

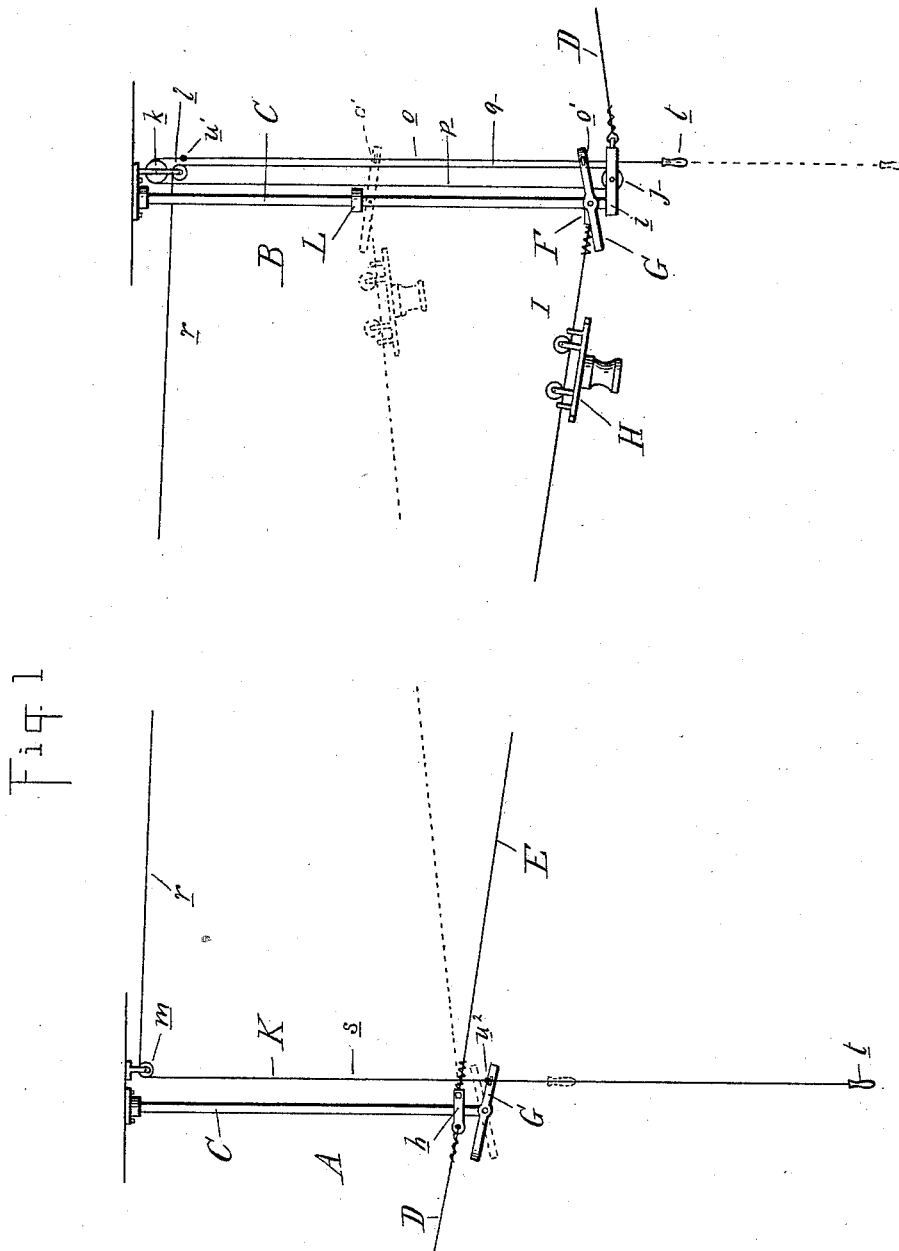
(No Model.)

2 Sheets—Sheet 1.

G. L. BOYNTON.
STORE SERVICE APPARATUS.

No. 418,436.

Patented Dec. 31, 1889.



Witnesses:
P. M. Hulbert
Edm^d Bryant

Inventor:
Grayville L. Boynton
By *Thos. S. Sprague* *Sen*
Atty.

