

W. B. YARBERRY.
RURAL MAIL DELIVERY CAR.
APPLICATION FILED OCT. 15, 1908.

940,107.

Patented Nov. 16, 1909.

2 SHEETS—SHEET 1.

Fig. 1.

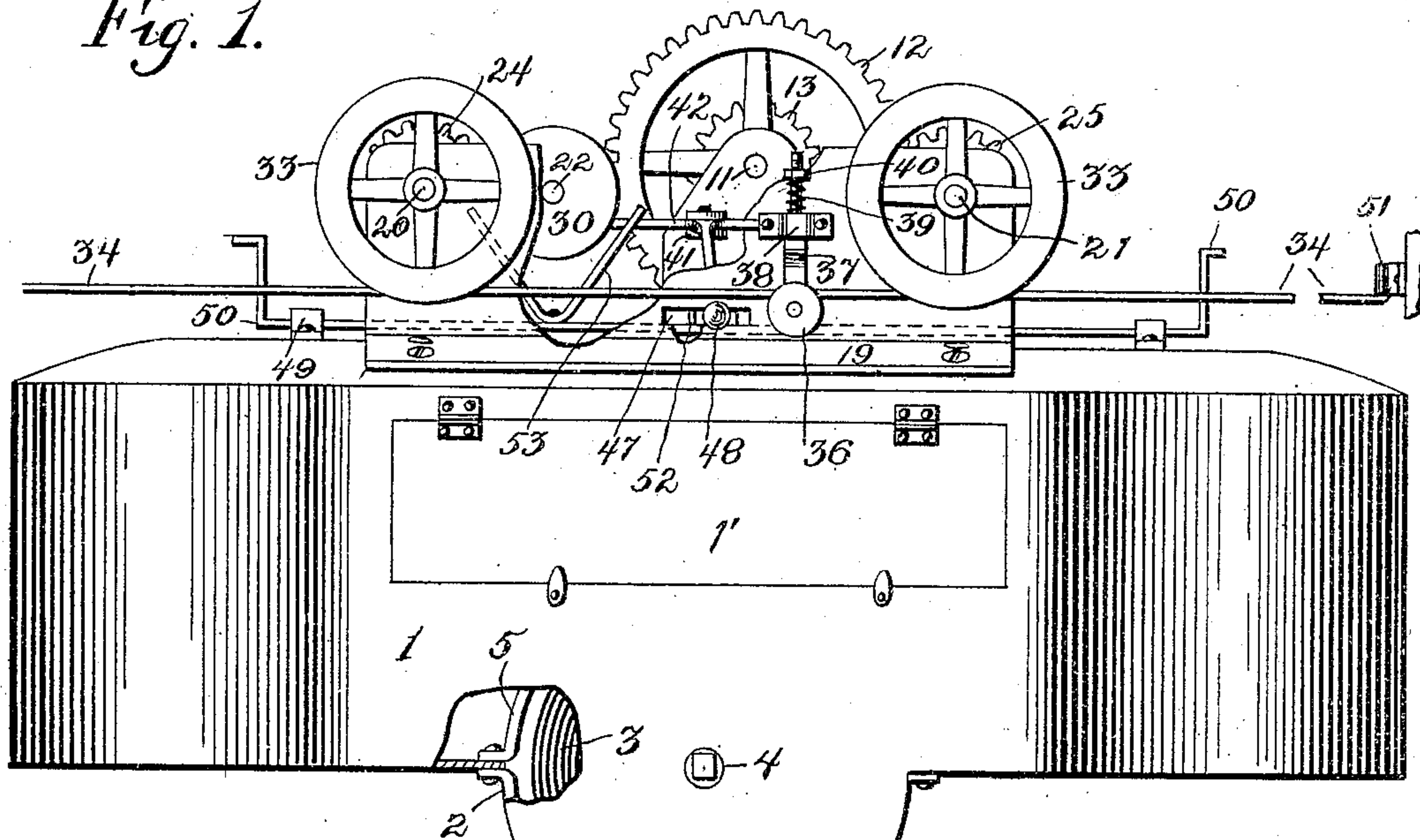
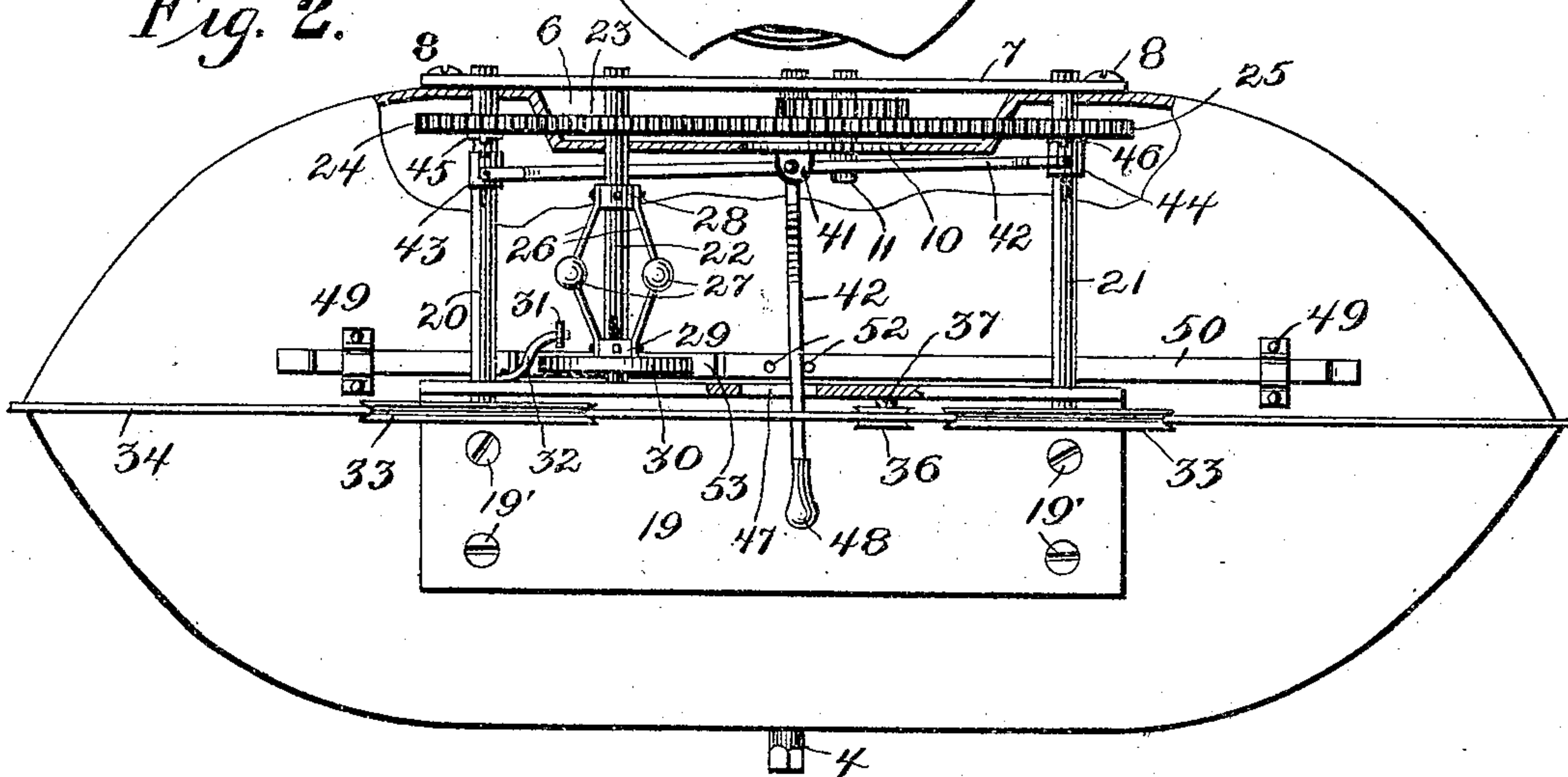


