

W. H. DODSON.

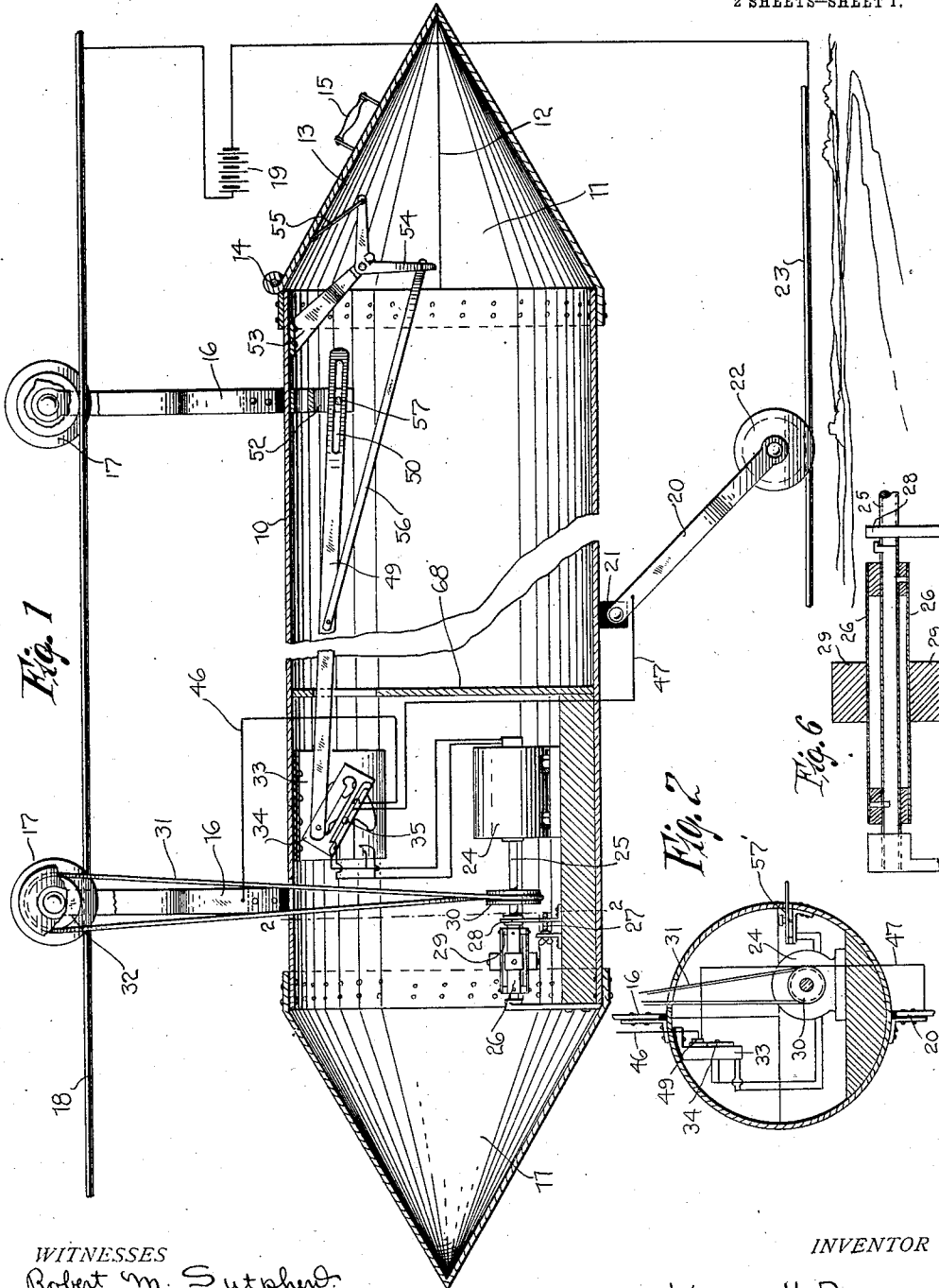
MAIL BOX.

APPLICATION FILED JAN. 31, 1912.

1,054,911.

Patented Mar. 4, 1913.

2 SHEETS—SHEET 1.



WITNESSES

Robert M. Sutphen.

