(No Model.) 2 Sheets—Sheet 1.

W. R. DEAN.

CASH CARRIER.

No. 405,538. Patented June 18, 1889.

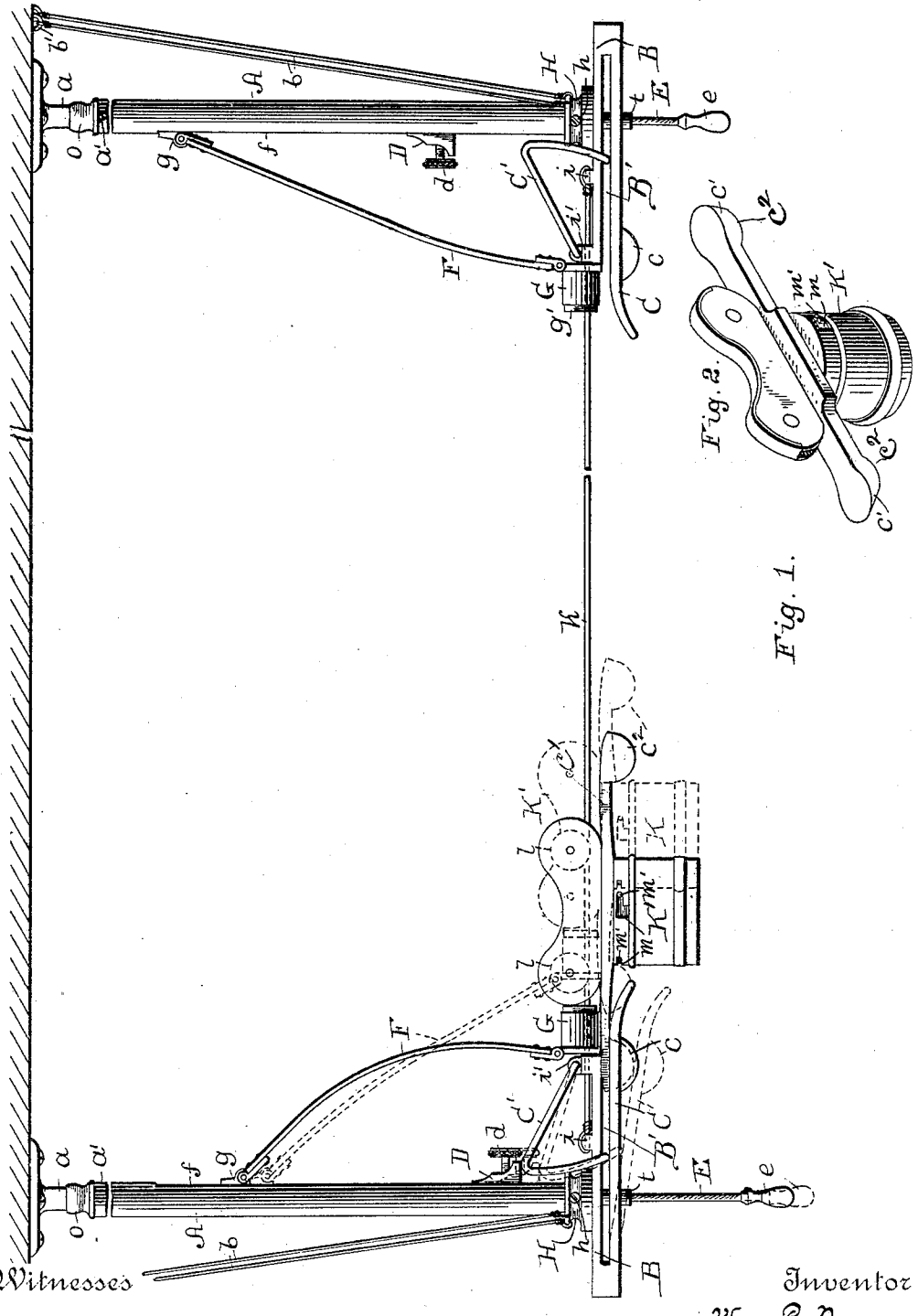


Fig. 1.

