

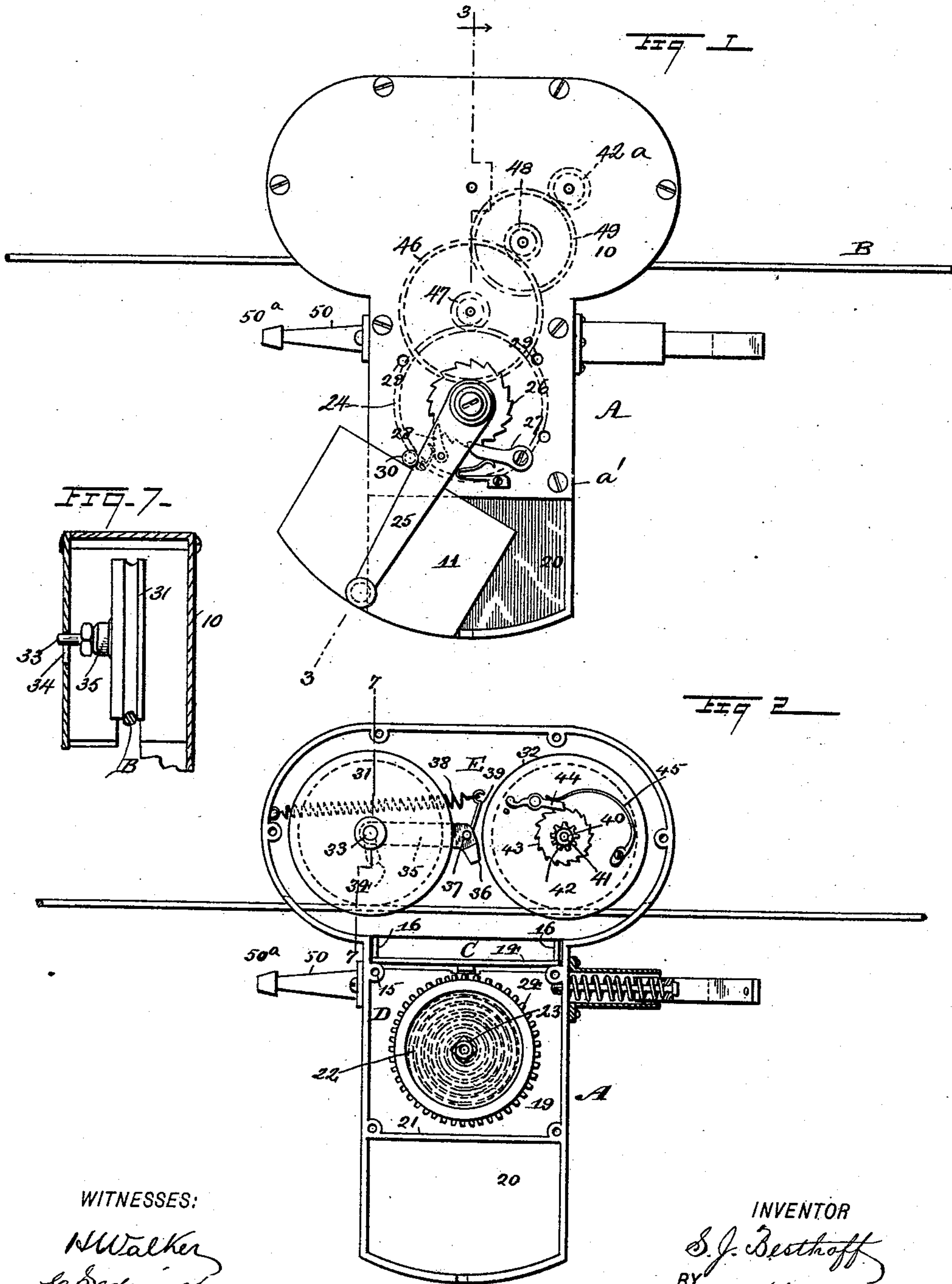
(No Model.)