Fig. 2.



Witnesses:

Albert L. Trey

C. M. Havell

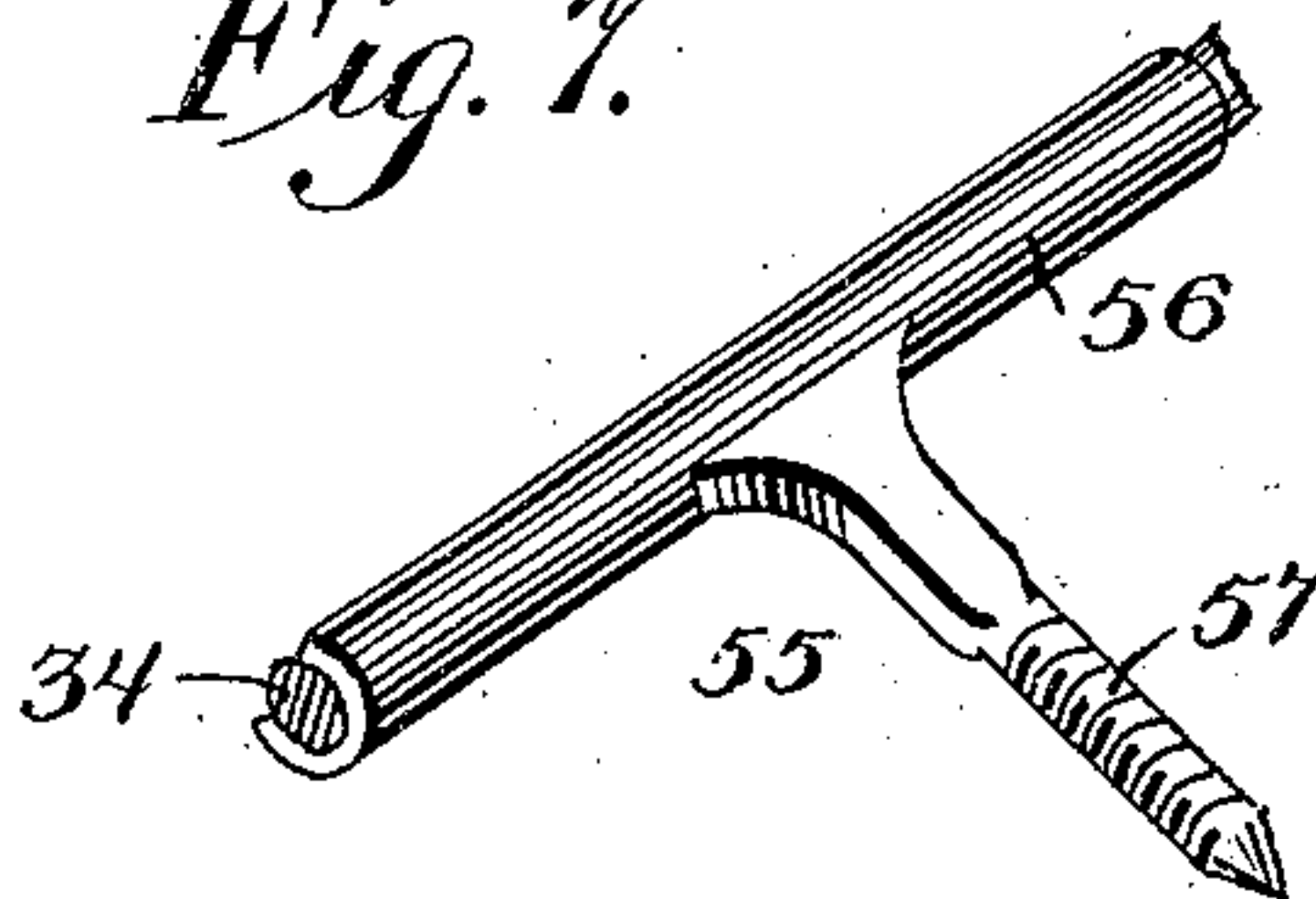
