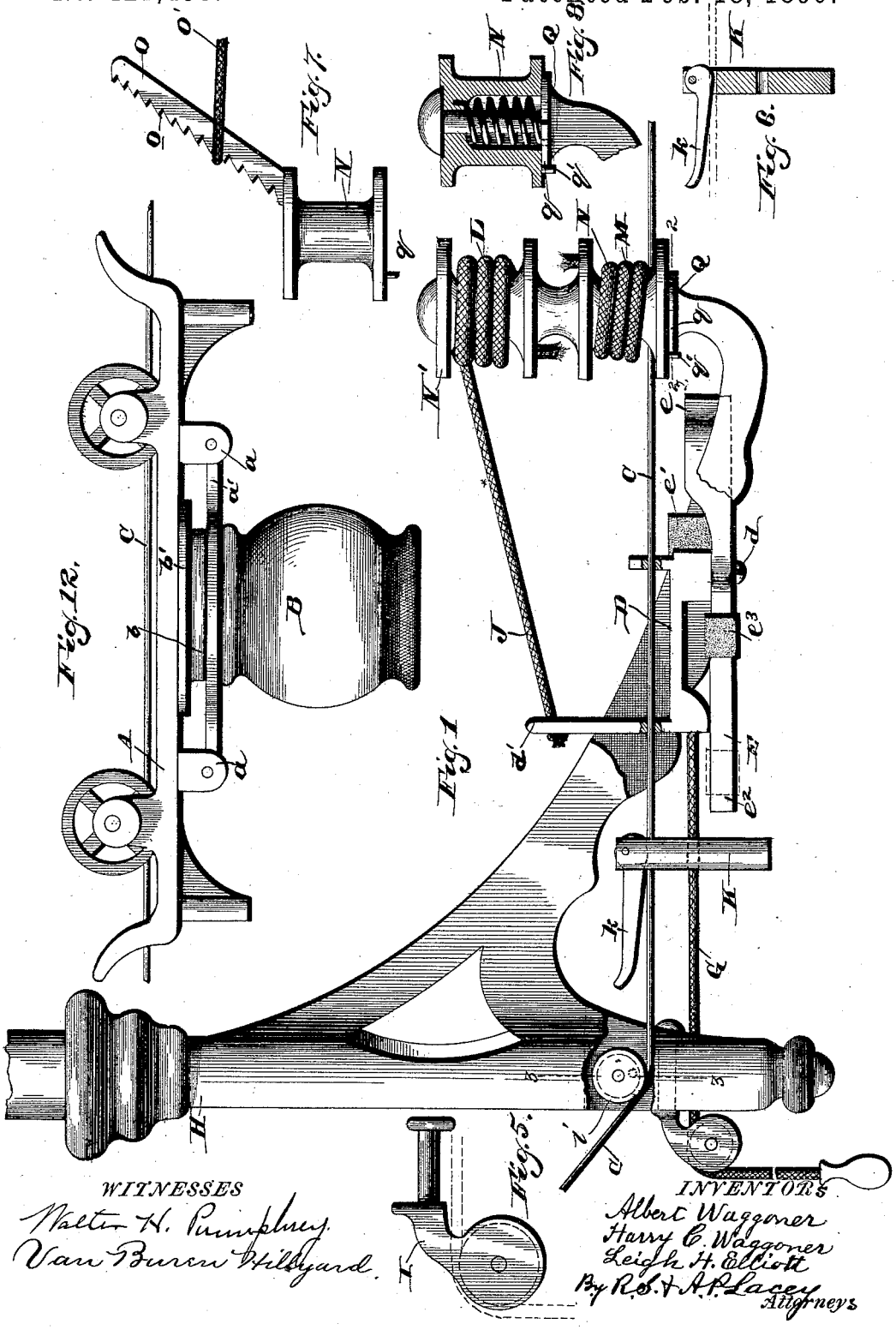
(No Model.) 2 Sheets—Sheet 1.

A. & H. C. WAGGONER & L. H. ELLIOTT.

CASH CARRIER.

No. 421,458. Patented Feb. 18, 1890.



WITNESSES

Walter H. Pumpelly.

Van Buren Wildyard.

INVENTORS

Albert Waggoner

Harry C. Waggoner

Leigh H. Elliott

By R.S. & A.P. Lacey

Attorneys

(No Model.) 2 Sheets—Sheet 2.