Fig. 2.

Witnesses

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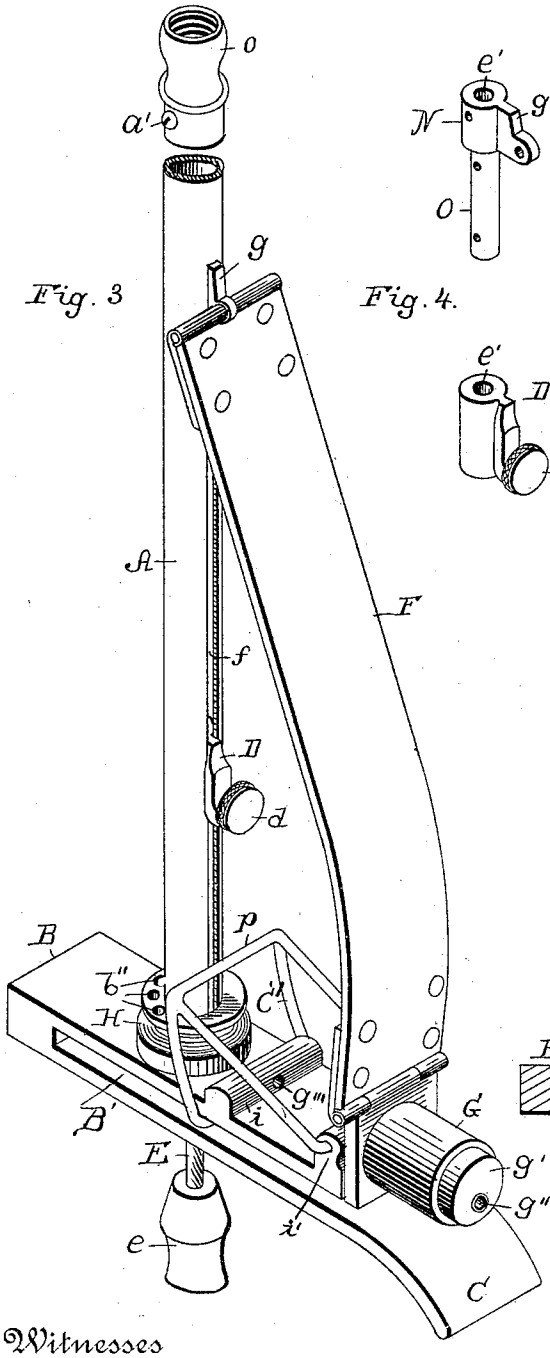


Fig. 3

Fig. 4.