L. N. Miller

INVENTOR

WARREN H. DODSON

By E. C. Freeman, his Attorney

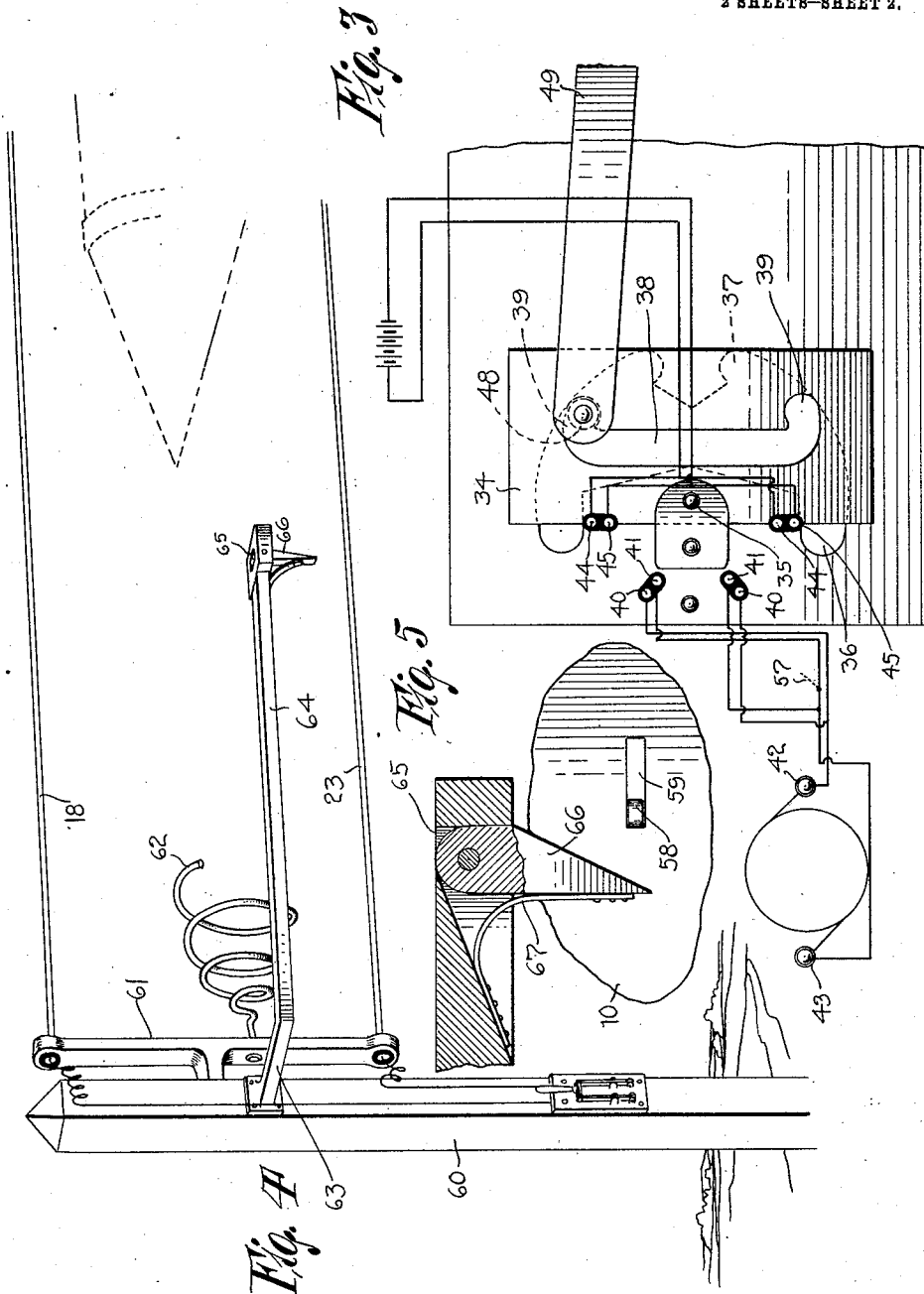
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UNITED STATES PATENT OFFICE.

WARREN H. DODSON, OF BOVILL, IDAHO.

MAIL-BOX.

1,054,911.

Specification of Letters Patent.

Patented Mar. 4, 1913.

Application filed January 31, 1912. Serial No. 674,516.