A. & H. C. WAGGONER & L. H. ELLIOTT.

CASH CARRIER.

No. 421,458. Patented Feb. 18, 1890.

Fig. 2.

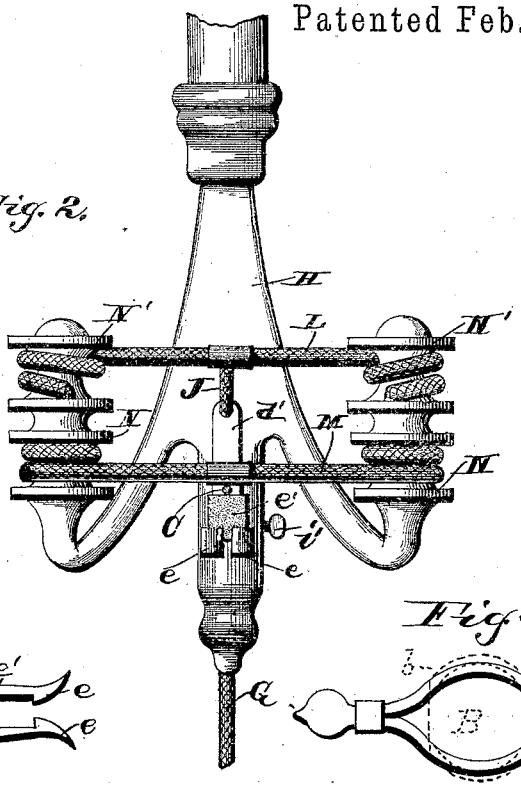


Fig. 4.

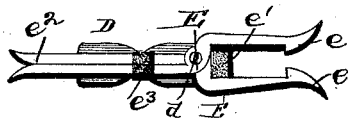


Fig. 9.

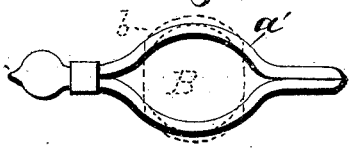


Fig. 13

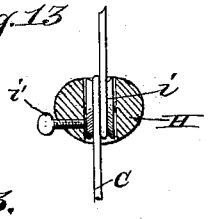


Fig. 10.

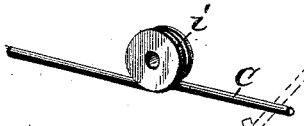


Fig. 3.

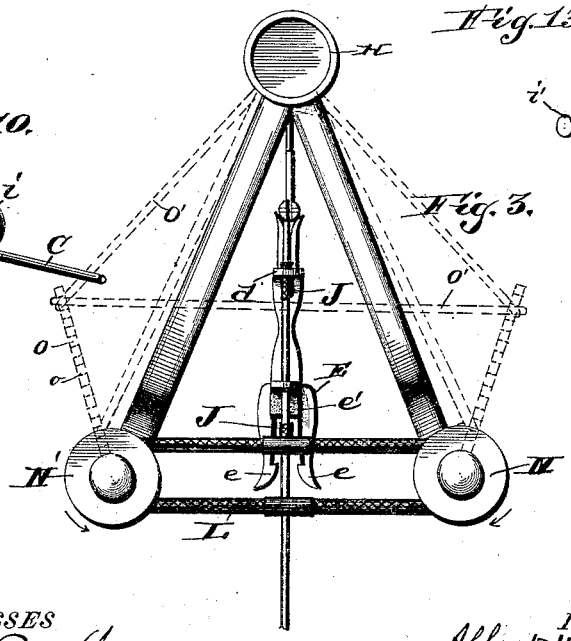
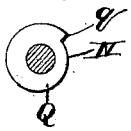


Fig. 11.



WITNESSES
Walter H. Pumphrey.
Van Buren Hillyard.

INVENTORS
Albert Waggoner
Harry C. Waggoner
Leigh H. Elliott
By R.S. & A.F. Lacey Attorneys

UNITED STATES PATENT OFFICE.

ALBERT WAGGONER, HARRY C. WAGGONER, AND LEIGH HOLMES ELLIOTT, OF COLUMBUS, OHIO.

CASH-CARRIER.

SPECIFICATION forming part of Letters Patent No. 421,458, dated February 18, 1890.

Application filed December 7, 1888. Serial No. 292,922. (No model.)

