Nov. 14, 1939. R. H. BESS 2,179,913

MAIL BOX

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FIG. 1.

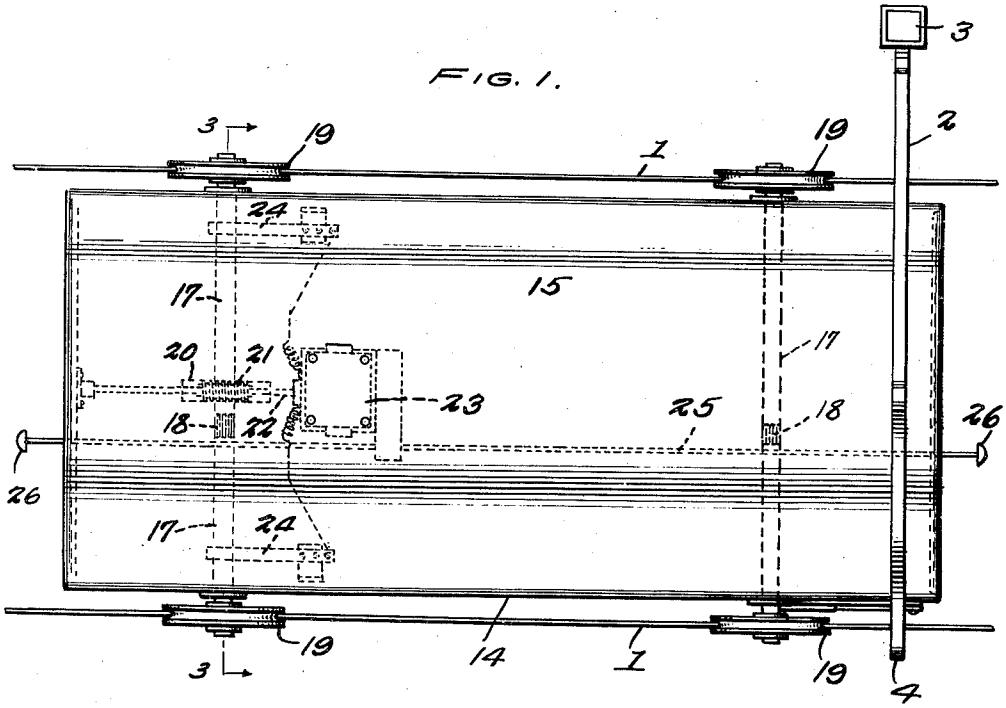
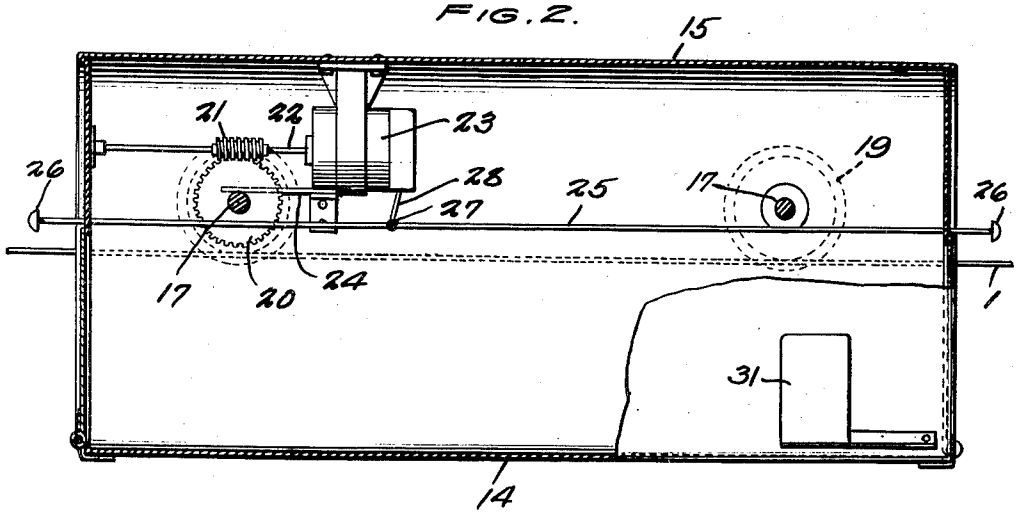


FIG. 2.



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FIG. 3.