2 Sheets—Sheet 1.

S. J. BESTHOFF.
CASH AND PARCEL CARRIER.

No. 486,750.

Patented Nov. 22, 1892.



WITNESSES:

W. Walker
C. Sedgwick

INVENTOR

S. J. Besthoff
BY *Munn & Co*
ATTORNEYS.

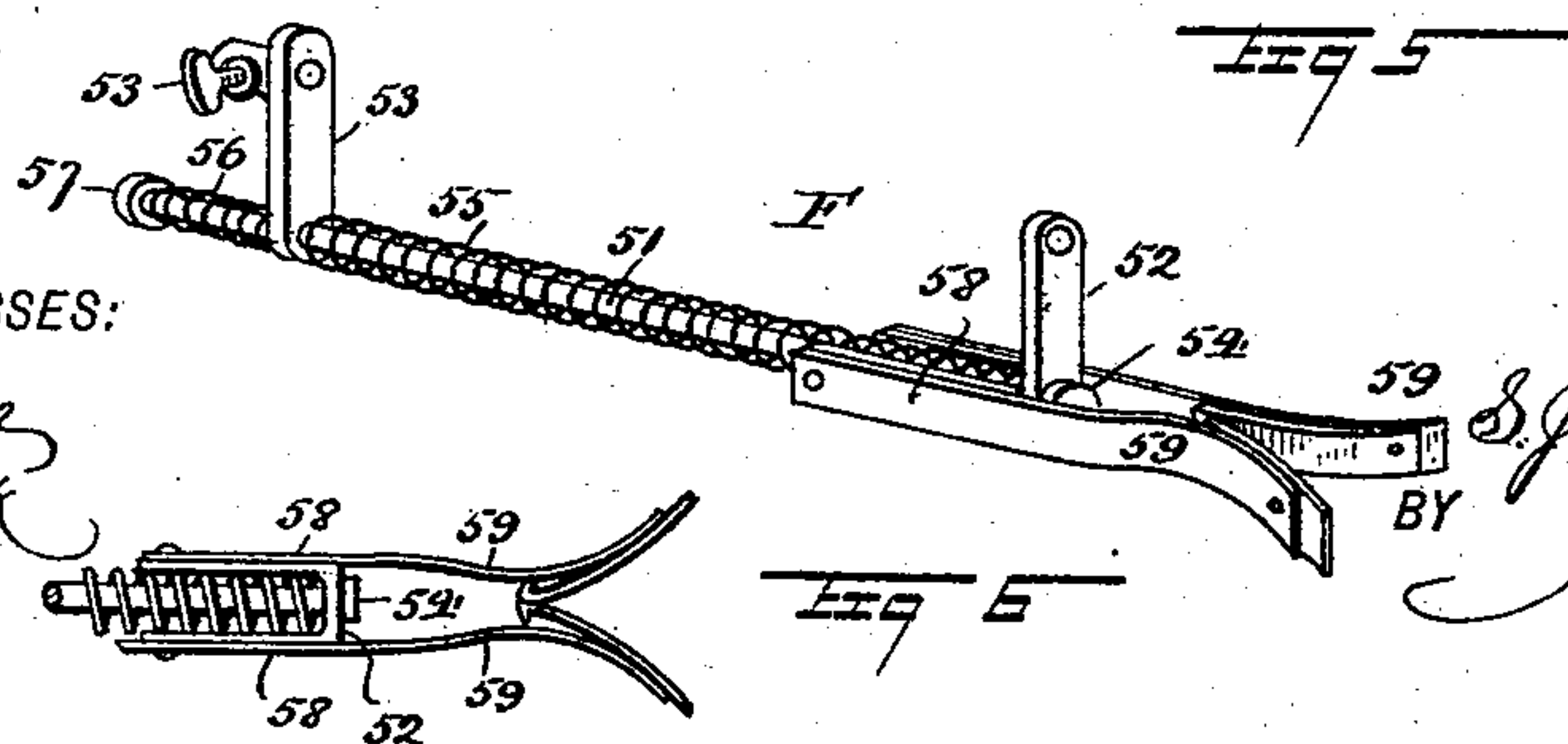
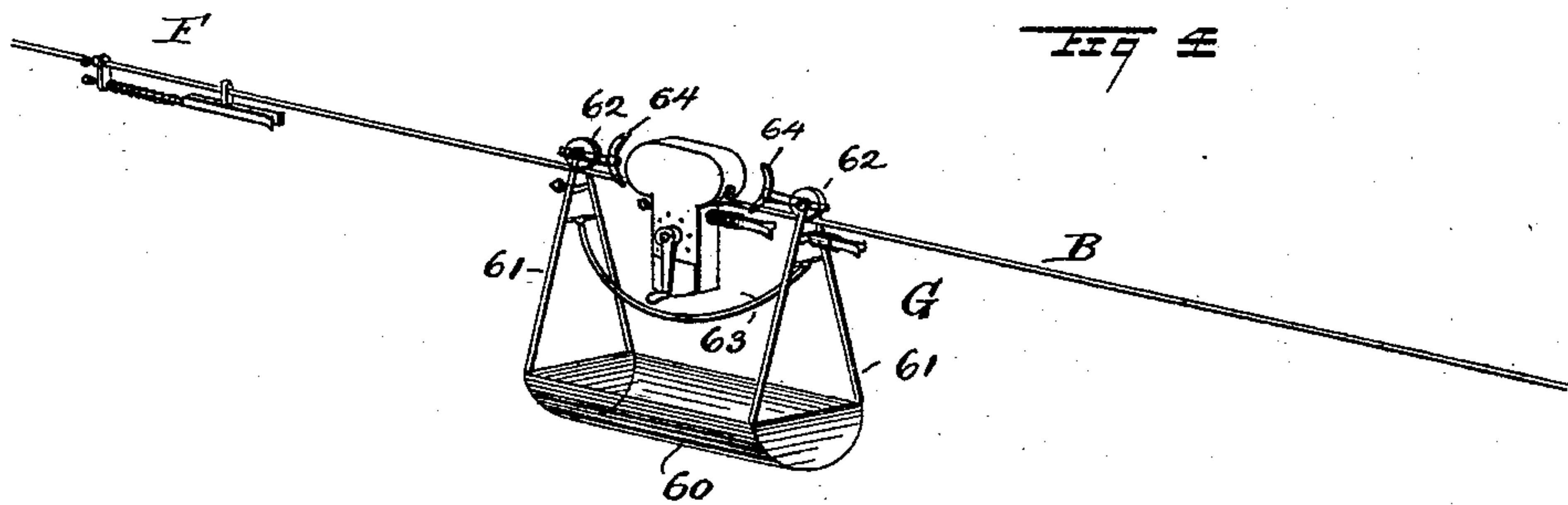