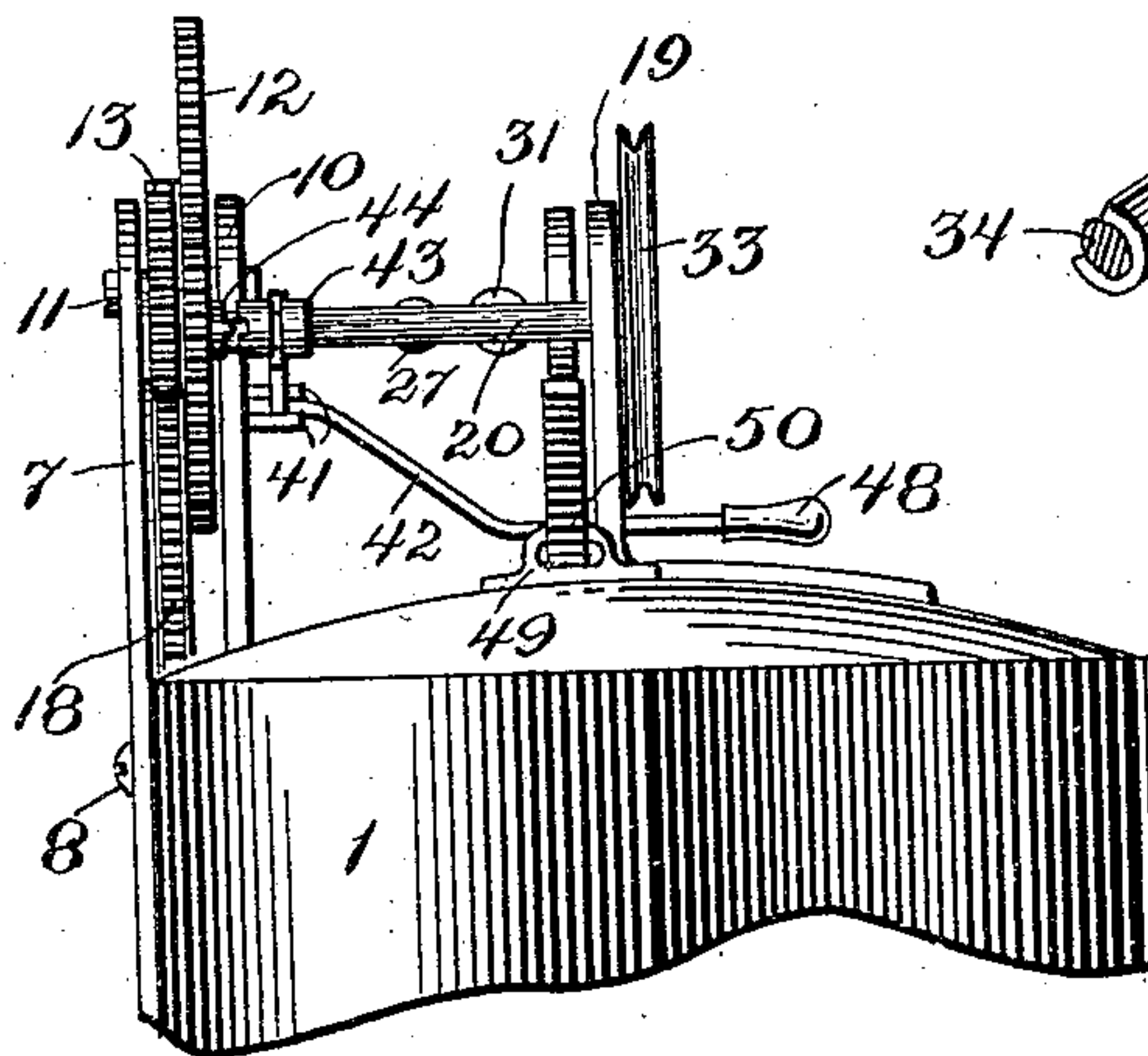
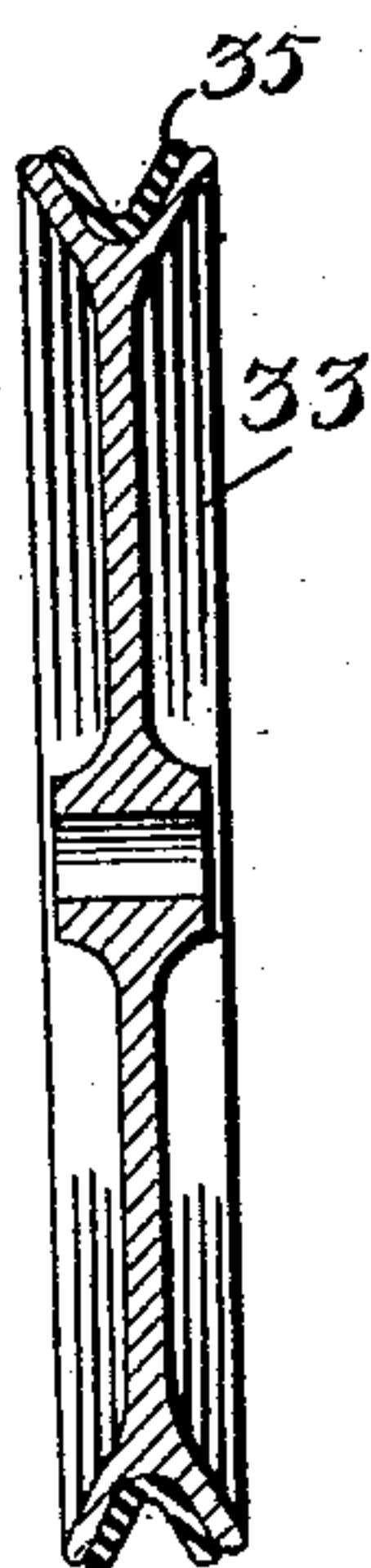
Inventor,