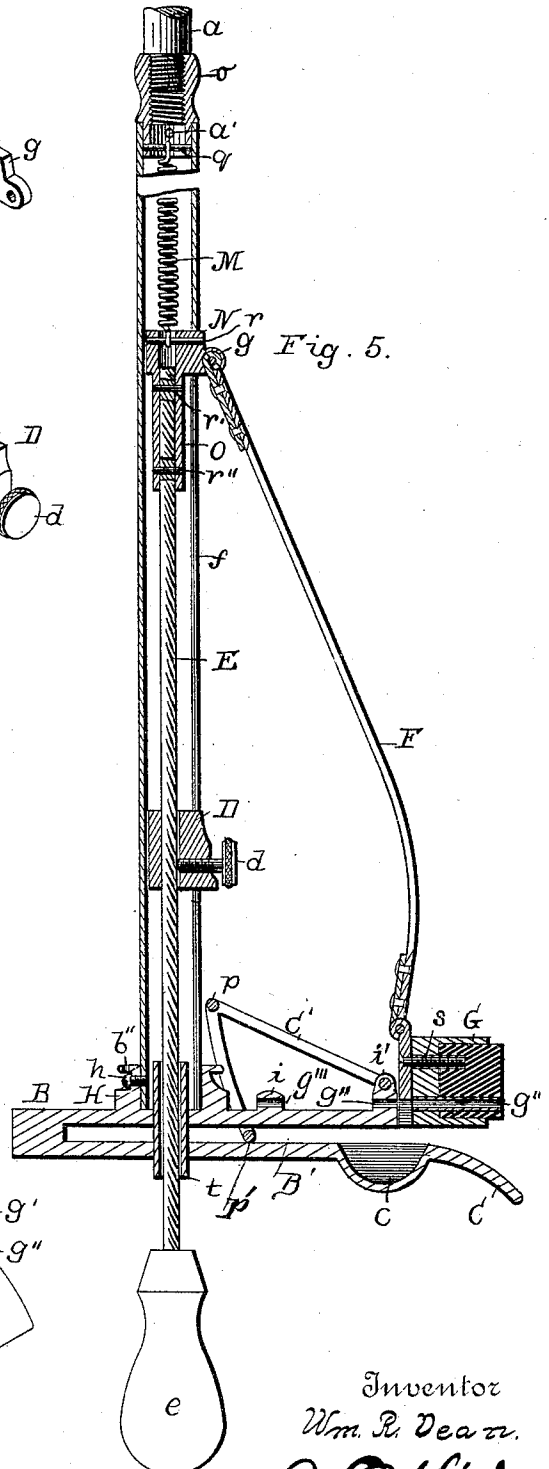


Fig. 5.

Witnesses

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UNITED STATES PATENT OFFICE.

WILLIAM R. DEAN, OF OTTAWA, KANSAS.

CASH-CARRIER.

SPECIFICATION forming part of Letters Patent No. 405,538, dated June 18, 1889.

Application filed February 27, 1889. Serial No. 301,320. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM R. DEAN, of Ottawa, Franklin county, Kansas, have invented certain new and useful Improvements in Cash-Carriers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part thereof.

This invention relates to certain improvements in that class of devices generally known as "cash-carriers," having for its object the systematic conduct of business, as relates to cash transactions, especially in mercantile places of business; and it consists of mechanism, as will be more fully understood from the following description and accompanying illustration, in which—

Figure 1 is a side elevation of my invention. Fig. 2 is a perspective view of the car. Fig. 3 is a similar enlarged view of a portion of my invention. Fig. 4 is a detailed perspective view of the rope or cord embracing sleeves, and Fig. 5 is a sectional elevation of the same.

In the organization of my invention I depend from the ceiling or overhead hollow or tubular supports or pendants A A, bolting first in place plates having short screw-threaded posts *a*. Upon each post *a* is screwed or fitted a coupling *o*, into which is screwed or fitted the upper screw-threaded end of a pendant or support, a screw *a'* screwing the coupling in place. From this arrangement it will be seen that the pendants or supports can be readily put in position and be readily removed.

B is a catcher or receiver and retainer fitted to the lower end of each pendant or support A; being provided with a stepped sleeve or socket H, to receive the said end of the pendant or support, and with a binding or holding screw *h* engaging the latter. The receiver and retainer B has a longitudinal slot B', extending almost its entire length, the lower part or spring-arm C of said receiver and retainer at the forward or open end of said slot being curved downward. This spring-arm C of the receiver and retainer has also a concavity or chamber *c* just inward from its downward curved end, the purpose of which will appear further on.

K is a rail or cable extending from pendant to pendant A, being passed through tubes or passages *g''*, secured in buffers G, resting against the forward or inner ends of the upper arms of the catchers and retainers B. Said cable or rail K is also passed through passages or eyes *g'''* in castings *i* upon the catchers and retainers B and suitably secured thereto.