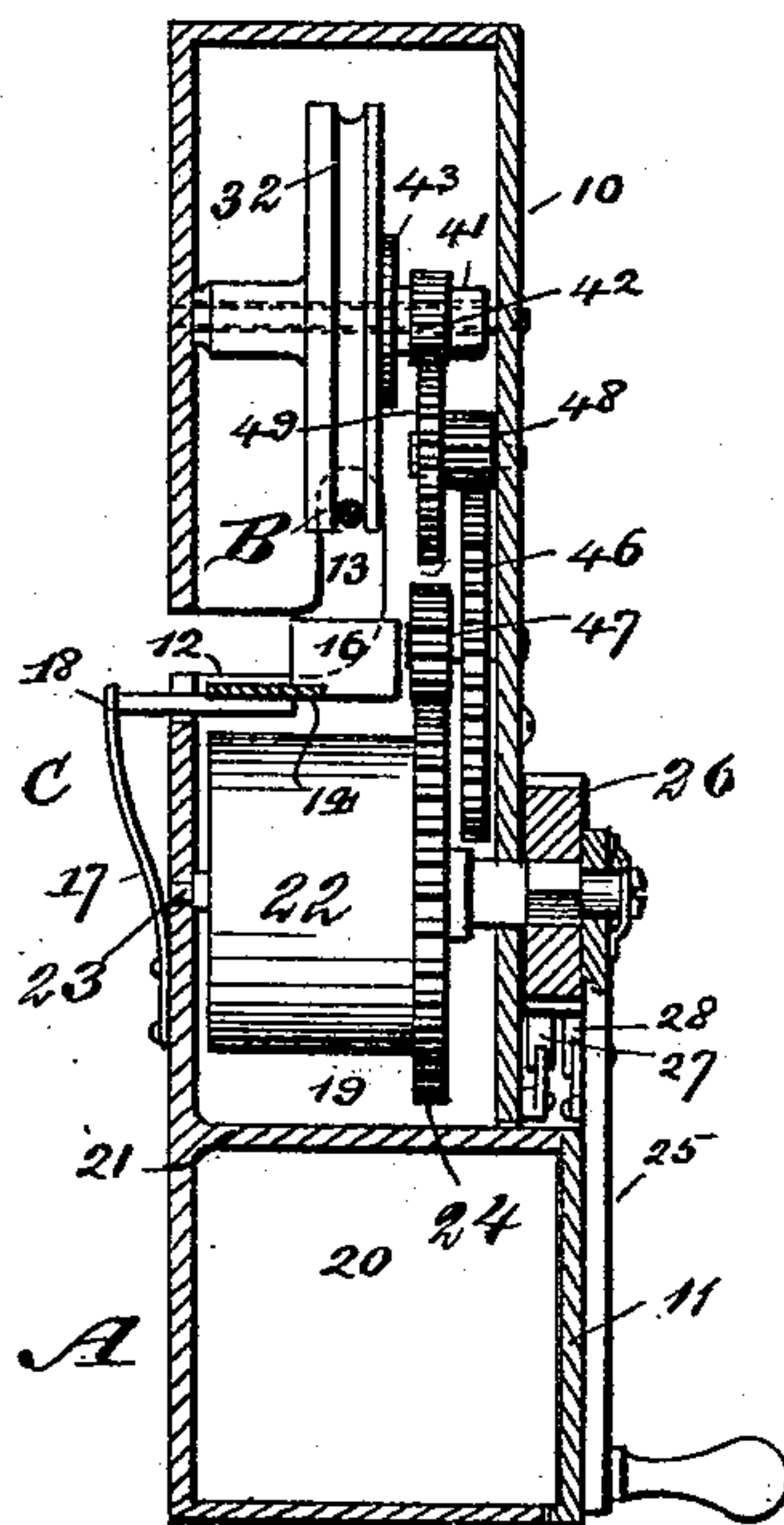
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UNITED STATES PATENT OFFICE.