To all whom it may concern:

Be it known that we, ALBERT WAGGONER, HARRY C. WAGGONER, and LEIGH HOLMES ELLIOTT, citizens of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented certain new and useful Improvements in Cash-Carriers; and we do 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to store-service apparatus, such as are designed for the transmission of money and merchandise from one or more points to a certain point, as from the clerks to the cashier, and vice versa.

The improvement consists in the novel features and peculiar construction and combination of the parts which will be hereinafter more fully described and claimed, and shown in the accompanying drawings, in which—

Figure 1 is a side view, parts being broken away, of one end of a store-service track line-wire, showing the application of and embodying our invention; Fig. 2, a front view; Fig. 3, a top plan view of the same, showing the application of a modified form of rewinding-spring by dotted lines; Fig. 4, a bottom plan view of the catch; Fig. 5, a detail view of the swivel-pulley; Fig. 6, a detail view of the adjustable stop; Fig. 7, a modification of the spool and rewinding-spring; Fig. 8, a further modification of the spool and rewinding-spring; Fig. 9, a bottom plan view of the supporting-rods for the money-box; Fig. 10, a detail view of the wheel for the track line-wire. Fig. 11 is a horizontal section of the support on the line $z\,z$ of Fig. 1; Fig. 12, a side view of the carrier on an enlarged scale. Fig. 13 is a detail section on the line 3 3 of Fig. 1.

In the accompanying drawings, one end of a track line-wire is shown only and the appliances necessary to the efficiency of the invention. However, it will be understood that each end of the track line-wire or intermediate stations will be provided with appliances similar to those shown; hence a description of one set of devices or appliances will suffice for a complete understanding of the construction and the operation of the invention.

To illustrate the application of the invention, a carrier of ordinary construction is shown, composed of the car or truck A and the money-box B. The lugs a, depending from the truck, support the ends of the oppositely-curved bars a', which sustain the money-box. The exterior shoulder b at the end of the money-box rests upon the bars a' and support the said money-box. This shoulder is cut away on its diametrically-opposite sides to permit the insertion of the money-box between the bars a', the box being supported by giving it one-quarter of a turn after it is inserted between the bars, which brings the shoulder b over the bars a'. The plate b', secured to the truck, forms a cover for the money-box.

The sliding catch-block is mounted on the track line-wire C, and is composed of the block D and the two levers E, pivotally connected with the block between their ends by the pivot d. The front ends of the levers E have hooks e, which form catches to engage with the carrier, and the bumper e', placed between the front ends of the levers, takes up the force of the blow when the truck strikes the catch. The rear ends e^2 of the levers E are held together by a yielding or elastic connection e^3, which is adjustable to adapt it to the momentum of the carrier. If the momentum of the carrier be not great, the yielding connection e^3 must be adjusted to permit the jaws or hooks e of the levers E to open readily to receive the carrier; but if the momentum be very great the connection e^3 should be adjusted to cause the said jaws of the levers E to open less readily and to close quickly to prevent any rebounding of the carrier disengaging it from the said catch. For convenience we have shown the simplest form of connection, which consists of an elastic band slipped on the rear ends of the levers and adjustable on the same to and from their pivotal connection. The catch-block-operating cord G is connected with the sliding catch-block D, and passes through an opening in the support or standard H and over a swiv-

eled pulley I. The pulley I is connected with the support by a swivel-joint, so it will adapt itself to the direction of the strain on the cord G when the said cord is operated. The catch-block is returned to its normal position on the track line-wire by any suitable means, as the elastic cord J, which is connected at one end with the post d' on the block D and at its other end with the elastic or other cord L, which will be farther on more fully explained.

The track line-wire C passes once around a wheel or drum i in the support H, and the thumb-screw i', passing through the said support H, bears on the side of the wheel or drum i when screwed home and holds the said wheel or drum against rotation.

The stop K is slotted at its upper end, and in this slot is pivoted the cam-lever k. The track line-wire is held between the closed end of the slot and the cam-lever. By turning the lever k up the stop can be adjusted on the track line-wire, and is made fast by turning the said lever down. Extending from the depending arm or hanger on each side of the track are two arms. Revolving spools N are mounted on these arms, to which are secured the ends of the propelling-sling M. In propelling devices of the character to which this invention pertains it is desired that the propelling cord or sling shall be held taut in the path of the carrier, so that it will certainly be engaged thereby. When the propelling-spring is slack, it sags down and the incoming carrier does not always engage it. Consequently the sling is not in a position to give the carrier its starting impulse.

