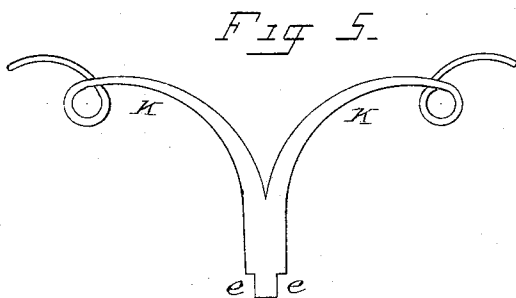
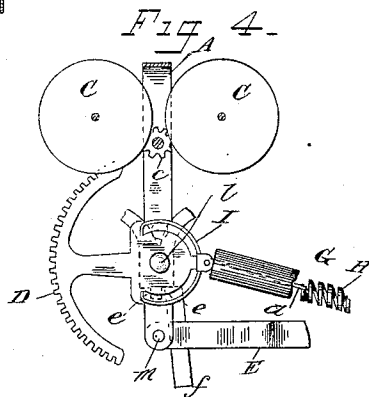
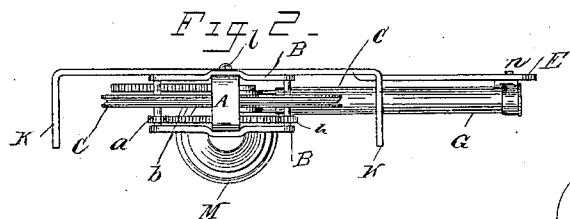
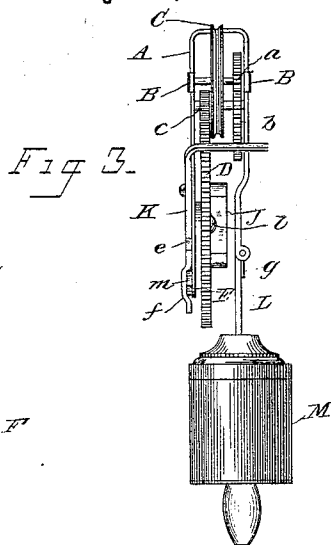
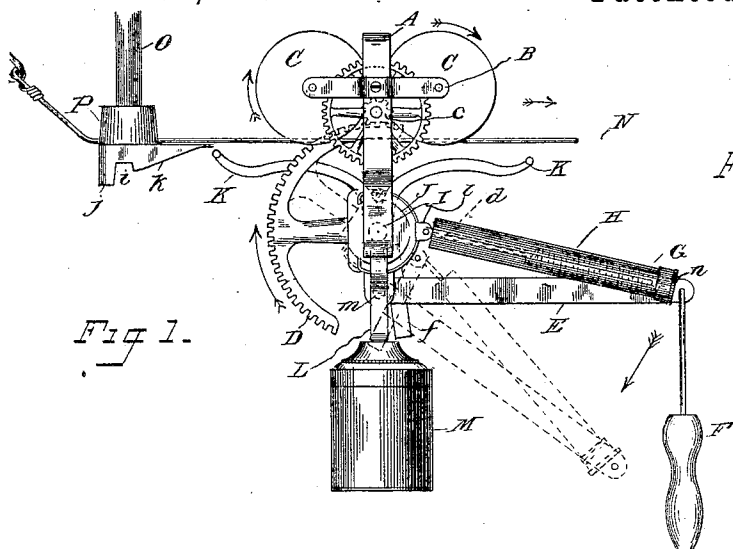


(Model.)

F. O. FARWELL.
CASH CARRIER.

No. 479,261.

Patented July 19, 1892.



WITNESSES

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CASH-CARRIER.

SPECIFICATION forming part of Letters Patent No. 479,261, dated July 19, 1892.

Application filed March 10, 1891. Serial No. 384,460. (Model.)

To all whom it may concern:

Be it known that I, FAY O. FARWELL, a citizen of the United States, residing at Dubuque, in the county of Dubuque and State of Iowa, have invented certain new and useful Improvements in Cash-Carriers; and I do hereby declare the following to be a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to various new and useful improvements in cash-carriers.

The invention particularly relates to a new and improved motor for cash-carriers.

