

E. J. LEGER.
MAIL COLLECTING APPARATUS.
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1,400,611.

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Fig. 1.

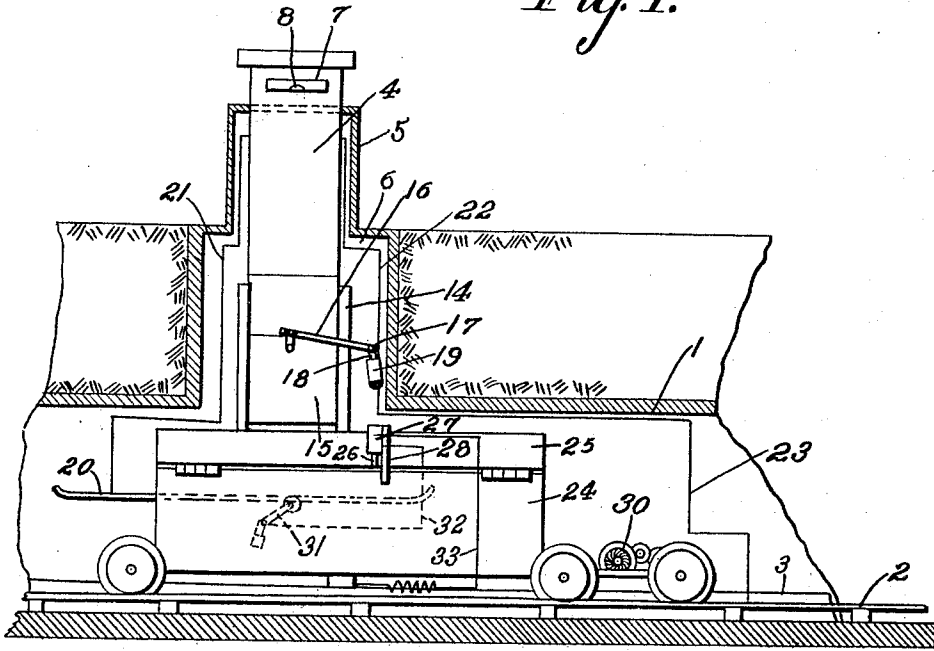
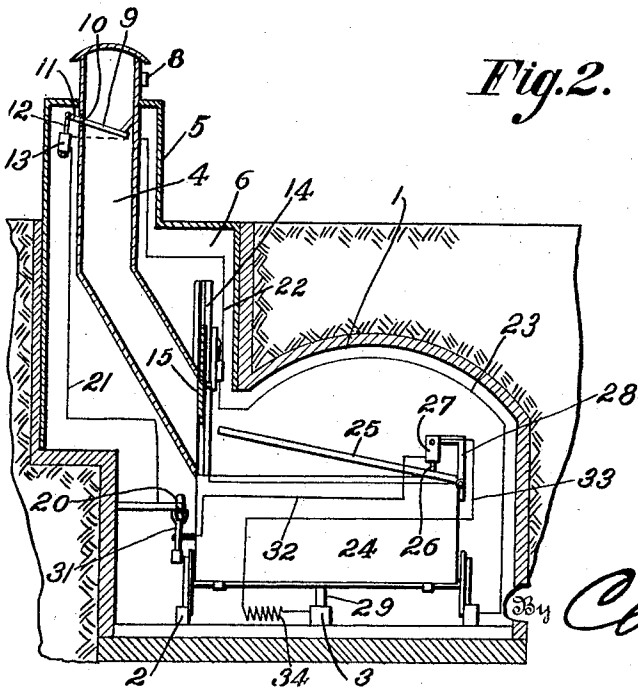


Fig. 2.



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MAIL-COLLECTING APPARATUS.

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Specification of Letters Patent. Patented Dec. 20, 1921.

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To all whom it may concern:

Be it known that I, EMILE J. LEGER, a subject of the King of England, residing at Moncton, Province of New Brunswick, Canada, have invented a new and useful Mail-Collecting Apparatus, of which the following is a specification.

This invention relates to apparatus for automatically collecting mail from different points and delivering it to a central station, one of the objects of the invention being to provide an underground carrier adapted to travel continuously along a prescribed path and which, during such movement, will pass mail boxes or containers which will be operated automatically to deliver the mail therefrom to the car and subsequently automatically reset to retain the mail until the car makes its next trip.

With the foregoing and other objects in view which will appear as the description proceeds the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that, within the scope of what is claimed, changes in the precise embodiment of the invention shown can be made without departing from the spirit of the invention.

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

In said drawings

Figure 1 is an elevation of a mail box and a collecting car in position adjacent thereto during the interchange of mail, the conduit in which the car is located being shown in section.

Fig. 2 is a vertical transverse section through the mail box and conduit and showing the collecting car in elevation.

Referring to the figures by characters of reference 1 designates a conduit which can be extended over any desired territory, the same beginning and ending at a central station and being provided with a continuous track 2 having a third rail 3 located wherever desired. At suitable points along the conduit are provided mail boxes one of which has been shown in the drawings.

