

C. A. WHIPPLE.  
STORE SERVICE APPARATUS.

No. 404,882.

Patented June 11, 1889.

Fig. 1.

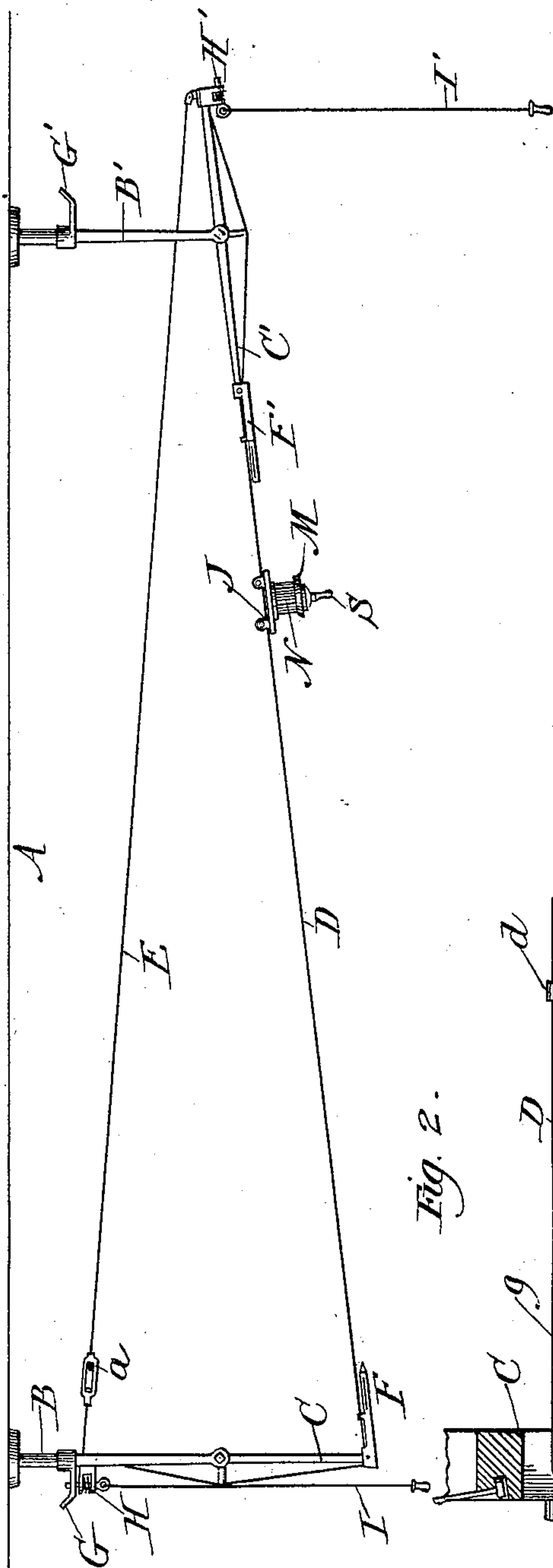


Fig. 2.