SAMUEL J. BESTHOFF, OF NEW YORK, N. Y., ASSIGNOR OF TWO-THIRDS TO
SIMON OTTENBERG AND HERMAN KAHN, OF SAME PLACE.

CASH AND PARCEL CARRIER.

SPECIFICATION forming part of Letters Patent No. 486,750, dated November 22, 1892.

Application filed July 25, 1892. Serial No. 441,160. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL J. BESTHOFF, of New York city, in the county and State of New York, have invented a new and useful
5 Improvement in Cash and Parcel Carriers, of which the following is a full, clear, and exact description.

My invention relates to an improvement in cash-cars or parcel-carriers, and has for its
10 object to provide a car capable of being placed upon a cable, which car will carry its driving mechanism, the said mechanism being of a simple, durable, and economic character.

Another object of the invention is to so construct the cash or parcel car or carrier that when
15 placed upon the cable it will not depart therefrom unless it is purposely removed and to provide a simple and practically automatically-operated locking device to maintain the car or carrier upon the cable, and, further,
20 wherein the door of the cash-compartment, when it is once opened, will serve to wind up the propelling mechanism, and whereby, also, the distance that the door shall be opened
25 may be limited and the propelling mechanism be wound only sufficiently to propel the car a predetermined distance.

Another object of the invention is to so connect the door with the propelling mechanism that the door will act only when opened
30 upon the propelling mechanism, thus permitting the door to be closed without affecting the said mechanism in the slightest degree.

The invention consists in the novel construction and combination of the several
35 parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification,
40 in which similar figures and letters of reference indicate corresponding parts in all the views.

Figure 1 is a side elevation of a cash car or carrier illustrating the door thereof as partially open. Fig. 2 is a side elevation of the
45 cash carrier or car illustrating the door and one of the side plates entirely removed. Fig. 3 is a central vertical section taken practically on the line 3 3 of Fig. 1. Fig. 4 is a perspective view of a cash carrier or car placed
50 upon a cable and also a perspective view of a

catch adapted to receive and hold the car when it has arrived at the end of its route, and Fig. 4 further shows a perspective view
of a parcel-carrier used in connection with the car and propelled thereby. Fig. 5 is a perspective view of the receiving-catch for the car, and Fig. 6 is a detail view of said catch.
55 Fig. 7 is a detailed view hereinafter referred to.

The casing or frame A of the car or carrier
60 may be of any desired shape. Ordinarily, however, the upper section *a* is wider than the lower section *a'*. The frame is of box-like shape and is closed permanently at one side, also at the front and back and at top and bottom, and the opposite side is covered by a removable plate 10 and a door 11, the latter
65 having a sliding movement in opening and closing. A transverse opening is made in the permanently-closed face of the frame or casing at the junction of its two sections *a* and *a'*, as best shown in Fig. 3. This opening
70 12 extends horizontally within the frame or casing and intersects at its rear with vertical openings 13, produced in the under face of the overhanging portion of the upper frame
75 or casing-section *a*. By this means the frame is held upon a cable B, the cable being admitted at the horizontal opening, and from thence it is admitted into the vertical open-
80 ings. When the cable is in the vertical openings, the car or carrier will hang perpendicularly from the cable and is not likely to leave it; but to insure the car remaining upon the cable until purposely removed a locking device C is employed. This locking device consists of a slide 14, located in the bottom of the horizontal opening, resting at its ends upon suitable guides 15, secured to the inner
85 face of the frame or casing, as shown in Fig. 2. Each end of the slide is provided with an upturned flange 16, which when the slide is in its normal position closes the lower ends of the vertical openings 13, as illustrated in Fig. 3, preventing the cable when in said openings
90 from leaving them. The slide is held in this closed position preferably by a spring 17, which is ordinarily located upon the outer face of the closed side of the casing, the spring being fixedly secured at its lower end thereto
95 and connected at its upper extremity with a pin 18, attached to the slide and having move-

ment in the casing. In placing the car or carrier upon the cable after the latter has entered the horizontal opening 12 the car is pressed against the cable and the slide is thereby carried backward against the tension of its spring and the cable is permitted to enter the vertical openings 13; but the moment the cable is in these vertical openings the slide is released and the spring returns the slide over the mouths of said vertical openings, thereby closing them.

The upper section of the frame or casing is usually made in one compartment only; but the lower section is divided into two compartments 19 and 20 by means of a partition 21. The removable side plate 10, before referred to, covers the upper compartment 19 and the compartment in the upper section of the casing, and the door 11 constitutes a cover for the lower compartment 20, as in this compartment the change or money representing a sale is placed.

The power mechanism D is located in the compartment 19, and this mechanism preferably consists of a spring-barrel 22 of any approved construction, the arbor or spindle 23 of which is journaled in the two side plates of the casing and extends beyond the removable side plate 10. The barrel is provided at its end opposite the removable plate 10 with peripheral teeth 24. A crank 25 is loosely mounted upon the outer end of the barrel-spindle and is adapted to move in one direction to revolve said spindle in a manner to wind the barrel-spring, and when the crank is moved in a contrary direction it does not affect the spring, the barrel, or its spindle. This is effected in the following manner: Next the crank-arm a ratchet-wheel 26 is secured to the outer portion of the barrel-spindle and its teeth are constantly engaged by a pawl or detent 27, spring-controlled and pivoted upon the outer face of the removable plate 10, as shown best in Fig. 1. A spring-controlled dog 28 is pivoted upon the inner face of the crank-arm 25, and this dog is also in constant engagement with the teeth of the ratchet-wheel, and the door 11 is carried by the crank-arm, being rigidly attached to it. When the door is slid from over the cash-compartment, the dog acts upon the ratchet-wheel 26 and turns the same, thereby winding the barrel-spring, and when the door has been carried outward a sufficient distance the detent acts to prevent the ratchet-wheel from turning back, and when the money or other material has been placed in the cash-compartment the door may be closed without acting upon the barrel, as the crank is loosely mounted upon the barrel-spindle and the dog or detent will slip over the ratchet-teeth.