To all whom it may concern:

Be it known that I, WARREN H. DODSON, a citizen of the United States, residing at Bovill, in the county of Latah and State of Idaho, have invented certain new and useful Improvements in Mail-Boxes, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to mail delivery devices of the type wherein a mail box is carried from one point to another on an elevated track, said box being provided with suitable mechanism for governing the same.

The principal object of the invention is to improve the general construction of devices of this character.

Another object of the invention is to provide an improved form of controlling device whereby the act of opening and closing the mail box door will reverse the direction of movement of the box.

With the above and other objects in view, the invention consists in general of certain novel constructions, combinations and arrangements of parts as will be hereinafter fully described, illustrated in the accompanying drawings, and specifically claimed.

In the accompanying drawings, like characters of reference, indicate like parts in the several views, and Figure 1 is a longitudinal median section taken vertically through a box constructed in accordance with this invention. Fig. 2 is a section on the line 2—2, Fig. 1. Fig. 3 is an enlarged detail view of the device used for reversing the electric current which furnishes power for propelling the box. Fig. 4 is a detail perspective view of the stop mechanism used in connection therewith. Fig. 5 is an enlarged detail of a portion of said stop mechanism showing the means used for cutting off the current at the end of the route. Fig. 6 is a detail showing the speed controlling device.

The invention as illustrated in the present embodiment consists of a cylindrical body 10 having conical ends 11 one whereof is split horizontally as at 12 to provide a door 13 which is hinged to the body of the box as at 14. This door is also provided with a handle 15 for convenience in operating the same. Extending upward from the body 10 are standards 16 upon each of which is carried a wheel 17 which is adapted to run upon an overhead wire 18, the wire also forming a conductor and being con-

nected to a suitable source of electric energy as indicated by the battery 19, it being understood that this battery is merely typical of any desired source of electric energy. Depending from the lower side of the body 10 is a trolley pole 20 which is pivoted to a suitable lug 21 on the body and is provided with the usual trolley wheel 22. This trolley wheel runs on an overhead wire 23 which is likewise connected to the source of electric energy 19. Within the body 10 is a motor 24 having a shaft 25 whereon is mounted a speed controlling device 26 in the nature of a spring controlled governor. Provision is made for adjusting the governor by a set screw 27 which acts to move a friction plate 28 to and from the movable plate 29 of said governor. On the shaft 25 is a belt pulley 30 which is connected by a belt 31 with a belt pulley 32 forming a part of one of the wheels 17.

At 33 is a switch board whereto is pivoted a lever 34, the lever being pivoted as at 35. The switch board is provided with a cut out portion, the sides of which form arcs of a circle having its center at 35. By reference to Fig. 3 it will be seen that these arcs terminate at each end in recurved portions forming pockets 36 and 37. The lever itself is provided with a slot 38 terminating at each end in a pocket 39. On the switch board 33 is mounted a set of contacts, these contacts being four in number and arranged in pairs, the respective contacts of the respective pairs being indicated at 40 and 41. The contacts 40 are connected by suitable wiring to one pole 42 of the motor while the contacts 41 are connected to the other pole 43 of said motor. On the lever are mounted other contacts similarly arranged in pairs, the respective contacts of the respective pairs being indicated at 44 and 45. These contacts are likewise connected but it is to be noted that the contacts are so arranged that when the lever is in one position the contacts 40 and 44 will be in engagement while in a second position the contacts 40 and 45 will be in engagement. By this means current passing to the motor is reversed, it being understood that suitable wires 46 and 47 connect the contacts 44 and 45 with the trolley pole and one of the brackets 16 respectively.

Movable within the slot 38 is a roller 48 which is carried on an arm 49 provided with a slot 50 which engages over a guide pin 57

carried on a bracket 52 adjacent the door end of the device. Pivoted to a second bracket 53 is a bell crank lever 54, one arm of which is connected by a ring 55 with the door 13 while the remaining arm is connected by a reach rod 56 with the bar 49.

