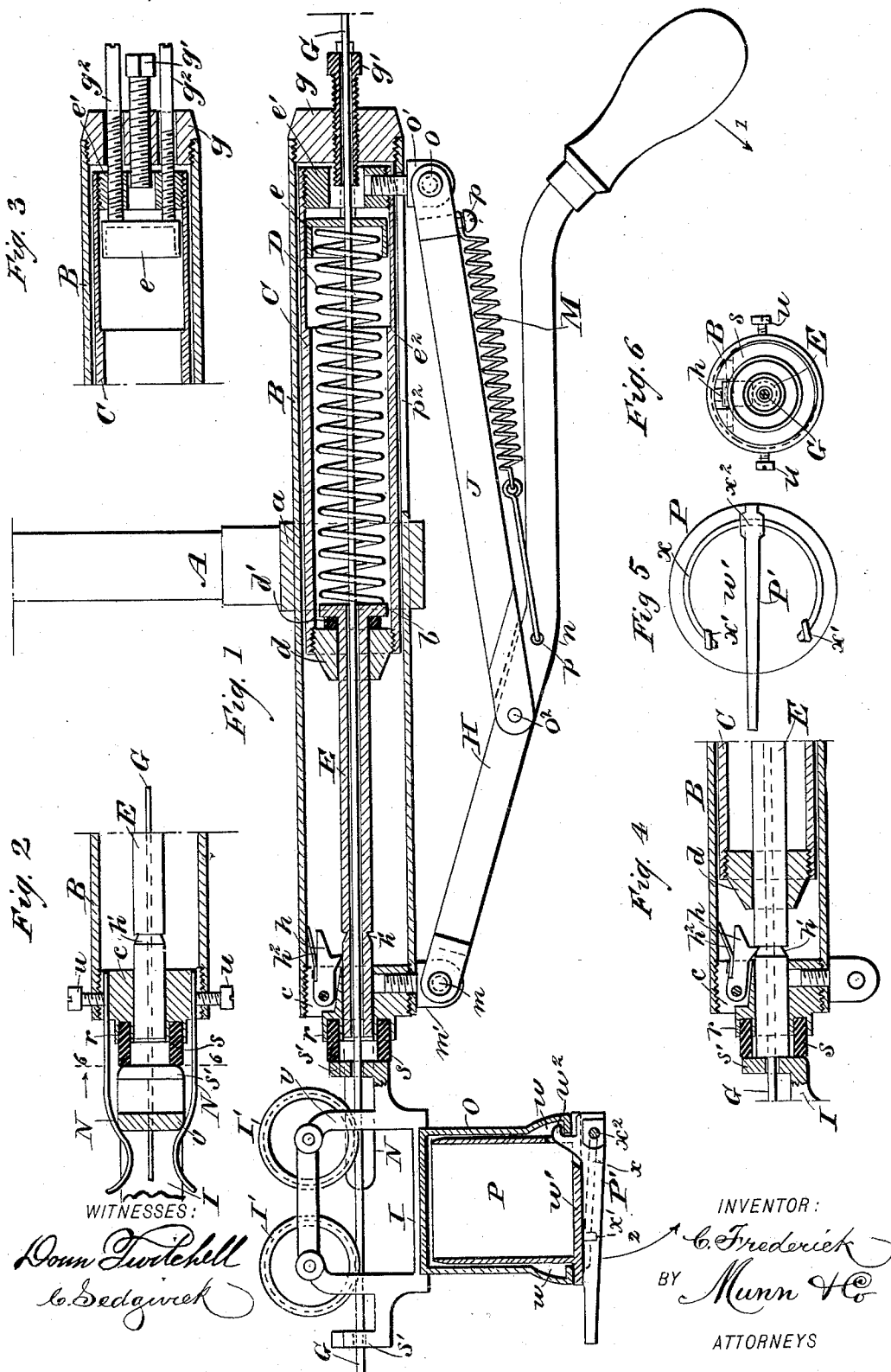


C. FREDERICK.
CASH CARRIER.

Patented Feb. 9, 1892.



