

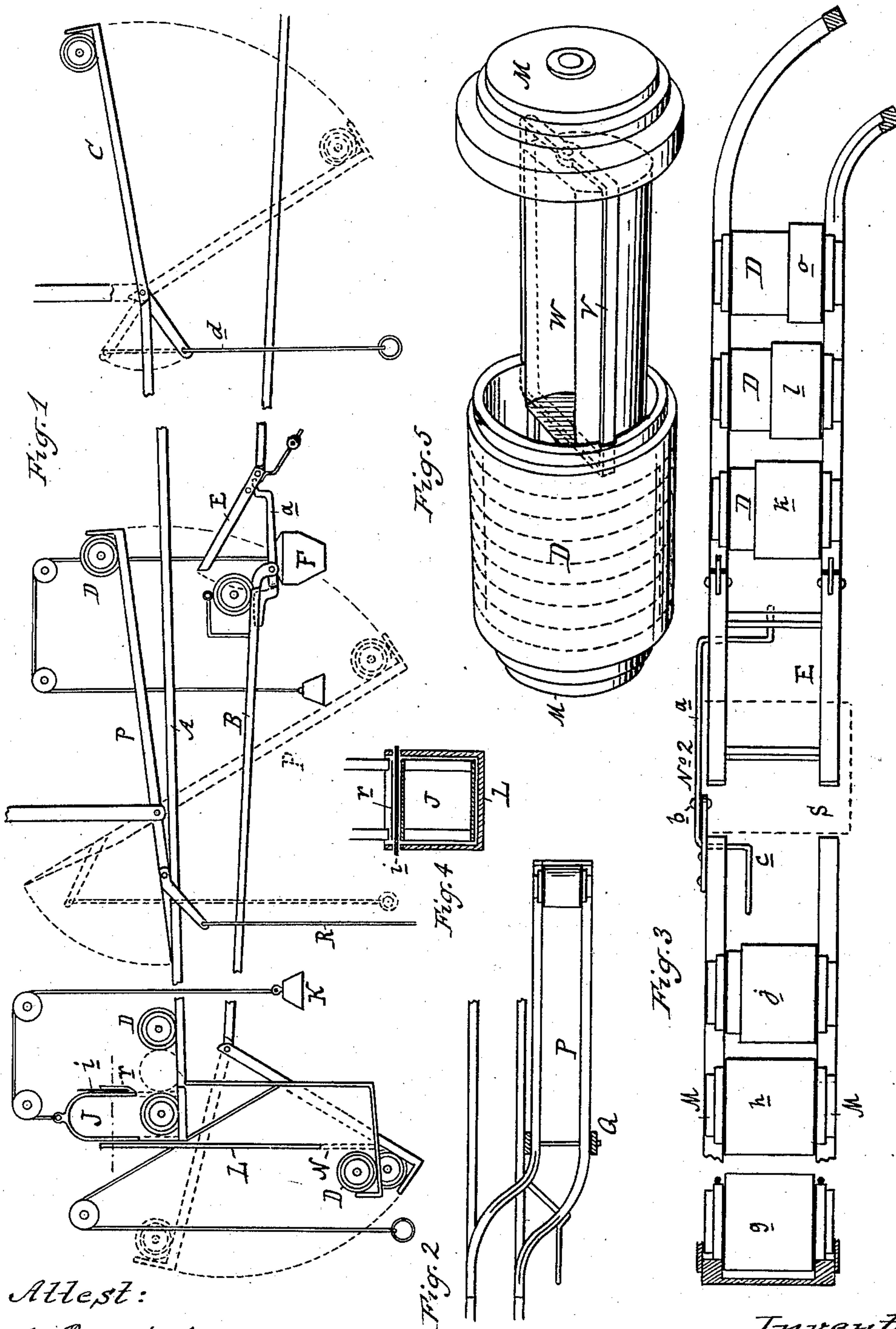
(No Model.)

H. A. BAKER.

CASH CARRIER.

No. 280,003.

Patented June 26, 1883.



Attest:

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UNITED STATES PATENT OFFICE.

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CASH-CARRIER.