William B. Yarberry.

By W. Stewart Brown Attorney.

940,107.

2 SHEETS—SHEET 2.



Albert L. Krey.

Chas. Howell

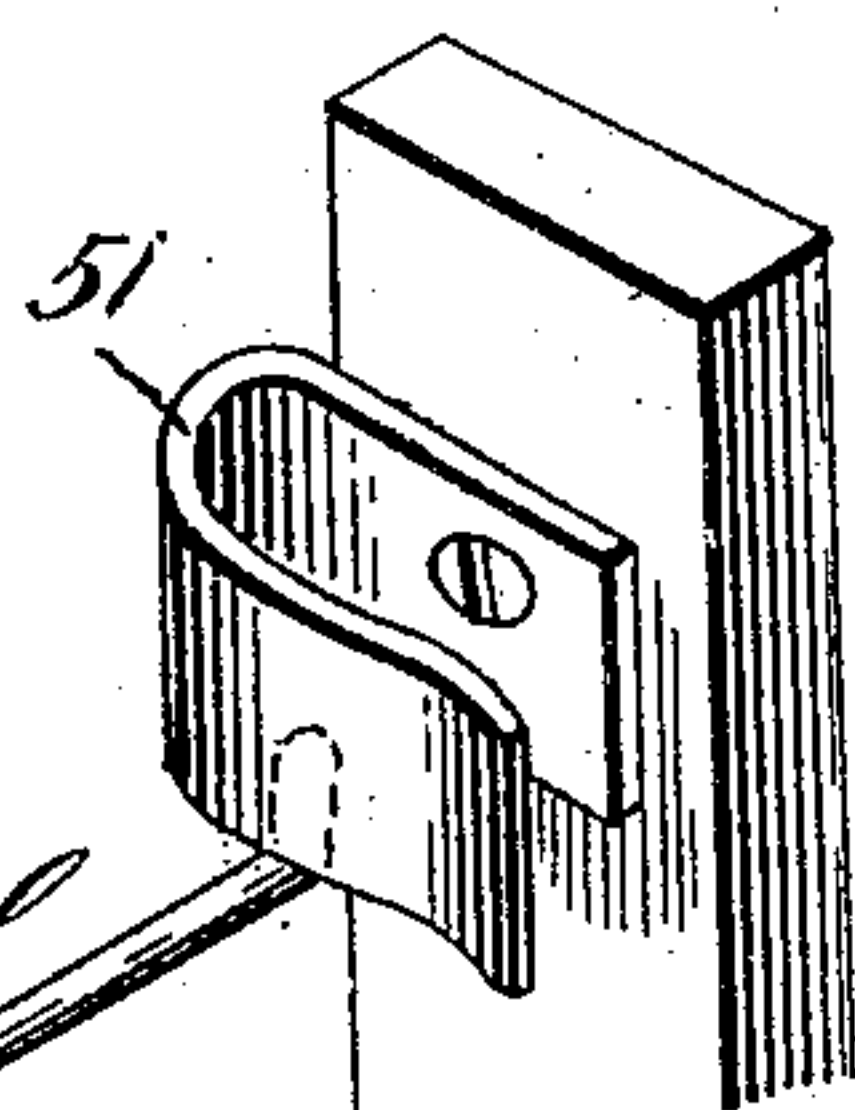


Fig. 5. Inventor,
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UNITED STATES PATENT OFFICE.

WILLIAM B. YARBERRY, OF GODDARD, KANSAS.

RURAL-MAIL-DELIVERY CAR.

940,107.

Specification of Letters Patent.

Patented Nov. 16, 1909.

Application filed October 15, 1908. Serial No. 457,802.

To all whom it may concern:

Be it known that I, WILLIAM B. YARBERRY, a resident of Goddard, in the county of Sedgwick and State of Kansas, have invented certain new and useful Improvements in Rural-Mail-Delivery Cars; and I do hereby 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.