In order to take up the slack of the propelling-sling and to hold it taut to be always in the path of the incoming carrier, the spools, to which the ends of the sling are secured, are made spring-winding, so as to wind up the slack after the carrier has been given its impulse. The spring-winding spools always hold the sling under tension, and the force of the spring which winds the spools tends to augment the force of the sling, as hereinafter set forth. In Figs. 1, 2, and 3 this winding-spring consists of an elastic strip, rope, or cord L, which is connected at its ends to auxiliary spools N′, fastened to or forming an extension of the spools N. The ends of the elastic band or cord L are wound on the said auxiliary spools N′ in a reverse direction to the ends of the propelling-sling M, so that as the sling M unwinds the elastic cord L will be wound up, and when the sling is liberated the elastic cord L contracting will rotate the spools N′ N and rewind the sling. Obviously the same result would be obtained if the ends of the elastic cord were carried back and fastened to the support H, as shown by dotted lines in Fig. 3.

The construction shown by full lines in Figs. 1, 2, and 3—*i. e.*, having the elastic cord extending between the spools N′ N—is preferable, because it serves also to return the catch D E to its normal position, the said catch being connected therewith by the cord J. In Fig. 7 and by dotted lines in Fig. 3 the spool N is shown provided with an oblique arm O, which is provided with a series of notches o. The yielding connection O′ is adjustably connected with the said oblique arm O to vary its tension, as will be readily understood.

In Fig. 8 the winding-springs for taking up the slack in the propelling-sling is a coil-spring P, which, for compactness, is arranged within the spool, one end of the spring being connected with the spool support or spindle.

It may be stated that the propelling-sling M may be of inelastic material, and it will operate to propel the carrier through the resiliency of the winding-springs L, O′, or P, which in their reaction take up the slack in the said sling so quickly as to give an impetus to the carrier on the track line-wire. However, for practical purposes, the sling M will be elastic, and its action will be supplemented by the winding-springs L, O′, or P. In some instances it has been deemed advisable to interpose a stop between the spools N and their support. For this purpose a portion of the periphery of the flange Q of the support for the spools is cut away to form a shoulder q', against which the stop q, depending from the spool, impinges.

The operation of the device is as follows: The carrier as it approaches a station or a terminal of the track line-wire is engaged by the catch and has a portion projecting within the path of the propelling-sling. By drawing down on the operating-cord the catch is drawn back, carrying with it the carrier. The latter, engaging with the propelling-sling, distends it and unwinds it from the spools, at the same time winding or expanding the elastic band or cord on the spool N′, that is connected with them. A continued pull on the cord G will bring the catch in engagement with the stop K, which will effect a disengagement of the carrier therefrom. The carrier being free will be propelled by the reaction of the sling M and the said winding-spring.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

1. In a cash-carrier apparatus, the combination, with the propelling-sling, of the spools mounted on supports, and the rewinding-spring connected with the spools for taking up slack in the said sling, substantially as and for the purpose described.

2. In a cash-carrier apparatus, the combination, with the supports, the spools mounted on the said supports, and the sling having its ends wrapped around the spools, of a winding-spring connected with the said spools for rewinding the said sling and augmenting its force, substantially as set forth.

3. The combination of the support, the spools, the elastic propelling-sling, and the winding-spring connected with the spools for

taking up slack and re-enforcing the elastic propelling-sling, substantially as described.

4. The combination of the support, the propelling-sling, the spools to which the sling is connected, the slack winding-spring, the catch, and the elastic cord connecting the winding-spring and catch for returning the carrier to its normal position, substantially as described.

5. The combination of the support, the propelling-sling, the spools to which the sling is connected, the slack winding-spring, and the auxiliary spools to which the ends of the slack winding-spring are attached, substantially as and for the purpose described.

6. In a cash-carrier apparatus, the catch composed of two levers pivotally connected together, and a yielding connection adjustable on the levers to and from their pivotal connection, whereby the said levers are held together under variable tension, substantially as set forth.

7. In a cash-carrier apparatus, the combination, with the block D, of the two levers E E, pivoted between their ends to the block, the yielding connection adjustable on the rear ends of the levers, and the bumper placed between the front ends of the said levers, substantially as set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

ALBERT WAGGONER.
HARRY C. WAGGONER.
LEIGH HOLMES ELLIOTT.

Witnesses:
S. W. SIMS,
OSCAR S. LEAR.