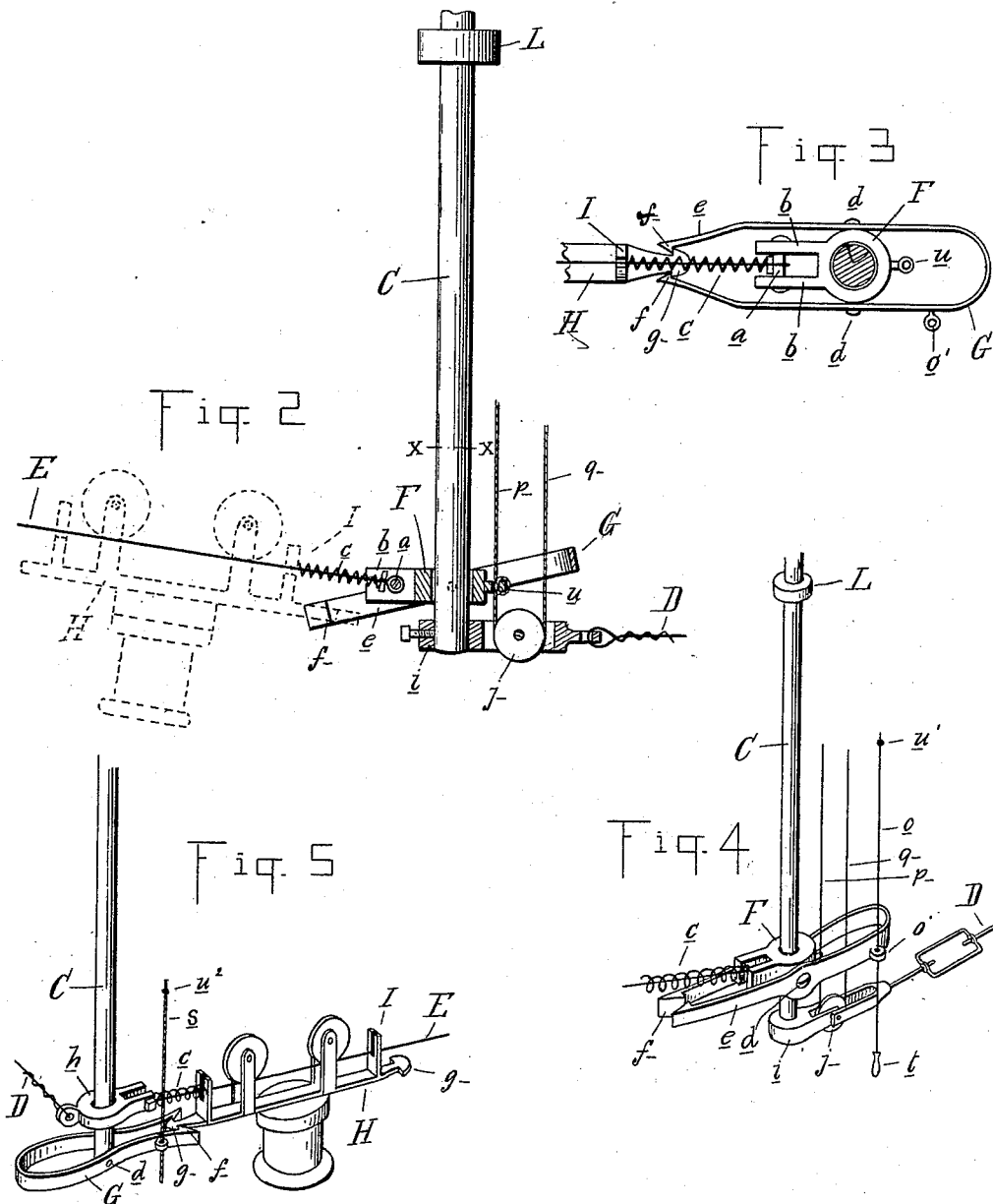
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UNITED STATES PATENT OFFICE.

GRANVILLE L. BOYNTON, OF MARINE CITY, ASSIGNOR OF ONE-HALF TO
NATHAN S. BOYNTON, OF PORT HURON, MICHIGAN.

STORE-SERVICE APPARATUS.

SPECIFICATION forming part of Letters Patent No. 418,436, dated December 31, 1889.

Application filed May 29, 1889. Serial No. 312,620. (No model.)

To all whom it may concern:

Be it known that I, GRANVILLE L. BOYNTON, a citizen of the United States, residing at Marine City, in the county of St. Clair and State of Michigan, have invented certain new and useful Improvements in Store-Service Apparatus, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to new and useful improvements in store-service apparatus; and the invention consists in the peculiar construction of the terminal station, the means for raising and lowering said station, and propelling the carriage to and from the stations, and, further, in the peculiar construction, arrangement, and combination of the various parts, all as more fully hereinafter described.

In the drawings which accompany this specification, Figure 1 is a side elevation of my improvement, showing two stations and the connecting-track. Fig. 2 is a vertical central section through one of the stations. Fig. 3 is a cross-section on line *xx*. Fig. 4 is a perspective view of one of the stations, and Fig. 5 is a perspective view of the other station.

A is the home or cashier's station; B, the sender's station, located at any desired position, from which the cash is to be transmitted to the cashier for change, as in the usual manner.

C are the supporting-standards.

D are suitable guy ropes.

E is the wire track, which is secured at the sender's station to the sliding sleeve F, preferably upon the cross-bar *a*, secured between the forwardly-extending arms *b*. To this cross-bar, and sleeved upon the wire track, is the coil-spring *c*. The spring-catch G is pivotally secured by the bolts *d* to the sliding sleeve F, and is held normally by a proper proportioning of the parts in any angular position to the sleeve, as shown. This spring-catch consists of a band of spring metal bent into a loop around the sleeve, as shown, its free ends *e* being provided with hooks *f* and arranged at a proper distance apart to receive and hold the hooked end *g* of the carriage H. An abutment I on the carriage is arranged to embrace the wire in such relation that when

the carriage comes to the station its momentum will necessarily compress the spring *c* before the hook *g* of the carriage is engaged with the locking-latch. The cashier's station is provided with a similar pivotal catch G, which, however, in this case is attached directly to the hanger C. A coil-spring sleeved upon the wire at this point is also connected to the rigid abutment *h*.

