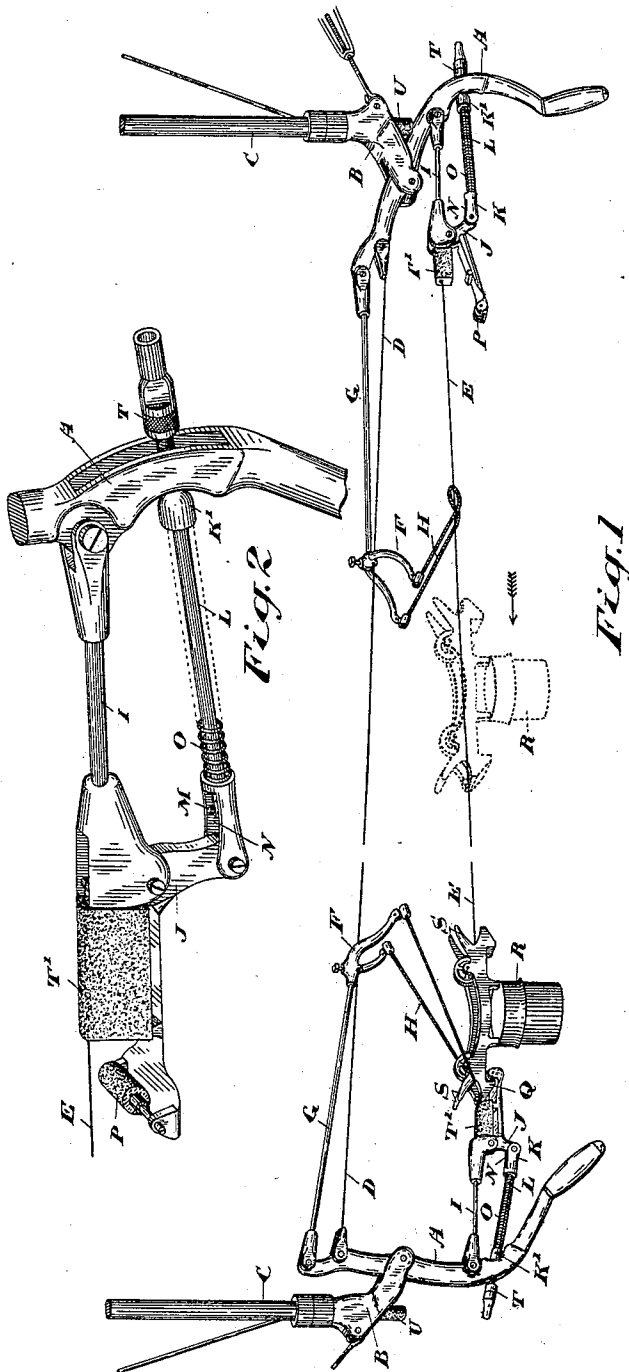


(No Model.)

F. J. H. HAZARD.
CASH CARRIER APPARATUS.

No. 466,235.

Patented Dec. 29, 1891.



Witnesses.

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UNITED STATES PATENT OFFICE.

FREDERICK JAMES HAWORTH HAZARD, OF TORONTO, CANADA.

CASH-CARRIER APPARATUS.

SPECIFICATION forming part of Letters Patent No. 466,235, dated December 29, 1891.

Application filed May 25, 1891. Serial No. 394,007. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK JAMES HAWORTH HAZARD, of the city of Toronto, in the county of York, in the Province of Ontario, Canada, have invented a certain new and useful Improvement in Cash-Carrier Apparatus, of which the following is a specification.

The object of the invention is to design a simply-constructed cash-carrier apparatus in which the cash-car is operated by a propelling-spring, the mechanism being so arranged that the car may be worked both ways from either end of the line; and it consists in the peculiar construction, arrangement, and combinations of parts hereinafter more particularly described and then definitely claimed.

Figure 1 is a perspective view of my improved cash-carrier. Fig. 2 is an enlarged detail of the lever and locking mechanism.

As the lever-propelling spring and locking mechanism are the same at both ends of the line, I propose in describing my invention to refer to the parts in the singular.

A is a lever pivoted on the bracket B, which is suitably fixed to the post C, securely braced to the ceiling of the room.

D is a wire connected to the lever A above its pivot and similarly connected to the lever at the opposite end of the line, and E is a wire arranged to connect the two levers referred to at a point below their pivots.

F is a fork carried on the end of the rod G, the opposite end of which rod is pivoted on the upper end of the lever A. This fork F rests upon the upper wire D and has connected to it the propelling-spring H.