In order to understand the operation of the reversing mechanism let it be supposed that the parts are in the position shown in Fig. 1. If the operator opens the door the bell crank lever will rotate on its pivot and the bar 49 will be drawn forward, the roller 48 being at this time located in one of the pockets 39 will cause the lever 34 to rotate about its pivot point until the roller 48 engages in the pocket 37 at the other end of the respective arc. When the operator closes the door the roller 48 will pass out of the pocket 39 and will move up along the slot 38 until it reaches the opposite end thereof. It is to be noted that when the roller 48 is in one of the pockets 37 the contacts 44 and 45 will be out of engagement with the contacts 40 and 41. After the roller has reached the opposite end of the slot 38 further movement of the bar 34 by the closing of the door will cause said roller to pass in the respective pocket 36 and this will force the contacts 44 and 45 into engagement with the contacts 40 and 41, thus reversing the current. It will thus be observed that every time a door is opened the direction of the current flow is reversed so that when the device reaches the station for which it is destined the mere opening and closing of the door will reverse the current so that then the machine is ready to run in the opposite direction, or, in other words, back to the other end of the line.

For the purpose of controlling the device and cutting off the current from the motor a suitable lever switch 57' is interposed in the wiring between the contacts 40 and 41 and the poles 42 and 43 of the motor. This switch is controlled by an arm 58 which passes out of the slot 59 in the side of the body 10. For the purpose of supporting the wires in parallel relation the usual pole line is used and at each end the respective pole 60 carries a T-shaped bracket 61 whereto the wires 18 and 23 are connected. Carried on the bracket is a spiral spring 62 so arranged that the point of the conical termination of the mail box can enter the spring and compress the same thus checking the movement of the box gradually and without violence.

Extending outward from the pole 60 is an arm 63 which has an angularly disposed outer end 64 extending parallel to the wires 18 and 23. At the outer end of this extremity 64 is a pocket 65 wherein is pivoted a latch 66 yieldably held in a downward position by means of a spring 67. This latch extends downward in such position that

when the switch arm 58 comes into engagement with the latch the switch will be turned to open position but the spring is of sufficient resiliency so that when the switch arm 58 arrives at the end of the slot 59 the spring will yield and permit the passage of the mail box to the terminus. The latch is so arranged that the box cannot bounce back from the spring 62 and run backward down the line with the power shut off.

It will, of course, be obvious, that the box may be released by raising the box by hand.

In the operation of the device, mail or other article to be sent from one station to another being placed in what may be termed the forward compartment of the mail box, a partition 68 being employed to divide the engine or motor space from the balance of the box, the operator closes the lid 13 and in so doing moves the switch lever 34 as previously described and establishes a circuit in the proper direction to run the box to the other end of the line. He then lifts the latch 66 and moves the switch lever 58 to complete the circuit through the motor. The box will then run to the opposite end of the line. When it reaches the opposite end of the line it will be checked by the spring 62 just previous to which the latch 66 at that end of the line will have acted to move the switch lever 58 and break the circuit. The operator at the end of the line then opens the door, takes out the mail, and again closes the door, which reverses the direction of the current. He then repeats the operation of lifting the latch and throwing the lever 58 and the box returns to its original station.

There has thus been provided a simple and efficient device of the kind described and for the purpose specified.

Having thus described the invention, what is claimed as new, is:—

1. In an apparatus of the character described, a pair of conducting wires mounted on suitable supports located in an electric circuit, a mail carrier receptacle connected with and movable on said conducting wires, an electric motor located in said receptacle and electrically connected with said conducting wires, a propelling mechanism connected with said electric motor, a reversible switch for reversing the current, and a hinged cover connected with said switch and operative to throw the same.

2. In an apparatus of the character described, a pair of conducting wires mounted on posts and located in an electric circuit, a mail carrier receptacle connected to said conducting wires by means of trolley wheels, an electric motor located in said carrier and electrically connected with said conducting wires, a propelling mechanism connecting the shaft of said motor with one of said trolley wheels, a switch lever and a reversing switch located in said carrier, and electri-

cally connected with the brushes to the motor and the switch lever for changing the circuit through said brushes and reversing the current.

5 3. In an apparatus of the character described, a pair of conducting wires mounted on posts and located in an electric circuit, a mail carrier receptacle connected to said
10 conducting wires by trolley wheels, an electric motor located in said mail carrier receptacle a switch lever, a propelling mechanism connecting one of said trolley wheels with the shaft of said electric motor, a reversing switch mechanism connected with

said electric circuit and with the brushes of 15 the motor; and a hinged door at one end of said carrier, a rod hinged to said door and connected to the switch lever of said reversing switch whereby the switch may be
20 thrown in either direction by the opening and closing of said door to reverse the current.

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

WARREN H. DODSON.

Witnesses:

S. G. BROCKWAY,
ALFRED BILSEMEIER.

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