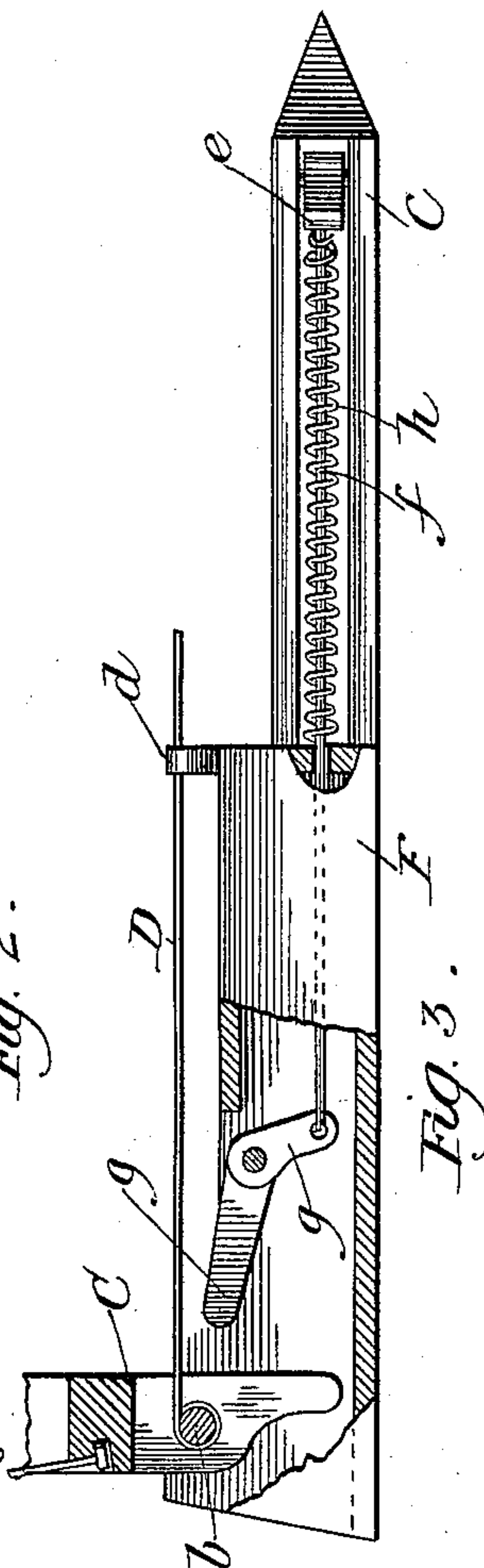
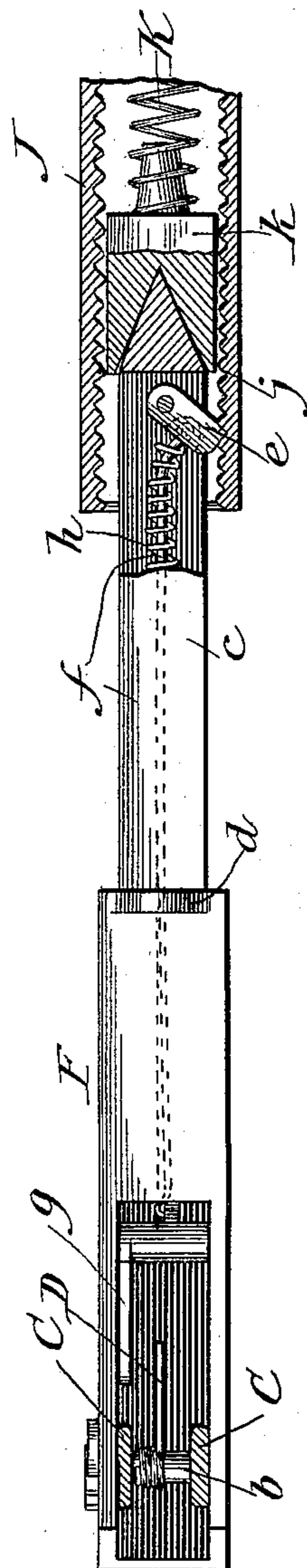


Fig. 3.



Witnesses:  
Harry F. Jones.  
Albert H. Adams.

Inventor:  
Charles A. Whipple  
By West & Bond, Attys.

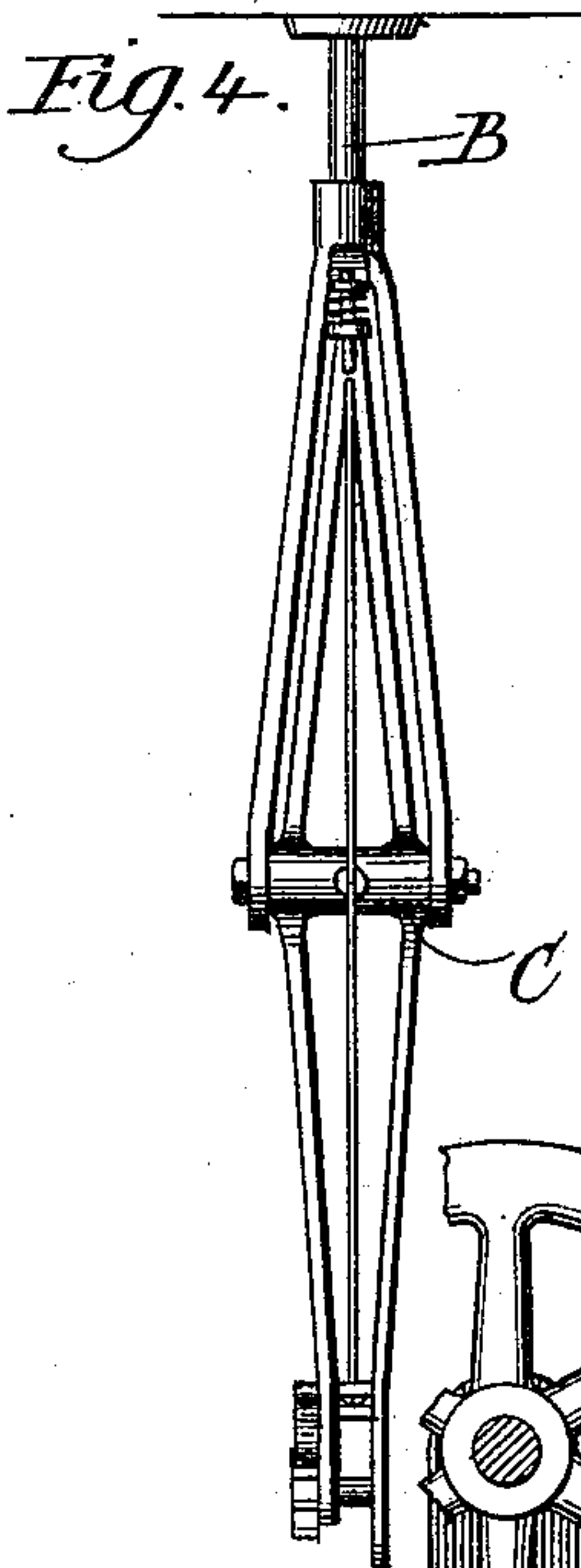
(No Model.)