I is a rod pivoted on the lever A at a point below its pivot, the bell-crank J being pivoted on the opposite end of the said rod I. A sleeve K is pivoted on the short arm of the bell-crank J. The sleeve K loosely fits the spindle L, which spindle is connected to the sleeve K by means of a pin M, which prevents the spindle L being withdrawn, but at the same time will permit the said spindle to be adjusted longitudinally, a slot N being made in the sleeve K for the purpose of permitting the said longitudinal movement of the spindle L. The opposite end of the spindle L is passed through a slot made in the lever A and is provided with a nut T. A spiral

spring O is fitted between the sleeve K and thimble K', butting against the lever A, as indicated, the tension of the said spring being such as will push upon the end of the sleeve K, against which it butts, and hold the bell-crank J in proper position for locking the car, as hereinafter described. The spring O, though placed on the spindle L, is entirely independent of the said spindle. A roller P is journaled on the end of the long arm of the bell-crank J. This roller is preferably made of rubber and forms one-half of the latch completed by the lip Q, formed on the bottom of the frame of the cash-car R.

A horn S is formed on the end of the car immediately above the lip Q. The left-hand end of Fig. 1 shows the car locked in position. The other end of the figure shows the parts in the position in which they will appear immediately after the car has been acted upon by the propelling-spring. The car shown in dotted lines represents it as it passes from one end of the line to the other. When the car is traveling from one end of the line to the other, the horn S first comes in contact with the propelling-spring H, stretching the said spring sufficiently to permit the lip Q on the car R to slip over and engage with the roller P on the end of the bell-crank J. The spring O, which butts against the sleeve K and holds the bell-crank for locking, acts quickly as the lip Q strikes and passes the roller. The spring H acts as a preliminary buffer and the rubber block T' as a final buffer. In this way the motion of the car is arrested gradually and with, comparatively speaking, little jar. When the car is locked, as indicated in the left-hand end of Fig. 1, the spindle L is perfectly loose and may be moved longitudinally without acting against the spring O or other parts.

In order to start the car, the lever A is drawn back, and, as the crank J, which is connected to the car R, as shown, will be drawn back through the motion of the rod I, the propelling-spring H will be stretched, the said stretch being still further increased by the forward motion of the fork F, which is connected to the upper end of the lever A by the rod G. By the time that the propelling-spring H has been stretched sufficiently far to give

the necessary propelling power to the said spring the lever A has come in contact with the nut T and the pin M with the back end of the slot N. Consequently any further
 5 backward movement of the lever A will cause the sleeve K, which is connected to the short arm of the bell-crank J, to move the said bell-crank on its pivot, so as to cause its end which engages with the lip Q on the car R to move
 10 away from the said lip, and in this way release the car, so that it may be immediately acted upon by the propelling force of the spring H. By adjusting the nut T the unlatching may be made sooner or later, as may
 15 be desired. Owing to the fact that the levers A are connected together by the wires D and E in the manner described, the movement of one of the levers A conveys motion in the opposite direction to the lever at the other end
 20 of the line, and consequently the car can be tripped and propelled by either lever, irrespective of the end at which the car may be at the time located.

A rubber buffer U projects from the bottom of the bracket B, against which buffer
 25 the lever A strikes when thrown back by the action of the lever at the opposite end of the line.

What I claim as my invention is—

30 1. A store-service apparatus having suitable supports at the stations, levers pivoted to the supports, wires connecting said levers, and a car-propelling spring H, connected with one of said levers and so arranged that the move-
 35 ment of the lever for the purpose of starting the car increases the tension of said spring, substantially as described.

2. A store-service apparatus having suitable supports at the stations, a lever pivoted to the
 40 support at each station, two wires connected to said levers at opposite sides of its pivotal point, and a spring connected with said lever and arranged to propel the car of a cash-carrier, substantially as described.

45 3. A store-service apparatus having suitable supports at the stations, levers pivoted to said

supports, wires extending from the levers, a bell-crank having a pivotal connection with one of the levers, a roller journaled thereon, and a spring connected with the lever, in com- 50
 bination with a cash-car having a horn to engage with the spring and a lip to engage with the said roller, substantially as and for the purpose specified.

4. A store-service apparatus having suitable 55
 supports at the stations, levers pivoted to the supports, wires extending from and connecting the levers, a bell-crank having a pivotal connection with one of the levers, a roller journaled thereon, a spring for propelling a 60
 car, and a fork for supporting the spring connected to one of the levers, in combination with a car having a horn to engage with the propelling-spring and a lip to engage with
 65 said roller, substantially as and for the purpose specified.

5. In a store-service apparatus, the combination of suitable supports at the stations, levers pivoted to the supports, wires extending from and connecting the levers, a fork F, con- 70
 nected with one of the levers, a propelling-spring H, connected to the fork, and a car adapted to travel on one of the wires and to be propelled between the stations, substan-
 75 tially as described.

6. A store-service apparatus having suitable supports at the stations, levers pivoted to the supports, wires extending from the levers, a cash-car having a lip thereon, a rod I, extend- 80
 ing from one of the levers, a bell-crank J, pivoted thereon, and a roller P, journaled on one end of the bell-crank and designed to engage with said lip, in combination with the spring O, sleeve K, spindle L, pin M, and adjusting-
 85 nut T, substantially as and for the purpose specified.

Toronto, May 6, 1891.

FREDERICK JAMES HAWORTH HAZARD.

In presence of—

CHARLES C. BALDWIN,
 F. A. WOODWARD.