F F are preferably broad plate-like springs hinged at their upper ends to the projections or ears *g* of slides or sleeves O in the upper ends of the hollow pendants or supports A A, said ears or projections projecting through and moving in vertical slots *f* of the latter. The lower ends of the springs or plates F are also hinged or articulated to the upper edges of plates connected by screws *s* to the buffers G, or by which the latter are connected to the former, and by means of which, also, the rubber or elastic cushions or stops *g'* are connected to the buffers, the cushions or stops being let into sockets of the buffers. The slides or sleeves O are suspended in position in the supports or pendants by means of springs M, the lower ends of which are connected to cross-pins *r*, inserted into the upper ends of the sleeves or slides. The upper ends of the springs M are connected to similar pins *q*, supported or passed into the lower inclosed end of the coupling *o*. The couplings are formed with enlargements N, which fit snugly within the supports or pendants A to guide the same in their movement in the latter.

E is a cord or rope passed up into each of the hollow pendants or supports A, its upper end being passed into the bore *e'* of the slide or sleeve O and secured therein by rivets *r'* *r''*, passed transversely through the sleeve or slide O. The cord E also has applied to it a similar sleeve or head D, the latter also having a projection extending through the slot *f* of the support A, and being held upon the cord by a binding or holding screw *d*. To the lower end of the cord or rope is secured a handle *e*, the cord passing out through a tube *t*, secured in the lower end of the support or pendant.

C' is a tripping device, which is essentially in the form of a bail, or rather of a compound

bail, having the cross-bar at one end pivoted in the eye of a casting i' of the catcher and retainer B. A second cross-bar p of the tripping device C′ stands in the path of the movement of the sleeve or head D, while still another cross-bar p' of the tripping device is arranged and moves in the slot B′ of the catcher and retainer B.

$b\,b$ are two series of brace-rods applied to the pendants A A, one series being connected at its upper end b' to the ceiling, while its lower end is connected to a support or pendant A and passed through apertures b'' of the step or socket D of the pendant or support A. Each series of brace-rods $b\,b$ is so applied to its respective pendant or support A, at the outer sides of the latter in alignment with the cable or rail, that they act reciprocally to receive the thrust of the sudden stoppage of the car as it arrives at the end of either of its two directions of travel.

K′ is the car, which is constructed in the usual way, having its top or cover connected by the ordinary bayonet-joint $m\ m'$, and to the cover or top is applied a longitudinal bar, forming arms $c'\ c'$. The lower sides of these arms are provided with ball-shaped pendants or projections $c^2\ c^2$, which separately enter either of the concavities or chambers c of the spring-arms C of the catchers and retainers B, to effect the automatic locking or securing of the car in position at the end of its route or cable. Above the arms c' of the car K′ are the suitably-incased pulleys $l\ l$, traveling or running upon the cable or rail K, and by means of which the car is disposed or suspended in position thereon.

It will be seen that as the rope or cord E is pulled downward the spring F will flex or bow outward, as seen in Fig. 1 at the left hand, and the slide or head D will be brought into contact with the tripping device C′, which in turn will depress the lower spring-arm C of the coincident catcher B and liberate the car K′, which, receiving the pressure or impulse of the spring F, will be suddenly and rapidly set in motion, performing its trip or errand with dispatch. Of course the return trip is effected in the same manner. The springs M return the operating cords or ropes to their former elevated position after they (the latter) are released.

From the above description it will be seen that the operating-cords are incased in the hollow supports or pendants, and are guided at the lower ends of the latter by the vertical tubes t, thereby protecting the cord and preventing it from swinging out of its proper position. Furthermore, the guides prevent the cords from being drawn at an angle to the vertical, and thereby prevent the slides from cramping in the supports or pendants. It will be noted, further, that the buffers slide on and are guided in a horizontal plane by the cable or rail, so that the impulse given to the car is exactly parallel with its line of motion, thereby preventing cramping and obviating all jar to the parts when the car is started. The tubes or passages in the buffers receive the wear incident to the movement on the cable or rail, and said tubes may be replaced, when worn, by new ones, thereby preventing rattling.