My invention relates to rural mail delivery cars, and has for its object the transmission and delivery of rural mail, as the mail carrier can not visit every residence on his route. I have provided a mail-box or car with means to travel a trolley wire extending from the carrier's route to the residences, said wire being suspended on poles so that when the carrier deposits the mail in the box or car he releases said car from its mooring and the car will travel the trolley wire to the residence to which it is destined which insures the certain and prompt delivery of the mail to its rightful owner and not leave the mail out over night a half mile away from any residence as might be, and exposed to robbers as is often the case.

To the accomplishment of these ends and others subordinate thereto, the preferred embodiment of my invention comprehends the construction and arrangement of parts, to be hereinafter described, illustrated in the accompanying drawings and succinctly defined in the appended claims.

Figure 1 is a front view in elevation, parts being broken away and shown in section. Fig. 2 is a top plan view with parts broken away and shown in section. Fig. 3 is a rear view in elevation, a portion of the inclosing plate being removed to disclose the motor and operating gears. Fig. 4 is an end view in elevation of the upper portion of the invention. Fig. 5 is a perspective view of a terminal post, trolley wire and bumper. Fig. 6 is a sectional view of one of the trolley or carrier wheels, and Fig. 7 is a perspective view of the trolley wire supporting bracket.

Reference numeral 1 designates a metallic box having V-shaped ends and oval top to break the wind and shed the rain, the front of the box being equipped with a door 1' for the reception of the mail. The bottom of the box is provided with a semi-circular de-

pression 2 to receive an involute spring 3 mounted on a shaft 4 journaled in the walls of the box, the forward ends of the shaft 4 being squared to receive a winding key. A semicircular cap 5 incases the spring 3 as seen in Fig. 1. The construction of the spring 3 is well known; it need not be described. The rear wall of the car is bent inwardly to provide a recess 6 which is incased by a plate 7, which plate is secured to the side of the car by screws 8 and threaded openings 9. The wall of the recess 6 is extended upwardly into an extension 10 and carries gear wheel 12 and pinion 13. A train of gears 14, 15, 16, 17 and 18 transmit power from the spring shaft 4 to the gear 12 through pinion 13 and the gears of said train are mounted on shafts which are journaled in the wall of the depression 6 and the incasing plate 7.

Parallel with the plate 7 is an angular plate 19 secured by screws 19' to the top of the car and between and journaled in these plates at opposite ends thereof are shafts 20 and 21. Similarly mounted is a governor shaft 22 to which is fixed a gear 23 in mesh with the gear 12 and with a gear 24 loose on shaft 20. The shaft 21 is provided with a loose gear 25 directly in mesh with a gear 12 to cause both shafts 20—21 to rotate in the same direction. Spring arms 26 and governor balls 27 are attached to rigid collar 28 and sliding collar 29 on the shaft 22 and to the sliding collar is attached a friction disk 30 which disk engages a roller 31 on spring arm 32 due to the action of the governor when the car is propelled at too great rate of speed.

The forward ends of the shaft 20—21 are equipped with carrier wheels 33 which travel on trolley wire 34 these wheels being provided with V-shaped grooved rubber treads 35 shown in Fig. 6. Between these wheels 33 is a tension wheel 36 engaging the upper side of the trolley wire and mounted on an arm 37 slidable in bracket 38 on the front plate 12. The tension exerted by the wheel 36 is controlled by spring 39 and nut 40, the latter being threaded on the upper end of said arm 37.

In a bracket 41 on extension 10, is pivoted a T-arm 42 the upper branches of which connect with clutch collar 43—44 slidable on shaft 20—21 and alternately engage with clutch members 45—56 fixed respectively to gears 24 and 25. The forward

branch or stem of member 42 passes through an opening 47 in plate 19 and is equipped with a handle 48.

Extending longitudinally of the top and slidable in bearings 49 is a shifting bar 50 having upturned ends, which ends contact with spring bumpers 51 on the terminal poles and to which the trolley wire ends are attached. This bar 50 is provided with pins 52 between which the stem of the said T-shaped member passes and are arranged to be engaged by said stem. To this bar 50 is secured spring-brake arms in the form of a V-shaped member 53 and said arms alternately engage the opposite sides of the disk 30 to stop the machine.

Bracket arms 55 support the intermediate portions of the trolley wire and each consists of a tubular portion 56 and screws 57.