UNITED STATES PATENT OFFICE.

CHARLES FREDERICK, OF COLUMBIANA, OHIO.

CASH-CARRIER.

SPECIFICATION forming part of Letters Patent No. 468,650, dated February 9, 1892.

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To all whom it may concern:

Be it known that I, CHARLES FREDERICK, of Columbiana, in the county of Columbiana and State of Ohio, have invented a new and useful Cash-Carrier, of which the following is a full, clear, and exact description.

This invention relates to improvements in cash-carriers of a type wherein a wire track is used to support a traveling carriage, the objects being to provide a device of the character indicated with improved means to removably hold a carriage at a station, novel mechanism to actuate the carriage, so as to propel it from one station to another, and also to furnish improved means for removably attaching the cash-receptacle to the carriage proper.

To these ends my invention consists in certain features of construction and combinations of parts, as is hereinafter described and claimed.

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

Figure 1 is a side view of the device, partly in axial section, showing the parts adjusted ready to communicate a progressive impulse to the carriage. Fig. 2 is a plan view, in axial section, of the forward portion of the actuating device for the carriage, shown in part, in connection therewith. Fig. 3 is a sectional plan view, in axial section, of the rear end portion of the carriage-actuating device. Fig. 4 is a sectional side view of the forward portion of the propelling mechanism of the cash-carrier, showing the parts in forward adjustment. Fig. 5 is a bottom plan view of the cash-receptacle of the device detached, and Fig. 6 is a transverse section of the forward part of the device on the line 6 6 in Fig. 2.

In Fig. 1, A is a depending hanger-arm whereon the entire device at each station is suspended from a stable support above it, reaching a point that is accessible from the floor to permit the convenient manipulation of the mechanism provided to dispatch cars or carriages on a single wire from station to station.

A horizontal guide-tube B is secured to the lower end of the hanger-arm A by its engagement near the center with a T-shaped socket-

piece a, that is secured upon the exterior of the guide-tube in any preferred manner.

Within the guide-tube B a cylindrical spring-case C is fitted to slide freely, having such a proportionate length as will permit a proper longitudinal movement of the latter.

Inside the spring-case C a spiral spring D is inserted of equal length therewith, having a bearing at the forward end of the case on an abutment-head b, that is a terminal radial enlargement of the pusher-rod E, which latter is tubular and of a suitable length to project through the front end of the spring-case and also through the front end of the guide-tube B when the parts are in the position shown in Fig. 1, and the spring-case is rearwardly adjusted within the guide-tube, as will be further explained.

The pusher-rod E is held centrally within the guide-tube B, at the front end of said tube, by its loose engagement with an axially-perforated head-block c, that is secured in the front end of the guide-tube, the rear end portion of the pusher-rod having a loose engagement with the centrally-apertured case-head d. This connection of parts will cause the spring D to press on the pusher-rod and actuate it longitudinally by the expansion of the spring, which latter has its rear end seated in a cup e, that is made to loosely fit the interior of the spring-case C at its rear, said case being enlarged diametrically within for a proper distance from the rear plugged end e' of the spring-case forwardly to a point e², and thus permit a compression of the spring D to be effected.

The rear end of the guide-tube B, or terminal end, that is farthest from the traveling carriage of the cash-carrier when all parts are in place, is closed by a removable plug g, that is longitudinally perforated at its center to receive a sleeve g', through which the line-wire G is inserted. Said line-wire or track whereon the traveling carriage moves is forwardly extended through the center of the spring-case C, the guide-rod E, the spring-cup e, and plug e' being perforated to allow such an introduction of the wire to be effected.

As shown in Fig. 3, the spring-cup e is pressed upon at its rear end by the set-screw bolts g², which pass loosely through the plug g and have a threaded engagement with par-

allel-tapped perforations in the case end e' , so that the inward movement of these set-screws will slide the spring-cup and compress the spiral spring D if the head b of the pusher-rod E is held in place. To effect the temporary retention of the head b , a detent-dog h is pivoted in a slot in the head-block c , a toe on the dog entering a locking-groove h' in the guide-rod, as shown in Fig. 4, when the parts are in forward adjustment, as will be further explained, the dog being pressed by a spring h^2 , that causes the engagement when the toe of the dog is above the groove.