The cavities or chambers c in the spring-arms are preferably rounded, as shown, to correspond with the ball-shaped projections on the arms of the car, whereby when the projections escape from the cavities under the impulse of the propelling-spring they will slip out easily without the friction or jar which would occur if the spring-arm and car were provided with angular shoulders. When shoulders are employed, the edges thereof gradually chip off, and thereby impair the effectiveness of the device.

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

1. In a cash-carrier, the combination, with a slotted support or pendant, of a sliding sleeve or thimble suspended from a spring within said support or pendant and having an operating-cord connected thereto, the flat spring pivoted or hinged at its upper end to said sleeve or thimble and carrying a buffer on its lower end, the catcher or retainer provided with a spring-arm, the tripping device having one arm resting on the said spring-arm, and the car having arms provided with projections to engage the cavity or chamber in said spring-arm, substantially as specified.

2. In a cash-carrier, the combination, with the outward flexing or bowing spring, the slotted catcher and retainer having a lower spring-arm, the operating rope or cord carrying a projection or head, and the car having arms engaging and held by said spring-arm of the catcher and retainer, of the compound bail-lever or tripping device having one cross-bar pivoted in the latter, a second cross-bar arranged in the path of the movement of the projection on the operating-cord, and a third cross-bar arranged in the slot of said catcher and retainer and pressing or resting upon said spring-arm, substantially as set forth.

3. In a cash-carrier, the combination, with a tubular longitudinally-slotted support or pendant carrying catching and tripping devices and having one end of the track or rail connected thereto, of a sliding sleeve or thimble suspended from a contractile spring within the support or pendant, the propelling-spring connected to and carried by said sleeve or pendant, and the operating-cord inclosed in the support or pendant and connected to the said sleeve or thimble, substantially as specified.

4. In a cash-carrier, the combination, with a tubular slotted support or pendant carrying catching or tripping devices, of the sliding sleeve or thimble suspended from a spring within the support or pendant, the propelling-spring connected to said sleeve or thimble, the guide-tube located concentrically at the

lower end of the support or pendant, and the operating-cord passing through said guide-tube and connected to the sleeve or thimble, substantially as specified.

5. In a cash-carrier, the combination, with the support or pendant having the end of the track or rail connected thereto and carrying suitable catching and tripping devices, of the sliding sleeve or thimble mounted in the support or pendant and having an operating-cord connected thereto, and the flat propelling-spring connected at its upper end to said sleeve or thimble and carrying a buffer on its lower end which slides on and is guided by the track or rail, whereby said buffer moves parallel with said track, substantially as specified.

6. In a cash-carrier, the combination, with the track connected to suitable supports or pendants and the sliding sleeve or thimble having an operating-cord connected thereto, of the movable buffer provided with a tube or passage arranged longitudinally therein to slide on the track and guide the buffer, and the flat propelling-spring connected at one end to the sleeve or thimble and at the other end to the buffer, substantially as specified.

7. In a cash-carrier, the combination of a sliding sleeve or thimble having an operating-cord connected thereto, the track or rail, a suitable car running thereon, the flat propelling-spring hinged or pivoted at its upper end to the sleeve or thimble, and the buffer guided on said track or rail and hinged or articulated to the lower end of the propelling-spring, substantially as specified.

8. In a cash-carrier, the combination of the tubular support or pendant, the longitudinally-slotted catcher or retainer provided with a lower spring-arm and having a sleeve or socket on its upper side to fit on the lower end of the support or pendant, the cable or rail fitting in eyes on the upper side of the catcher or retainer, the sleeve or thimble suspended from a coiled spring within the support or pendant and having an operating-cord connected thereto, and the flat propelling-spring connected at its upper end to the said sleeve or thimble and carrying a buffer on its free end, which slides on the track or rail, substantially as and for the purpose specified.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM R. DEAN.

Witnesses:
J. A. MUNDY,
C. E. LATCHEM.