A bracket *i* is secured at the base of the hanger C at the sender's station, in which is journaled a suitable wheel *j*, and to the ceiling, near the hanger, is secured a suitable bracket carrying the wheels *k* and *l*. Over the cashier's station is secured in any suitable manner another wheel *m*.

The cord K is arranged as shown in Fig. 1, having a vertical run *o*, passing through the eye *o'* on the pivotal catch and over the pulley *k* and downward, and the vertical run *p*, passing under the wheel *j* and upward, a vertical run *q*, passing over the wheel *l*, and a horizontal run *r*, connecting the stations and passing over the wheel *m*, terminating in the vertical run *s*. Suitable handles *t* are provided on the ends of this cord. The cord is attached to the sliding sleeve in the eye *u* in the vertical run *p*, and is provided with a knot or button *u'* in the vertical run *o*, and with a knot or button *u''* in the vertical run *s*.

L is a stop secured upon the standard C at the sender's station.

The parts being thus constructed and arranged, they are intended to operate as follows: The car being at the sender's station, secured in position as described, the sender, having put the desired cash or parcel in the detachable box or basket, pulling on the handle *t*, will pull upward the run *p* of the cord, which is attached to the sliding sleeve, and will elevate the same until it strikes the stop L. At this point the knot or button *u'* will strike upon the eye *o'* and depress the rear end thereof, elevating the hooked portion, as shown in dotted lines in Fig. 1, out of engagement with the hook on the carriage. This movement of course changes the inclination of the track toward the cashier's station, as also shown in dotted lines in Fig. 1, and as soon as the hook on the carriage is released

from the catch the tension of the coil-spring starts the carriage down the incline, giving it a sufficient impetus to carry it down the track, where it is engaged in the spring-catch.

5 The cashier, having made the change, replaces the box on the carriage, and, pulling downward on the handle *t* at his station, pulls down the run *p* of the cord, which, being attached to the sliding sleeve F, draws it down

10 to its lowest point, thus inclining the wire away from the cashier's stand. When the sleeve has been brought to its lowest point on the standard, the knot or button *u* strikes the spring-catch, depressing its forward end

15 out of engagement with the carriage, and the spring gives it the momentum sufficient to carry it down the incline to the station at the other end. This construction enables me to use the inclined tracks, which I consider the

20 best form of apparatus, having the sliding sleeve only at one end, and yet which may be operated from either end. It is also an apparatus which can be constructed at a minimum of cost without any danger of the parts

25 getting out of order, and it is positive in all its actions. The bifurcated abutment I also serves to prevent the car from jumping the track.

What I claim as my invention is—

- 30 1. In a store-service apparatus, the combination of the hangers, the sleeves on said hangers, one of said sleeves being movable and the other stationary, the pivoted catch on the movable sleeve, the pivoted catch on one
- 35 of the hangers, and the cord connected to the movable sleeve and adapted to incline the track from either station, and further provided with buttons for tripping the pivoted catches, substantially as described.
- 40 2. In a store-service apparatus, the combination, with the hangers, sleeves, track, carriage, and pivoted spring-catches, of the cord connected to one of the sleeves and adapted

to incline the track from either station and provided with stops or buttons adapted to contact with the pivoted latches for tripping said catches, substantially as and for the purpose described. 45

3. In a store-service apparatus, the combination of the hangers, one having an abutment thereon, the sliding and stationary sleeves on the hangers, the pivoted catch on one of the hangers, the pivoted catch on the movable sleeve, the track and carriage, the cord attached to the movable sleeve and having the vertical runs and the horizontal run, and further provided with buttons adapted to contact with the pivoted catches for tripping the same, substantially as and for the purpose described. 50 55 60

4. The herein-described store-service apparatus, consisting of the hangers, the sleeves on the hangers having bifurcated ends, the track connected to said sleeve, the springs, each having one end thereof arranged in the bifurcated ends of the sleeves and surrounding the track, the carriage mounted on the track and having the slotted abutments and the hooks, the pivoted spring-catches for engaging the hooks, the bracket connected to one of the hangers, the guide-pulleys, the cord passing around said pulleys, connected to one of the pivoted spring-catches for moving the said catch and sleeve on the hanger to give the proper inclination to the track, and having buttons adapted to contact with said pivoted catches to incline the same to catch on the hooks of the carriage, all substantially as shown and described. 65 70 75

In testimony whereof I affix my signature, in presence of two witnesses, this 20th day of March, 1889. 80

GRANVILLE L. BOYNTON.

Witnesses:

GEO. A. GREGG,
ED. MCBREARTY.