The objects of the invention are to provide a simple and effective cash-carrier which will run a considerable distance on the way and wherein the motor may be operated by a single movement of a hand-lever to propel the carrier in one direction, and the motor will be operated in the reverse direction to return the carrier to its starting-place by a reverse movement of the hand-lever.

Heretofore cash-carriers have been constructed wherein the carriage is propelled along the wire through the agency of rubber bands or springs. Such carriers can be used only on short ways without curves and the springs are soon broken. By means of my improved device these objections are overcome. The track-wire is preferably perfectly horizontal, and therefore no difficulty is experienced in returning the carriage. The apparatus is cheap and simple to erect, and since the motor operates for a considerable time the tracks may be long and may be curved, as desired.

For a better comprehension of the invention attention is directed to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a side elevation of a carrier embodying the invention, showing it in position upon the wire way, and showing in dotted lines the hand-lever after it has been moved to start the motor; Fig. 2, a top view of the same; Fig. 3, an end view; Fig. 4, a detail view, and Fig. 5 a modification of the retaining-arms.

In all of the above views corresponding

parts are designated by similar letters of reference.

A is the main frame of the carrier, and it consists of a heavy metal band or bar in the general U shape shown. Near the top of this frame are the metallic cross-pieces B B, within the ends of which are mounted the supporting-wheels C C, which are provided with grooved peripheries for retaining the wheels upon the wire way. The shaft or axle of each wheel is provided with a small pinion *a*, with which the large cogged wheel *b* engages. This cogged wheel is mounted upon its shaft in the main frame of the carrier, directly beneath the cross-pieces B B. The shaft of the cog-wheel *b* is provided with a small pinion *c*, arranged on the opposite side of the shaft from the cog-wheel *b*. Pivotaly mounted near the bottom of the frame A is a cogged segment D, arranged so as to engage with the pinion *c* on the shaft of the gear-wheel *b*. Pivoted by means of a pivot *m* at the extreme lower end of the main frame is a lever-arm E, made of metal and provided at its end with a dependent handle F. Near the outer end of this lever-arm is pivoted a cylinder or tube G by means of a pivot *n*. Extending a short distance into this tube G is a leaf-spring *d*, as shown in broken lines, Figs. 1 and 4. The end of the leaf-spring *d* within the tube or cylinder G connects with the spring H, which is attached to the extreme end of the cylinder G and by means of which the leaf-spring will be normally held in position within the cylinder. The other end of the leaf-spring *d* is secured to the part I.

The spring H just referred to may be an ordinary spiral spring; but I prefer to make use of the usual rubber bands for this purpose, as I have found that these rubber bands are cheaper and may be very easily replaced when broken and form a very powerful spring for the purpose intended. The end of the leaf-spring *d* on the outside of the cylinder G is attached in any suitable way with the central part of the flat segment I, which is cast integral with the cogged segment D, although it may be soldered or otherwise secured to the hub J, which carries the toothed segment D before referred to. Upon the same side of

the main frame A to which the segment D is pivoted are pivotally secured two deflecting-arms K K, having right-angled extensions at their ends, which are located beneath the wire or way when the carrier is in position for operation. If desired, the right-angled extensions of the deflecting-arms may be bent, as shown in Fig. 5, in which case they are elastic in order to take up the shock when the carrier reaches the end of the wire or way, as will be evident. These deflecting-arms K K are made in one piece, and at their lower ends are provided with two notches *e e*, although these notches may be dispensed with. The operating-lever E, near its pivoted end, is provided with a short cross-piece *f*, the upper end of which, according to the position in which the lever E may be placed, engages with one or the other of the notches before referred to, so as to limit the movement of the lever-arm E. Upon the opposite side of the main frame A than that to which the cogged segment D is pivoted is an arm L, which is preferably hinged to the frame A and which carries at its lower end a box or receptacle M to receive the cash. A stop *g*, made integral with the main frame A, prevents the hinged arm L from swinging inwardly, so that it will not come in contact with the lever-arm E as it is moved in its path. The device is intended to be placed upon the ordinary wire or way N. This wire or way is supported at its end by the standard O, having an enlarged head P at its lower extremity. This head P is provided with an incline *k* at its forward portion, with a recess *i* directly in the rear of the incline, and with the stop *j* adjacent to the recess *i*. As the carrier moves along the way one of the right-angled extensions on the arms K will come into engagement with the incline *k* and will pass down this incline until it is arrested by the stop *j*, when it will be held from further movement within the recess *i*.