It is necessary and desirable that the spring should be wound only sufficiently to provide enough power to propel the car the required distance, as, if too much momentum is applied to the car or imparted to it, it will strike with too much violence against the stop, catch,

or bumper placed at the end of the cable to receive the car. Therefore I provide in the removable face-plate 10 a series of apertures 29 around the ratchet-wheel, and likewise a pin 30, capable of fitting into any of the said apertures, as shown in Fig. 1. By placing the pin in any predetermined aperture the crank cannot be turned in a direction to wind the spring after it engages with the pin. At each aperture 29 the number of feet or yards that the car will be propelled by carrying the crank to that point may be designated. By this means the overwinding of the barrel-spring is effectually guarded against.

Two supporting-wheels 31 and 32 are located in the compartment of the upper section *a* of the casing, one over each vertical opening 13, and one of the wheels 32 serves not only as a support for the car upon the cable, but it acts, also, as a drive-wheel, it being driven from the propelling mechanism D, while the supporting-wheel 31 forms a support and controls a brake E, which brake is adapted to prevent the power mechanism from acting until the car is placed upon a track. The supporting-wheel 31 turns loosely upon a spindle 33, and this spindle is journaled at one end only in an elongated slot 34, produced in the fixed or permanent side plate of the casing, as shown in dotted lines, Fig. 2. The spindle is preferably made to extend a slight distance beyond the permanent side plate of the casing, as shown in Fig. 7, in order that the said spindle may be elevated in like manner as when placed upon a track, and thereby release the brake. This operation may not be necessary; but in the event that by any possibility the spring should become wound up too tightly it may be relieved or loosened by the above manipulation of the spindle 33. By placing the pin 30 in one of the apertures 29 I arrange so as to wind the spring sufficiently to send the car about one-half the required distance by means of the spring-power, and the balance of the distance is accomplished by the momentum of the car, the momentum being sufficient to carry the car to the end of the line. Therefore when the car is removed from the cable or track the spring has no power, being fully unwound, to turn any of the gearing until the cover is once more opened and the spring thereby wound up. I do not wish to save power, but desire rather to exhaust the power at each trip of the car. Therefore I have arranged so that the spindle 33 of the supporting-wheel 31, as has been heretofore stated, shall project sufficiently through the slot 34 in order that, in addition to the functions named in connection with the spindle in the event that a mistake has been made and discovered before the car has been sent to its destination, by grasping the projecting end of the spindle 33 of the supporting-wheel 31 at the slot 34 and forcing it upward to the top of the slot the brake will be removed from the drive-wheel and the power of the spring

may be made to exhaust itself before opening the cover to rectify the mistake. Were it not for this arrangement, and should several mistakes occur in succession, the spring would become wound up so tightly that it would be impossible to move the cover of the cash-compartment. Between the journals of the spindle and the supporting-wheel 31 an arm 35 is rigidly secured to said spindle, this arm constituting a portion of the brake E. The arm extends beyond the periphery of the wheel 31, back of said wheel, in an inwardly direction and horizontal position, and the arm at its inner end has formed thereon a brake-shoe 36, and this shoe is adapted for engagement with the periphery of the drive-wheel 32. Trunnions 37 are projected from opposite sides of the brake back of the point contacting with the driving-wheel, and these trunnions are journaled, respectively, in the fixed and in the removable side of the casing.