2 Sheets—Sheet 2.

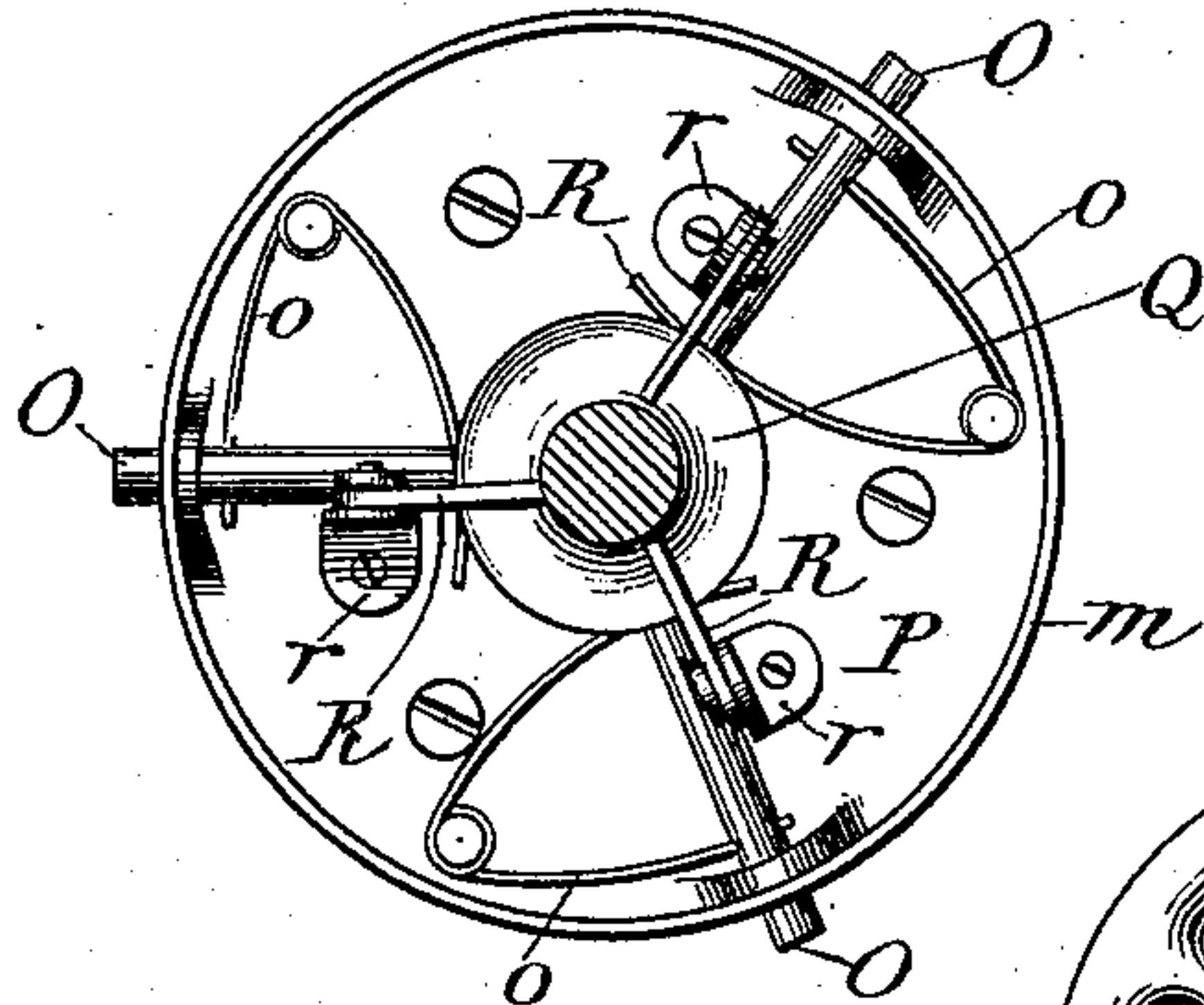
C. A. WHIPPLE.  
STORE SERVICE APPARATUS.

No. 404,882.