The operation of the device is substantially as follows: The handle F is swung around in the direction of the arrow, as shown in dotted lines, so as to assume substantially a horizontal position on the other side of the carrier-frame. The cogged segment D will engage with the pinion *c*, and the smooth segment I will be held stationary until the carrier begins its initial movement. It will be seen that the leaf-spring will be moved from its position in the cylinder G against the tension of the spring H therein, so as to exert a pressure upon the smooth segment. As soon as the handle is moved around to its new position the cross-piece *f* will engage with the notch *e*, so as to move the arms K on their pivot and to disengage the right-angled extension on the arm K from its engagement with the recess *i*, so as to allow the carrier to start along the wire. As soon as this right-angled extension is disengaged from the recess *i* and the carrier is allowed

to move the tension of the spring H will tend to move the cogged segment D into engagement with the pinion *c*, which will turn the gear-wheel *d*, and in this way the bearing-wheels C will be operated. The cogged segment D will be moved around to a new position corresponding to its original position, so that it will be thrown out of engagement with the pinion *c*. The cash-carrier will then travel by the momentum acquired, and it has been found that it will move a considerable distance. When it is desired to return the carrier to the counter which it has left, the operating-handle F is moved around to its original position and the reverse actions will take place. If necessary, the wire may be slightly inclined at the center, so that the cash-carrier will be moved up this incline when the motor is operating, and when the spring has finished its movement and the device is moving by its momentum it will have reached a sufficient elevation to run easily down the other side.

Having now described my invention, what I claim as new therein, and desire to secure by Letters Patent, is as follows:

1. The combination of the supporting-wheels C, multiplying-gearing connected therewith, a toothed segment D, engaging with said multiplying-gearing, a lever-arm E, pivoted to the frame of the cash-carrier, a cylinder or tube G, pivoted to said lever-arm, and a spring within said cylinder connected with the toothed segment, substantially as set forth.

2. The combination of the supporting-wheels C, multiplying-gearing connected therewith, a toothed segment D, adapted to engage with said multiplying-gearing, having a hub provided with a smooth segment I, a lever-arm E, pivotally connected to the frame of the carrier, a tube or cylinder pivoted to said lever-arm, and a spring within said tube or cylinder attached to the smooth segment, substantially as set forth.

3. The combination of the supporting-wheels C, multiplying-gearing connected therewith, a toothed segment D, adapted to engage with said multiplying-gearing, a smooth segment connected with said toothed segment, a lever-arm E, pivoted to the frame of the carrier, a cylinder or tube G, pivoted to said lever-arm, a spring within said cylinder or tube connecting with said smooth segment, and retaining-arms K K, secured to the frame of the carrier, for the purposes set forth.

4. The combination of the supporting-wheels C, multiplying-gearing connected therewith, a toothed segment adapted to engage with said multiplying-gearing, a smooth segment connected to said toothed segment, a lever-arm pivoted to the frame of the carrier, a cylinder or tube G, pivoted to said lever-arm, a spring within said tube or cylinder connecting with said smooth segment, deflecting-arms K K, pivoted to the frame of the

carrier for the purposes set forth and having notches *e e* at their lower ends, and the cross-piece *f* on said lever-arm adapted to engage with one or the other of said notches.

5 5. The combination of the supporting-wheel C, multiplying-gearing connected therewith, a toothed segment adapted to engage with said multiplying-gearing, a smooth segment connected to said toothed segment, a lever-arm
10 E, pivoted to the frame of the carrier, a cylin-

der or tube G, pivoted to said lever-arm, a spring within the tube or cylinder connected with the toothed segment, and the arm L, hinged to the main frame of the cash-carrier and carrying a cash-holder, substantially as 15 set forth.

F. O. FARWELL.

In presence of—

MONROE M. CADY,
JOHN L. BARTLETT.