SPECIFICATION forming part of Letters Patent No. 280,003, dated June 26, 1883.
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To all whom it may concern:

Be it known that I, HUDSON A. BAKER, of Bay City, in the county of Bay and State of Michigan, have invented new and useful Improvements in Cash-Carriers; and I hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to new and useful improvements in automatic cash-carriers, and contains the following new features: First, the inward track at the receiving-stations is provided with a tilting switch, which elevates the carrier and switches it onto the main track; second, the outward track at the distributing-stations is provided with a trap-section actuated by a tripping-bar, which opens the track for a certain carrier and allows it to drop into a counterbalanced basket, which descends mechanically; third, the cylindrical carrier is provided upon its ends with independently-revolving track-wheels, which are provided with threads of different diameter, so as to enable the device to round curves; fourth, the inner end of the inward track is provided with a self-operating receiver, which descends each ball seriatim and mechanically operates a gate at the inner end of the inward track; fifth, no material reduction of the size of the carrier is required to enable it to reach its intended destination; sixth, the inner end of the outward track is hinged onto the main track and forms a swinging elevator operated by the cashier.

In the drawings which accompany this specification, Figure 1 is a side elevation of my improved cash-carrier, showing the central station, two receiving, and one distributing stations. Fig. 2 is a plan view of the tilting switch which elevates the carrier and switches it onto the main track. Fig. 3 is a plan view of a portion of the outward track, with trap-section and a number of carriers thereon destined for other stations. Fig. 4 is a horizontal cross-section on the inner end of the inward station, showing the construction of the gate which closes or discloses the entrance into the receiving-basket. Fig. 5 is a perspective view of my carrier opened.

A is the inward track, and B the outward track.

C is the outermost receiving-station, which

is simply a piece of track hinged onto the main track, so as to form a continuation thereof.

d is a rope, by means of which the hinged track C may be swung in position, so as to elevate and transfer a carrier onto the main track. This hinged track has to be of sufficient length to allow a person on the floor to easily deposit a carrier upon its lower end, which is provided there with an end board. This track is kept open by its own weight. The inner end of the outward track is constructed in the same manner—that is, a hinged section of the main track can be raised into position by means of a rope to elevate the carrier and bring it onto the main track. The track is constructed of two parallel rails, which form the supporting and guide rails for the carrier. The carriers D are hollow cylindrical bodies provided upon their ends with independently-revolving wheels M, which are provided with two treads of different diameters. In Fig. 3 is also shown a piece of curved track, and to enable the carrier to freely pass around such curve the inside rail is adapted to bring the bearing from the large tread of the wheel (which guides the carrier upon the straight rail) onto the bearing of the smaller or outside tread of the wheel, giving it enough slower travel to enable the carrier to turn in the radius of the curve. The carriers D are made hollow and open in any suitable manner, so as to form convenient receptacles.

The construction of the way-stations of the main inward track is as follows: P is a switch-section of track resting with the meeting ends of its rails on top of the main track, but forming a somewhat steeper incline. This switch-section is pivotally secured at Q to the side of the main track, and its own gravity keeps it open, as shown in dotted lines in Fig. 1, and its lower end then reaches far enough down to enable a person upon the floor to deposit a carrier thereon. A rope, R, upon its opposite end enables the person to swing the switch in position, which then allows the carrier to pass onto the main track. The curves of the switch are constructed upon the principle before described—that is, with its inner curves so arranged as to transfer the bearing of the wheel M from the large tread onto the small one.

The way receiving-stations of the outward

track are constructed as follows: A gap, S, in the main track is closed by a hinged and counterbalanced section, E, which is pivoted onto the main track at its farther end, so as to allow it to rise and open the gap S. This raising of the hinged section or trap is accomplished by means of the tilting lever *a*, pivoted at *b* to the side of the main track. Its inner end, *c*, projects within the rails in such manner that an outgoing carrier passing over it will, by its weight and momentum, depress it, and thereby open the trap or hinged section, allowing the carrier to fall into a balanced basket, F, beneath, which descends with the carrier, but rises again in position after the same is removed. To make the trap only operative for the carrier destined for the station the outer body of the carrier—that is, its cylindrical face—forms treads *g h j k o*, &c., of different width, the largest width for the first station and a constantly-diminishing one for each of the succeeding stations. By placing the inner ends, *c*, of the levers *a* in the proper position between the rails, so that only a certain width of tread on the carrier can strike them, it is evident that each carrier can be made to operate the trip-lever of the station to which it belongs. The same object could be obtained by providing each carrier with a ring-tread in different positions upon the bodies of the carriers, and each tread registering only with one position of the inner end, *c*, of the trip-lever. Whichever construction may be chosen it is clear that but little reduction in the size of the body of my carrier is needed to operate a considerable number of stations with one line.