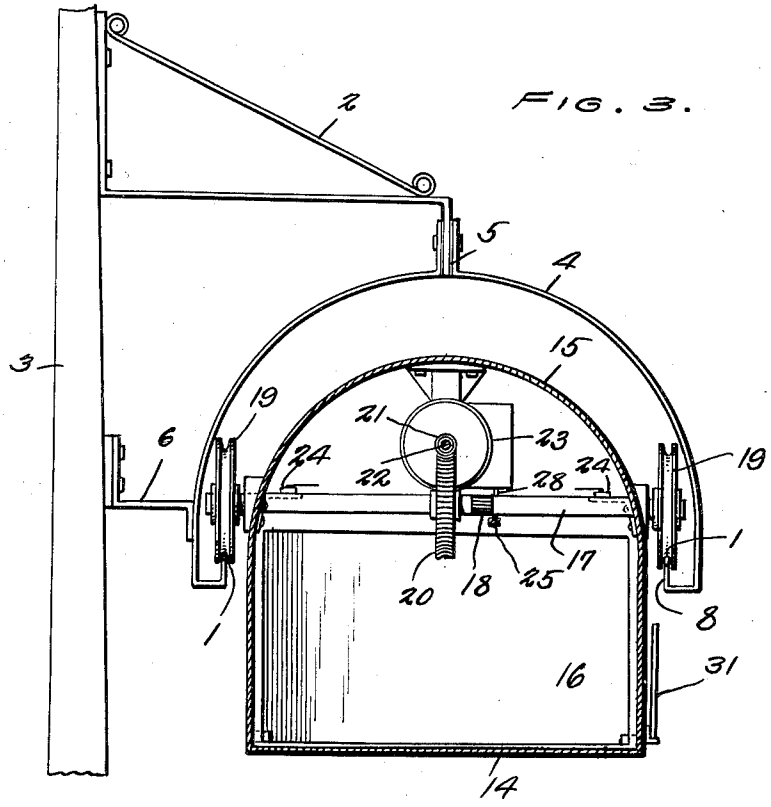


FIG. 4.

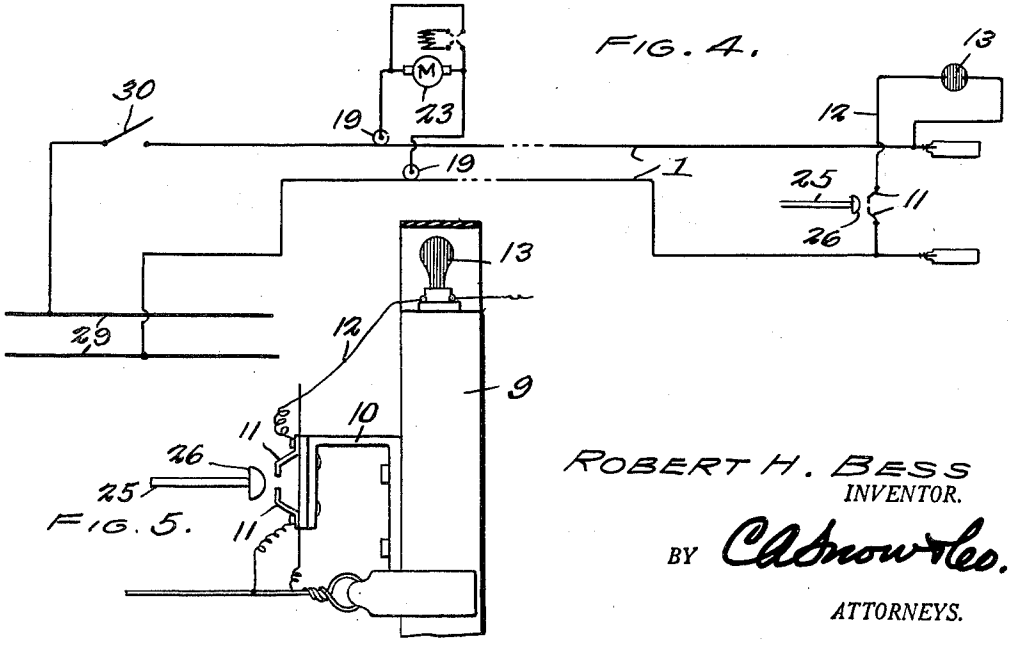


FIG. 5.

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UNITED STATES PATENT OFFICE

2,179,913

MAIL BOX

Robert H. Bess, Downey, Calif.

Application October 3, 1938, Serial No. 233,077

1 Claim. (Cl. 104—151)

This invention relates to a mail box designed primarily for use in rural sections where mail boxes ordinarily are located at the side of a road and usually remote from the residence of the user.

An object of the invention is to provide a mail box mounted to travel from the road to the house, said box being electrically driven and constantly under the control of the user located at one end of the path of travel.

A further object is to provide a mail box which, on reaching that end of its trip remote from the user, will automatically operate a signal light to indicate that its destination has been reached.

A still further object is to provide a travelling mail box which utilizes a reversible electric motor, said motor being reversed automatically when the box reaches either limit of its movement.

