame or structure essentially comprising a horizontal support 7, sustained in position by an upright 8, and a plurality of spaced hangers 9. In practice two of said hangers are arranged in close proximity at the rear end of the horizontal support 7 and are provided near their free ends with inwardly curved vertically spaced fingers 10, the fingers of one of the hangers supporting adjacent ends of the switch wires 11 and fingers of the other hanger engaging under the main wires 12. One of said hangers 9 is arranged at the front end of the support 7 and is also bent inwardly at its free or lower end to form inwardly curved fingers 13, adapted to engage under the main track wires.

A horizontally disposed rock shaft 14 is journaled in suitable bearings of the supporting frame or structure 6, and is formed at its front end with an outwardly extending flange 15, having a suitable recess 16, cut or formed in its periphery. The free end of the rock shaft is also formed with a longitudinal socket 17, for the reception of the rear portion 18 of a longitudinally movable member 19, the front end 20 of which is connected with the pivot or lower end of an upright actuating lever 21, the free end of which is of rearwardly curved formation, the purpose of which will be shown.

A locking plate 22 is formed or fixed to the rear end of the locking member 19, and is provided at its inner face with a rearwardly extending tongue or extension 23, adapted to normally engage with the recess 16 of the flange 15, and with a corresponding recess 24, formed in one face of one of the bearings for the rock shaft 14. The front end of said locking member 19 is adapted to slide through the lower ends of suitable supports or hangers 25, sustained by the supporting frame or structure 6 in any suitable manner, a resilient element, preferably in the form of a coiled spring 26, being arranged near one of the hangers, the tendency of said spring being to maintain the locking member 19 in its normal position.

From the construction illustrated and defined, it will be seen that should the free end of the actuating lever 21 be swung inwardly the locking member 19 would be caused to

move forwardly, which operation will cause the tongue or extension of the locking plate to be disengaged from the recesses 16 and 24, when the shaft 14 will be permitted to turn in its bearings.

In carrying out the invention, sections 27 of the main track wires are cut out and are pivotally connected with the main part of the track wires at their forward ends, the rear ends of such sections 27 being normally held in contact with the adjacent end of the main part of the track wires by a depending supporting member or hanger 28, connected with the outer or free end of a lifting arm 29, connected to the rock shaft 14.

From the construction shown and described, it will be seen that when the free end of the actuating lever 21 is swung rearwardly the locking member 19 will be released from locking engagement with the rock shaft 14, and the latter permitted to turn in its bearings sufficiently to bring the rear ends of sections 27 adjacent the branch wires 11, in which case the car or carrier will be switched from the main line.

A coiled spring 29 is arranged around the rock shaft at a suitable point to cause the latter to return to its normal position after having been rocked by the weight of the passing car or carrier.

The body 30 of the car or carrier is supported from the main or supporting wheels 2 by suitable hangers 31, the same being represented as connected with the axles 32 of the car or carrier, it being evident, however, that the body 30 may be suspended from the wheels 2 in any other suitable manner.

To cause the carrier or car to travel along the track wire 1, a motor 33 is arranged between said wheels 2 in any suitable manner. A positive wire 34 is arranged between the axle of the front wheel and the motor, and a negative or return wire 35 between the motor and axle of a grooved contact wheel 36, arranged to run on the wire 5, the frame being suitably insulated from the car or carrier frame, as is evident.

In carrying out the invention, the car or carrier is provided with suitable mechanism which may be set to throw the switch at any desired station along the mail route. While various arrangements may be employed for accomplishing this, I will show and describe an arrangement that is preferably employed.

A setting wheel 37 is mounted above the motor of the car or carrier in any suitable manner, said wheel being formed in its periphery with a suitable locking recess 38. A ratchet wheel 39 is arranged at one face of the setting wheel and is adapted to be engaged by the inner or pivot end 40 of an actuating lever or member 41, the free end of which is preferably outwardly curved, and is adapted to strike or engage a finger or extension 42 arranged at each of the stations along the mail route. A locking pin 43 is arranged to have its inner end bear on the periphery of the setting wheel, and is formed at its opposite end with a laterally extending finger or extension 44, a spring 45 being arranged around the body of said pin to cause it to operatively engage or bear on the periphery of the setting wheel.