The actuating-lever H, that by its vibration effects a compression of the spiral spring D a proper degree to afford the necessary impulse to the traveling carriage I, is pivoted by one end, as at m in Fig. 1, to an ear m' , that depends from the head-block c , said lever being preferably bent at n sufficiently to dispose the rear portion of the lever in a plane about parallel with the guide-tube B when the parts are in the position shown in Fig. 1, ready for service.

The body of the lever H is connected loosely to the end wall or plug e' of the spring-case C by a link-bar J, that is pivoted thereto at o , where it engages a depending ear o' , and to the lever at o^2 , a contractile spring M, which is connected at p and p' to the lever and link-bar, respectively, serving to return the lever to a normal position when swung on its pivot-point m downwardly and forwardly, as indicated by an arrow 1 in Fig. 1, the travel of the case being permitted by a longitudinal slot p^2 , wherein the ear o' will slide.

A preferably cylindrical-shaped projection r is formed on the front end of the head-block c , which projection is annularly grooved to receive an annular cushion s , of gum or similar elastic material, that is designed to arrest the carriage I and absorb the shock of its impact, the cushion having a sufficient projection exterior of the head-block to allow it to receive the impinge of one of the head-flanges s' , that are portions of the carriage-frame and project vertically therefrom at each end of said frame.

There are two similar plate-springs N provided, which are adjustably held by the screws u in channels produced at each side of the head-block c , so as to project their main portions forwardly of the cushion s at each side of the same, these projected portions being recurved, as represented in Fig. 2, so as to admit the frame-bar v of the carriage I and clasp the frame against the cushion s when the carriage impinges thereon. The carriage I is provided with two wheels I' , that are pivoted between its frame so as to rotate freely and engage their grooved peripheries with the track-wire G. Below the carriage-frame a holder-case O is secured by its upper end so as to depend vertically therefrom if the carriage is in a horizontal plane, the case being made cylindrical and open at the lower end, having an annular groove w formed on the inner surface near the free lower edge.

There is a cylindrical cash-box P furnished of such a relative diameter and length as compared to similar interior dimensions of the holder-case O that the cash receptacle or box will freely enter the latter when slid upwardly from below to engage therewith. A flat bottom wall w' is formed or secured on the lower end of the cash-box P, which wall is radially extended beyond the side wall of the box, and thus affords an abutment, which will engage the lower end of the holder-case O and limit the insertion of the box in the holder when the parts are assembled.

A lever P' is provided for the cash-box P to lock and release it to and from the holder-case O, which is effected as follows: A curved wire spring x is attached by its ends x' to the bottom wall w' of the cash-box P after the lever has been secured to the spring, preferably by inserting the latter through a perforation laterally formed in the lever near one end, as at x^2 in Fig. 5, which connection will hold the lever yieldingly against the lower surface of the box-bottom wall and allow it to be swung downwardly in the direction of the curved arrow 2 in Fig. 1. Upon the edge of the lever P' that impinges on the bottom wall w' a hook w^2 is formed, which will enter the groove w in the holder-case O when the lever is in folded adjustment, as shown in Fig. 1, the bottom wall being indented or cut away at a proper point to permit the hook to enter the groove, and thus interlock therewith, so as to retain the cash-box P in the holder O.