The operation is as follows: In Fig. 2 the parts are set for movement toward the right, in which position the clutch collar 43 is disengaged from its complement member 45, and the collar 44 engaged with its complement member 46. As the spring unwinds the shaft 21 is driven through the train of gears and causes the car to travel to the right until the bumper 51 is encountered by the upwardly projecting end of the bar 50, when said bar is shifted to the left, the pins 52 thereon engage the stem of the T-shaped clutch shifting member 42 and swing the same to the left, thereby disengaging the clutch parts 44—46 and engaging the clutch parts 43—45 to throw the shaft 20 into action to propel the car to the left. Of course it will be understood that at the end of the travel of the car to the left another bumper is encountered to shift the bar 50 to the right to reset the clutches and thereby reverse the direction of the travel of the car. The handle 48 is provided to reverse the direction of travel at the option of the attendant and independently of the shifting bar 50. When the car is moving to the right the shaft 21 becomes the driver and the shaft 20 an idler. And when moving to the left the shaft 20 is active and shaft 21 an idler. At each terminal, upon shifting of the bar 50, either through its contact with the bumper 51 or upon its movement by the stem 42, in case of manual operation, the brake member 53 will frictionally and yieldingly engage the disk 30 to stop the movement of the car.

Having described the construction and assembling of my machine, what I claim is:

1. In a rural mail delivery car comprising a box having an oval top, V-shaped ends and a transverse semicircular projection on the under side, a vertical recess in one side of said box, a removable plate to cover said recess, an upward extension from the inner side of the aforesaid recess and a vertical longitudinal extension from the top of said

car, an involute spring transversely mounted within said car in the aforesaid transverse semicircular projection, as described and specified.

2. In a rural mail delivery car comprising a box having an oval top, V-shaped ends and a transverse semicircular projection on the under side, a vertical recess in one side of said box, a removable plate to cover said recess, an upward extension from the inner side of the aforesaid recess and a vertical longitudinal extension from the top of said car, an involute spring transversely mounted within said car in the aforesaid transverse semicircular projection, a plurality of cog-wheels mounted in the aforesaid vertical recess of the car and in engagement with the aforesaid involute spring, a plurality of shafts extending from the top of the aforesaid plate, transversely over the car and pivotally mounted in the vertical longitudinal extension from the top of said car, gear wheels mounted on one end of said shafts, means for engaging said wheels with the shafts, means for alternately engaging and disengaging said wheels, means for governing the speed of said car, means for braking said car, drive wheels mounted on the aforesaid shafts to ride the trolley-wire, said wheels having grooved perimeters bearing semicircular grooved tires, as described and specified.

3. In a rural mail delivery car comprising a box having an oval top, V-shaped ends and a transverse semicircular projection on the under side, a vertical recess in one side of said box, a removable plate to cover said recess, an upward extension from the inner side of the aforesaid recess and a vertical longitudinal extension from the top of said car, an involute spring transversely mounted within said car in the aforesaid transverse semicircular projection, a plurality of cog-wheels mounted in the aforesaid vertical recess of the car and in engagement with the aforesaid involute spring, a plurality of shafts extending from the top of the aforesaid plate, transversely over the car and pivotally mounted in the vertical longitudinal extension from the top of said car, gear wheels mounted on one end of said shafts, means for engaging said wheels with the shafts, means for alternately engaging and disengaging said wheels, means for governing the speed of the car, means for braking said car, drive wheels mounted on the aforesaid shafts to ride the trolley-wire, said wheels having grooved perimeters bearing semicircular grooved tires, a yielding adjustable shank, a spring mounted on said shank, an offset on the lower end of said shank and a sheave pivotally mounted on said shank, a brake-bar slidably mounted on the top of said car, the free ends of said bar having upward and parallel bends, a bent spring

rigidly affixed to said bar beneath the brake-disk, vertical pins in said bar on each side of the reversing lever, such a distance that when the car is reversed the brake will be released by the throw of the lever, as described and specified.

4. In a rural mail delivery car having driven wheels, said wheels having grooved perimeters bearing semicircular grooved rubber-tires in combination with a trolley wire, said wire mounted in an arm extending perpendicular to the pole, said arm ap-

proximately T shaped, one extension provided with a log-screw to enter the post, the lateral extensions grooved to receive the trolley-wire, as described and specified. 15

In testimony whereof, I have signed this specification in the presence of two subscribing witnesses.

WILLIAM B. YARBERRY.

Witnesses:

JOHN H. BURNS,
J. A. DAVISON.