In the operation of the invention, the setting wheel is caused to turn one notch as the car or carrier passes each of the stations by the actuating lever 41 engaging the fingers or extensions 42. The locking pin is so arranged that the finger or extension 44 thereof passes over the free ends of the actuating levers 21 arranged at the several stations until the setting wheel has been turned sufficiently to permit the inner end of the pin to engage with the recess 38, which will then be sufficiently lowered to strike or engage the free end of the actuating lever 21 at the next station, when the car or carrier will be switched in the manner described.

The ratchet wheel is preferably formed with a number of teeth to correspond with the several mail stations along the route, and the several teeth consecutively numbered as indicated. By this arrangement the switch actuating mechanism carried by the car or carrier may be set to switch the car at the first, second, third, fourth or other station along the route from the starting point. The rear wheel 2 of the car or carrier is preferably turned by suitable gearing operated by the motor shaft. In practice, it will be evident that such parts are insulated, as is necessary to prevent short circuits.

Having described my invention, I claim:

1. In a delivery apparatus of the class specified, the combination with a main track comprising two spaced track wires, a branch track also comprising spaced track wires and a switch formed by pivoted sections of the former, of a car or carrier having supporting wheels to travel on the upper track wire of either of the tracks, and a contact wheel to travel on the lower wire of either of the tracks, a driving gear for driving one of the supporting wheels, a motor for operating said gear, means for energizing the track wires, and connections for leading the current to and from the motor to complete the circuit through the car or carrier.

2. In a delivery apparatus of the class specified, the combination with a main and a branch track comprising each parallel track wires and a switch formed by pivoted sections of the main track, of a car or carrier adapted to travel on either of the tracks, switch mechanism adapted to be operated by the car or carrier to throw the switch, said mechanism comprising a longitudinally extending rock shaft, locking means for holding the switch in normal position, and switch actuating mechanism sustained by the car or

carrier for actuating the switch mechanism to throw the switch, with means for returning the switch into normal position.

3. In a delivery apparatus of the class specified, the combination with a main track, a branch track and a switch formed by pivoted sections of the former, of switch operating means for operating to throw the switch, said means comprising a pivoted actuating lever arranged near the switch, a car or carrier adapted to travel on either of the tracks, and actuating means supported by the car or carrier for operating the switch mechanism, said actuating means comprising a setting wheel supported by the car, said wheel being formed with a peripheral recess and a locking pin supported by the car in position to engage with the recess of the setting wheel, said pin comprising a laterally extending extension designed to engage the actuating lever when the pin is in engagement with the recess of the setting wheel.

4. In a delivery apparatus of the class specified, the combination with a switch station, of a main track, a car or carrier adapted to travel thereon, a setting wheel supported by the car or carrier, a ratchet wheel arranged at one face of the setting wheel, an operating lever pivotally supported by the car or carrier in position to engage the teeth of the ratchet wheel, and engaging means at the station for engaging the operating lever to turn the ratchet wheel one notch.

5. In a delivery apparatus of the class specified, the combination with a main track, a branch track and a switch formed by pivoted sections of the main track, of switch operating mechanism for throwing the switch, said mechanism comprising a longitudinally extending rock shaft, locking means for locking the rock shaft in normal position, a pressure spring tending to retain the locking means in locked relation with the rock shaft, and a pivoted actuating lever connected with the locking means for the rock shaft, a car or carrier adapted to travel on the track and switch actuating means supported by the car for operating the locking means to release the rock shaft.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

SHELTON H. ROBY.

Witnesses:
Z. WHITEHURST,
E. S. BALDWIN.