The construction of the station end of the inward track is as follows: J is the receiving-basket, held in its upper position, when empty, by the counter-balance K. As soon as a carrier rolls into the basket, said basket descends within the frame or box L, and arriving at the bottom thereof lets the carrier roll out through the opening N, whereupon the elevator, relieved from its weight, rises up again into position. While descending the basket allows the gate *i* to lower until it closes the end of the track to an incoming carrier, and opens the same again on its moving into position. To prevent the gate from being interfered with in its closing by an incoming carrier, it is inclosed in a pocket, *r*, formed upon the front side of the basket, as shown.

In Fig. 5 I show a detached perspective view of my carrier with its pocket drawn out as far as possible to show its construction. The body of the carrier is made hollow, so as to form a receptacle, with one end of the body forming a cover to it. V is a frame sliding in parallel grooves in the wall of the receptacle. W is a cylindrical pocket pivotally secured upon its ends within the frame V, so as to allow it to swing freely on its pivots. The frame V is on its rear end provided with suitable stops to prevent its complete withdrawal from the carrier, and its opposite end is connected to the portion of the carrier which forms the cover.

The pocket W forms the receptacle proper for the reception of the cash, and on account of its pivotal bearings will keep a quiescent position when the carrier is rolling.

Although I have described the swinging switch P as forming a medium for elevating the carrier onto the main track, I do not wish to be understood that I intend to make it perform in all cases the whole lift. On the contrary, I may find it advisable to raise the carrier by other mechanical means upon the down-hanging end of said switch and make the latter only the means for completing its elevation. Such a construction would allow me to use a more limited length for the switch.

To prevent the carriers from jumping the track, I secure a barrier to the outside of the rails where necessary and a guard-rail high enough above the same to allow the wheels of the carrier to pass freely underneath. To deaden all noise, the treads of the wheels of the carriers are covered with rubber or other suitable material.

What I claim as my invention is—

1. In a cash-carrier, the tilting switch herein described, pivotally secured to the side of the inward track, so as to allow its farther end to tilt by its own gravity below the main track and raise at the same time its inner end above the same, substantially as and for the purposes described.

2. In a cash-carrier, one or more distributing-stations in the outward track, each consisting of a hinged section in the outward track swung open by a tilting lever operated by the gravity and momentum of a certain carrier, substantially in the manner and for the purposes described.

3. In a cash-carrier, and in combination with a two-railed track, a cylindrical carrier provided upon its ends with independently-revolving wheels, substantially as and for the purposes described.

4. In a cash-carrier, a cylindrical car or carrier provided with independently-revolving wheels, each of which is provided with treads of different diameter, and in combination with the inner curves of the tracks adapted to transfer the bearings from the larger tread upon the smaller one, substantially in the manner and for the purposes described.

5. In a cash-carrier, a basket swinging upon pivots independently within the body of the rolling carrier, substantially as and for the purposes set forth.

6. In a cash-carrier, the basket or receptacle W, pivotally secured upon opposite ends within the frame V, said frame being adapted to be partially withdrawn from the interior of the carriage, substantially as and for the purposes specified.

7. In a cash-carrier, a number of carriers or cars supported on their ends upon independently-revolving wheels, the cylindrical bodies of which are provided between their ends with annular reductions of different degrees, substantially as and for the purposes set forth.

8. In a cash-carrier, one or more distributing-stations in the outward track, consisting of the hinged and counterbalanced sections E, tilting lever *a*, pivoted to the side of the track, and operating the hinged section, and a counterbalanced basket below the said section, adapted to descend with the added weight of the carrier, substantially as and for the purposes described.

9. In a cash-carrier, the furthestmost receiving-stations of the inward track or inner station of the outer track, consisting of a section of track hinged onto the end of the track, so as to form a continuation thereof, and devices, substantially as described, for swinging it in position, adapting it thereby to form a means for elevating a carrier onto the track, substantially in the manner set forth.

10. In a cash-carrier, the inner end of the inward track, a counterbalanced basket descending with the weight of a carrier, and the cut-away sides thereof, in combination with the frame Z and its lower opening, N, whereby the operation of the basket is performed automatically, substantially as specified.

11. In a cash-carrier, the mechanically-operating basket J, in combination with the gate *i* and pocket *r*, constructed and arranged substantially as and for the purposes described.

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Witnesses:

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E. SCULLY.