This mail box, which has been indicated at 4, is arranged within a housing 5 extending above the surface of the ground, the lower portion of the housing being enlarged as at 6 and opening into one side of the conduit 1 at the top thereof. The box 4 is pro-

vided with the usual mail receiving slot 7 which can have a closure of any desired construction, indicated at 8 and within the box and below the slot is a trap door 9 which normally hangs downwardly within the box, this trap door being hingedly mounted at 10 and having an arm 11. The armature 12 of a solenoid 13 may be connected to this arm so that when the solenoid is energized the attraction of the armature will result in the movement of the trap door from its depending or open position to its raised or closed position as shown in Fig. 2.

The lower portion of the box 4 is inclined downwardly and laterally toward the conduit 1 and is provided, at its open lower end with parallel guides 14 extending above the open lower end of the box. Slidable within these guides is a door 15 which is normally closed and is connected to one arm of a lever 16 fulcrumed as at 17 (see Fig. 1) and having the armature 18 of a solenoid 19 connected to the other arm thereof. Thus when the solenoid is energized the armature will be attracted to move the lever 16 and shift the door to open position.

Supported within one side of the conduit across the point of communication between the conduit and the housing 6 is a contact rail 20 the ends of which are upturned and supported beyond the sides of the housing as shown in Fig. 1. This rail is electrically connected as by means of a conductor 21, to the solenoid 13 and said solenoid, in turn, is electrically connected, as by a conductor 22, to the solenoid 19. The latter solenoid is electrically connected by a conductor 23 to the track 2.

The car used for collecting the mail has been indicated at 24 and is designed to travel along the track 2, this car being provided with a hinged cover 25 to which is connected the armature 26 of a solenoid 27 mounted in a suitable bracket 28 carried by the car body. A shoe 29 is connected in any suitable manner to the car for traveling along the third rail 3 and this car is provided with a motor indicated generally at 30 and which receives its power from the third rail in the usual or any preferred manner thereby to drive the car continuously along the track 2 from the time it leaves the central station until it returns thereto.

A contact lever 31 is mounted to swing on one side of the car and is movable against

and along the contact rail 20. This lever 31 is not electrically connected to the car 24 but is connected by a conductor 32 to the solenoid 27 which, in turn, is electrically connected by a conductor 33 to the circuit leading to the motor 30, there being any suitable resistance provided in the conductor 33, as indicated at 34.

As before stated the door 15 is normally closed while the trap 9 is normally open. Thus when mail or other articles are placed in the top portion of the box 4 it will gravitate against the door 15. As the car traveling along the track 2 comes to position below the lower end of the box 4 the lever 31 comes against the contact rail 20. This immediately completes a circuit through the solenoids 27, 19 and 13 with the result that the armatures will be attracted. The trap 9 will immediately move to closed position, thus to intercept any mail that might be placed in the box while the car is receiving articles from the box. The energizing of the solenoids will also promptly open the door 15 and the cover 25. As soon as the door 15 is lifted the mail contained behind it will gravitate into the open car body, the car in the meantime moving forwardly. The car is of such length, however, that the mail will have ample opportunity to fall thereinto before the car passes from under the box. As soon as the lever 31 passes away from the contact rail 20 the circuit to the solenoids will be broken and the door 15 will drop to closed position, the trap 9 will open, and the cover 25 will also fall to closed position. When the car reaches the next box 4 along its path the foregoing operation will be repeated so that when the car reaches its destination it will contain the articles delivered thereto from all of the boxes along its route.

It is to be understood that any desired arrangement of wiring and of electrically operated parts may be provided, only one form having been illustrated in the drawings.

What is claimed is:

1. The combination with a receiving box having an outlet opening in the bottom thereof, of a door normally closing said opening; a normally opened trap between the ends of the box, an automatically operated car movable below and past the outlet end of the box, and means controlled by the car for automatically opening the door and closing the trap simultaneously.

2. The combination with a receiving box having an outlet opening in the bottom thereof and an inlet opening adjacent the top thereof, of a normally open trap between the inlet and outlet openings, a normally closed door at the outlet opening, a collecting car movable below and past the outlet end of the box, a cover thereon, and means controlled by the car during its movement past the box for automatically opening the cover and door and closing the trap, and subsequently releasing them.

3. The combination with a conduit and a track therein, of a receiving box extending above the conduit and having an inlet at its upper end and an outlet at its lower end opening into the conduit, a contact rail extending within the conduit and across the point of communication with the receiving box, a door normally closing the outlet end of the box, a trap within the box and normally open, said trap being located between the inlet and the outlet, a car movable automatically along the track, a contact lever carried thereby and movable into and out of contact with the rail, a closure upon the car, and means controlled by the contact of the lever with the rail for simultaneously and automatically opening the closure and the door and closing the trap.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

EMILE J. LEGER.

Witnesses:

EDWARD GIROUARD,
ANTOINE E. LEGER.