With the foregoing and other objects in view which will appear as the description proceeds, the invention consists of certain novel details of construction and combinations of parts hereinafter more fully described and pointed out in the claim, it being understood that changes may be made in the construction and arrangement of parts without departing from the spirit of the invention as claimed.

In the accompanying drawings the preferred form of the invention has been shown.

In said drawings

Figure 1 is a plan view of the mail box in position on its supporting trolleys.

Figure 2 is a central vertical section through the box, a portion being shown in elevation.

Figure 3 is a section on line 3—3, Figure 1.

Figure 4 is a view in diagram showing the electric circuit.

Figure 5 is an elevation showing the means employed for closing the circuit to the signal lamp when the box reaches one limit of its movement.

Referring to the figures by characters of reference 1 designates a pair of parallel supporting trolley wires of sufficient strength to support the mail box and any load which may be placed therein. These wires are suspended from suitably arranged brackets 2 which can be mounted at desired intervals on posts 3. It is preferred to provide each bracket with a yoke 4 fastened at its center as shown at 5 and at one side as shown at 6, the ends of the yokes being extended toward each other and thence upwardly as at 8 to the wires 1 where they are welded or otherwise attached.

An abutment post 9 is located at each end of the trolley wires, one of these being shown in Figure 5 and each post has a strap or bracket 10 extending therefrom for the purpose of reversing a motor as hereinafter explained. One of the brackets 10 is also provided with spaced resilient contact members 11 constituting terminals of an electric circuit 12 in which is included a signal lamp 13. It is preferred to locate this lamp at that end of the trolley which is remote from the home of the operator so that, when the box reaches the limit of its movement away from the house, the signal lamp will be lighted to show that the box has reached its extreme position.

The mail box is of any desired configuration. In the structure illustrated this box has been shown in the form of a casing 14 having a rounded top 15 and hinged doors 16 which close the ends of the casing.

Parallel shafts 17 are journalled in the sides of the box near the top thereof and each shaft is made up of alining sections separated by a length of insulation indicated at 18. Grooved wheels 19 are secured to the ends of each shaft and these wheels are adapted to rest on and travel along the respective wires 1.

One of the shafts is provided with a worm gear 20 constantly in mesh with a worm 21 which is secured to the shaft 22 of a reversible electric motor 23 and current is supplied to this motor through brushes 24 which bear upon the respective end portions of one of the shafts 17.

A reversing rod 25 is extended longitudinally within the box and projects at its ends therefrom. Each end of this rod has a head 26 thereon and the rod is adapted to slide longitudinally. It is coupled at 27 to a lever 28 used for operating the reverse mechanism of the motor. This mechanism constitutes no part of the present invention. On the contrary the reversible motor can be of any standard type.

As shown in Figure 4 the two trolley wires 1 are connected to opposite sides of an electric circuit the wires or conductors of which have been indicated at 29. These wires are usually part of the house circuit. A switch 30 is in circuit with one of the wires 1 and is located preferably at the house end of the apparatus.

In using the box the mail to be delivered to the carrier is placed therein and a flag 31 carried by one side of the box is swung outwardly where it can be seen readily by the carrier. Switch 30 is then shifted to close the electric circuit through the wires 1 and this circuit will flow through the shaft 17 and brushes 24 to the motor so that said motor, which has been shifted to carry the box outwardly away from the house, will cause the

wheels 19 to travel along the supporting wires until the box ultimately reaches the outer limit of its movement adjacent to the side of the road. At that point the advancing head 26 will come against the contacts 11 and not only close the circuit to the signal lamp 13 but also cause the rod to push lever 28 and reverse the motor. The operator standing at the house watches for the light and as soon as the red light appears, he throws the switch 30 so that the box will remain at the outer limit of its movement. After the mail has been removed from the box by the carrier said box can be returned to the house simply by closing the circuit at switch 30. As the motor has already been reversed the box will travel along the supporting wires 1 until the house is reached at which time the advancing head 26 will come against the bracket 11 in the path thereof and cause the motor to be reversed. The operator who is standing ready to receive the box immediately opens the switch so that the box will remain in position and its contents can be removed.

It has been found in practice that apparatus such as herein described is very efficient in use and is advantageous because of its simplicity and ease of operation. It has been of great convenience to persons residing in rural districts where mail boxes are located at considerable distances from the houses.

While it is generally designed to locate the signal light at the outer terminus of the box, it is to be understood that it could be located at the inner terminus where it will be lighted when the box reaches the outer end of its trip.

What is claimed is:

Apparatus of the class described including supporting wires, a carrier mounted for movement therealong, a reversible motor within the carrier including a reversing switch, means operated by the motor for moving the carrier in either direction along the wires, a signal circuit including normally spaced contacts, and means movable with the carrier and against the contacts for simultaneously limiting the movement of the carrier in one direction, operating the reversing switch, and closing the signal circuit through the contacts.

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