The brake is held normally in engagement with the driving-wheel, and the spindle 33 of the supporting-wheel 31 is maintained at the lower end of the slot 34 in the casing by means of a spring 38, which is secured to the wall of the casing at one end and at its opposite end is attached to a hook 39, or the equivalent thereof, projected upward from the brake-shoe. The spring constantly exerts tension in a direction to keep the brake applied; but the moment that the car is placed upon the cable the weight of the car will cause the casing to drop downward, the supporting-wheels being upon the cable, and the spindle 33 of the supporting-wheel 31 will be carried to the upper end of the slot 34 in the casing, and this movement will draw the brake-arm downward and outward and cause the brake to be removed from the driving-wheel. Therefore it is evident that the moment that the car is placed upon the cable the brake is automatically removed and the propelling mechanism may then act.

The driving-wheel 32 is mounted loosely upon a spindle 40, which spindle is journaled in the fixed and removable plates of the casing, and upon that portion of the spindle between the wheel 32 and the removable casing-plate a sleeve 41 is loosely mounted upon the spindle 40, which sleeve carries a pinion 42 and a ratchet-wheel 43, the ratchet-wheel 43 being constantly engaged by a dog 44, pivoted upon the driving-wheel 32 and pressed by a spring 45, carried by said wheel.

Power is communicated from the propelling mechanism D to the pinion 42 upon the spindle 40 through the medium of a train of gearing carried by the removable plate 10 of the casing, the gearing being journaled upon the inner face of the plate. This gearing consists of a large spur-wheel 46, a pinion 47, connected with said spur-wheel and meshing with the teeth upon the spring-barrel 22, as shown in Fig. 3, the large spur-wheel 46 being in mesh with a pinion 48, constituting a portion of the train of gearing above referred to, and con-

nected with said pinion is a large spur-gear 49 which meshes with the pinion 42 upon the sleeve 41, through the medium of which the driving-wheel is revolved.

At the terminus of the cable a latch F is located, adapted to receive a buffer 50, located upon either the forward or the rearward face of car. The preferred form of latch is shown in Figs. 4, 5, and 6, and it consists of a rod 51, loosely mounted in two hangers 52 and 53, the said hangers being provided with apertures, through which the cable passes, and one of the hangers is fitted with a set-screw 53, through the medium of which the latch is secured to the cable.

The forward end of the rod is provided with a head 54, and the forward hanger is just next to this head. A spring 55 is coiled upon the rod between the two hangers, a second spring 56 being coiled upon the rod between the rear head 57 and the hanger 53, carrying the set-screw, whereby when the car strikes against the forward head 54 the spring acts as a cushion and the rod slides through the rear fixed hanger, thus easing the shock. From the forward hanger extend rearwardly-projecting arms 58, and to these arms spring-latches 59 are attached, which latches extend forward some distance beyond the front end of the rod and terminate in heads somewhat of a half-arrow-head type, which heads are normally close together, but are separated to receive the head of the buffer 50 of the car. This buffer consists of a rod or post extending at a right angle from any portion of the car-casing, terminating at its outer end in a head 50^a which, when it passes between the heads of the latch F, is in locking engagement with the latch. It is somewhat desirable that a latch of the type described should be secured to the side or face of the car-casing opposite that carrying the buffer, so that in the event one car should so closely follow another as to engage therewith the buffer of one car will enter the latch of the other car, and thus a coupling will be effected between them.

In Fig. 4 I have illustrated a parcel-carrier G, which may or may not be used in connection with the cash-car. This parcel-carrier consists of a basket 60, which is supported at its ends by hangers 61, and these hangers carry at their upper extremities grooved friction-rollers 62, the said rollers being adapted to travel upon the cable. The hangers of the basket are connected by wire 63, which curves downward beneath the lower end of the cash-car, and the upper ends of the hangers are provided with inwardly-projecting arms or buffers 64, and as the cash-car is located upon the cable between the said arms or buffers of the basket if it moves either forwardly or rearwardly it will engage with one of them, and thus carry the parcel-receiver with it. This parcel receiver or carrier is employed when it is desirable to transport the goods bought with the cash paid for them.