It being understood that the track-wire G is stretched taut between stations, so as to be freely traversed by the carriage I, the operation is essentially as follows: The clerk who desires to transfer cash and the bill of purchased goods from his station at the counter to the cashier's desk pulls the lever P' of the cash-box P downwardly, so as to release the box, into which the cash is inserted, and then the box is replaced. The lever being swung back is thereby interlocked with the holder-case and retained, as before stated, by the spring x . The bill of goods should be placed between the box-bottom w' and the adjacent edge of the lever P' , so as to avoid crumpling the bill to place it in the cash-box. The operating-lever H is now swung downwardly and forwardly, which movement will cause the pusher-rod E to slide forwardly a short distance, so as to permit the dog h to enter the circumferential groove h' , and thus retain the pusher-rod from further forward movement. The continuation of the movement of the lever H forwardly after the dog h is interlocked with the pusher-rod E will cause the cup e to slide forwardly until arrested by the shoulder e^2 , thus compressing the spring D, as will be readily understood, the spring-case being forwardly moved by the lever as the ear o' slides in the slot p^2 forwardly. The front end portion of the case-head d is projected beyond the spring-case wall and rendered slightly coniform to allow its tapered wall to slide be-

low a projecting end portion of the detent-dog *h* and raise it out of the groove *h'*. When the carriage *I* is in proper connection with the springs *N* and cushion *b*, the end of the pusher-rod *E* will lie near to the flange *s'* of the carriage *I*, so that when the actuating-lever *H* is fully vibrated and releases the detent-dog *h* the rearward sliding movement of the rod and its head *b* will be reversed and the spring *D*, that was fully compressed thereby, will be suddenly released and its expansive force exerted to propel the carriage on the line-wire *G* with sufficient force to cause it to reach the opposite terminal of the line, where a similar apparatus will receive the carriage and arrest its progressive movement. In order to ease the shock of the head *b* of the pusher-rod *E* when it strikes the case-head *d*, a gum spring *d'* in washer form may be placed on the rod between the parts named, which will receive the impact of the sliding abutment head or flange and prevent noise or jar. As soon as the carriage *I* has been dispatched the spring *M* will return the lever *H* to its normal position, and all attached parts also, ready to receive the returning carriage and its attached cash-box.

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

1. In a cash-carrier apparatus, the combination, with a depending fixed arm, a guide-tube thereon, a case within the tube, and a spiral spring within the case, of a pusher-rod in the case, adapted to be actuated by the spring therein and provided with a circumferential groove, a detent-dog on the guide-tube, adapted to interlock with the groove in said rod when the rod is moved from rear to front of the guide-tube, means for sliding the spring-case in the guide-tube and causing its front end to release the dog, a track-wire, and a carriage traveling on the track-wire, substantially as shown and described.

2. In a cash-carrier apparatus, the combination, with a depending fixed arm, a horizontal guide-tube thereon, a cylindrical case in the

guide-tube and adapted to slide therein, a lever pivoted at its forward end to the guide-tube and connected by a link with the cylindrical case, a spring in said case adapted to be compressed when the lever is vibrated, and a hollow pusher-rod in the case and guide-tube having a circumferential groove, of a track-wire extending through the spring-case, guide-tube, and pusher-rod, a wheeled carriage on the guide-rod and carrying a detachable cash-box, two curved plate-springs on the front end of the guide-tube, adapted to engage a flange on said carriage, and a spring-pressed dog on the forward end of the guide-tube, adapted to interlock with the groove of the pusher-rod and to be tripped by the front end of the spring-case when the operating-lever is vibrated, substantially as shown and described.

3. In a cash-carrier apparatus, the combination, with a carriage having a depending cylindrical holder-case on the carriage-frame, interiorly grooved in its side wall near its lower end, of a cash-box fitting in the holder-case, and a lever on the bottom of the cash-box, pressed by a spring to a contact with said bottom and provided with a toe adapted to enter the groove in the holder-case when the parts are assembled and the lever is in folded adjustment, substantially as shown and described.

4. In a cash-carrier apparatus, the combination, with a wheeled carriage-frame and a cylindrical holder-case depending therefrom, having a circumferential groove within, near the lower edge, of a cash-box loosely fitting the holder-case, a U-shaped spring on the bottom of the cash-box, and a lever secured to the U-shaped spring and provided with a toe that will interlock with the groove in the holder-case when said lever is folded on the bottom of the cash-box, substantially as described.

CHARLES FREDERICK.

Witnesses:

J. G. AUGUSTINE,
F. A. WITT.