The operation of this device has been given in detail in various parts of the specification, and it is deemed necessary only at this time to state that the cash-carrier having been removed from the cable and the door opened the propelling mechanism is wound up sufficiently to propel the car the desired distance. The money is placed in the compartment 20 and the door is closed over the same. The carrier is then hung upon the cable, and the moment that it is so suspended the wheel 31 is forced upward in the casing and the brake is relieved from the driving-wheel 32, which is under constant tension from the propelling mechanism when said mechanism is wound up. Therefore this wheel will be revolved and the cash-car will be rapidly taken to its destination.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a cash-car, the combination, with the casing, of a driving-wheel and a brake pivoted between its ends in the casing and a vertically-movable support to rest on the cable beyond the driving-wheel and to which is pivoted the outer end of the brake, whereby when the car is placed upon a track or cable its driving mechanism will be automatically set in operation and the inner end of the brake removed from connection therewith, and whereby, also, the moment the car is removed from the track or cable the brake is automatically applied.

2. In a cash-car or cash-carrier, the combination, with the driving-wheel and the supporting-wheel, the latter having vertical movement in the car-casing and both wheels being adapted to be engaged by the cable, of a pivoted brake pivotally connected at one end with the spindle upon which the supporting-wheel is mounted, the said brake being adapted at its opposite end for engagement with the periphery of the supporting-wheel, a spring controlling the brake normally pressing it against the periphery of the supporting-wheel, the brake being automatically moved away from the supporting-wheel when the cable engages with the supporting-wheel of the car, substantially as and for the purpose set forth.

3. In a cash-car or cash-carrier, the combination, with the casing thereof provided with a horizontal transverse opening and a vertical opening or openings intersecting the horizontal one, said openings being adapted to receive the cable, of a spring-controlled lock having movement over and from the vertical opening to close or to uncover the same and comprising the slide 14 in the bottom of the

horizontal opening and provided at its inner corners with upwardly-extending flanges 16, crossing the vertical openings, and the spring 17, pressing the slide outwardly, substantially as shown and described.

4. In a cash-car, the combination, with the casing having a cash-compartment in its lower end open at one side, the power mechanism having a winding-spindle projecting through the side of the casing over the open side of the cash-compartment and provided exterior to the casing with a ratchet-wheel, of a swinging arm mounted loosely on the outer end of said spindle parallel with that side of the casing and adapted to swing freely in one direction without operating the spindle, a pawl on the said arm engaging the said ratchet to rotate the spindle when the arm is turned in the opposite direction, a locking-dog on the casing engaging the ratchet, a door carried by the said arm to slide across the open side of the cash-compartment, said carrier having a circular series of apertures arranged around the ratchet, and the pin to engage said apertures, substantially as set forth.

5. In a cash-car, the combination, with the casing, the driving-wheel, the power mechanism, and the door having an arm for winding the power mechanism, of a supporting-wheel having its spindle mounted in a slot in the casing to permit the wheel to move vertically, said spindle projecting through the slot for operation by the finger of the operator, and a brake pivoted between its ends in the casing with one end adjacent to the driving-wheel to engage the same and pivotally connected at its opposite end with the spindle of the supporting-wheel, both wheels being adapted to run on a cable, substantially as set forth.

6. In a cash car or carrier, the combination, with the car, of a basket arranged below it and provided with hangers extending upward at each side of the car and having arms or buffers on their upper ends and adapted to be engaged by the car, as and for the purpose specified.

7. In a cash and parcel carrier, the latch F, comprising two hangers provided with means for mounting them on a cable and having apertures in their lower ends, a rod extending loosely through said apertures and headed at its ends, a spring 56 on the rear end of the rod, a spring 55 on the rod between the two hangers, and the forwardly-projecting spring-latches 59, secured to the lower end of the forward hanger, substantially as set forth.

SAMUEL J. BESTHOFF.

Witnesses:

E. M. CLARK,
A. LURCOTT.