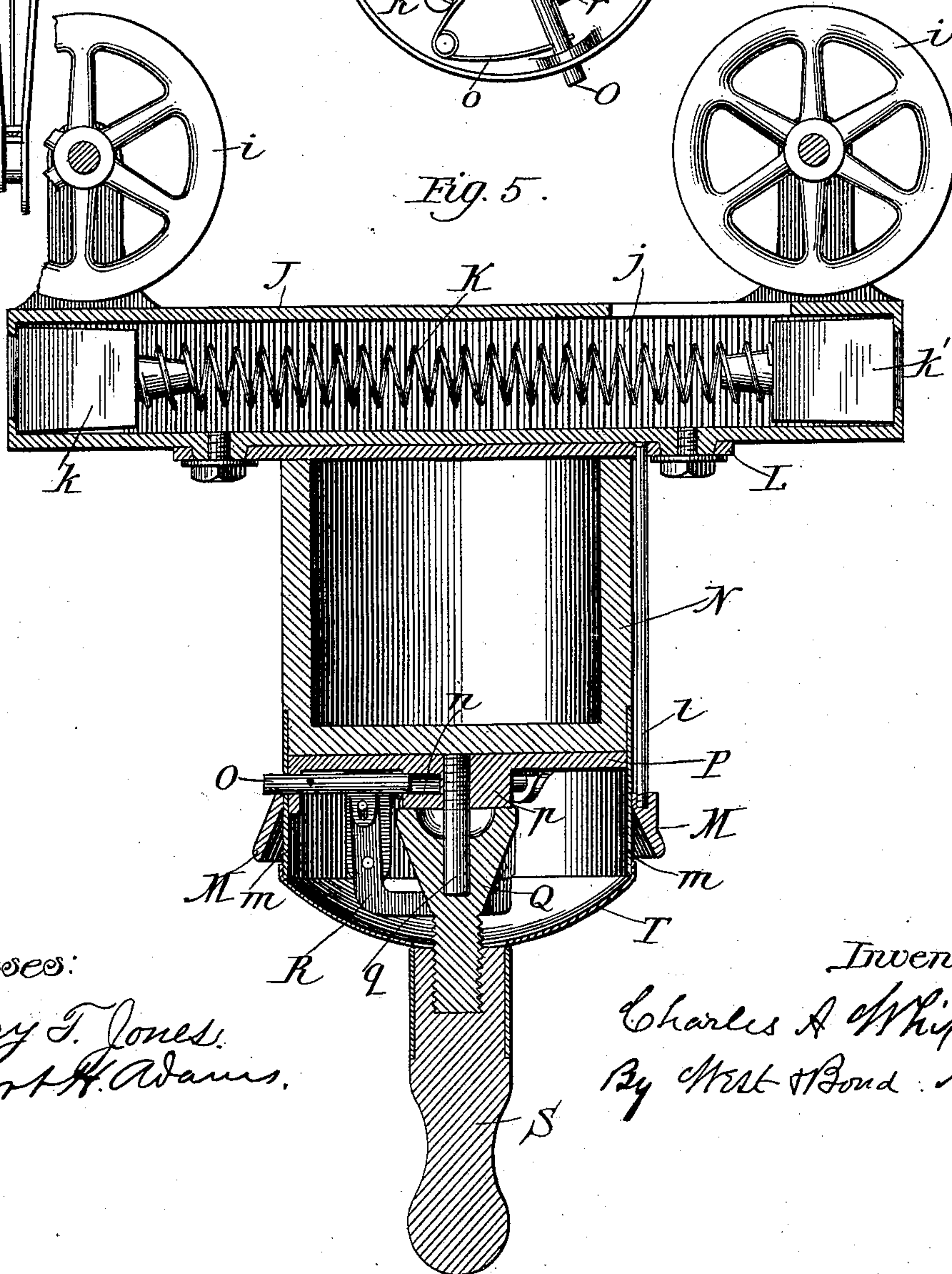
Patented June 11, 1889.



*Fig. 6.*



*Fig. 5.*



Witnesses:

Harry T. Jones.  
Albert H. Adams.

Inventor:

Charles A. Whipple  
By M. H. Bond Atty



# UNITED STATES PATENT OFFICE.

CHARLES A. WHIPPLE, OF GALESBURG, ILLINOIS.

## STORE-SERVICE APPARATUS.

SPECIFICATION forming part of Letters Patent No. 404,882, dated June 11, 1889.

Application filed July 20, 1888. Serial No. 280,558. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES A. WHIPPLE, residing at Galesburg, in the county of Knox and State of Illinois, and a citizen of the United States, have invented new and useful Improvements in Store-Service Apparatus, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation showing one track of my apparatus with the carrier and operating devices. Fig. 2 is a detail, being a side elevation of the device for receiving, holding, and releasing the carrier. Fig. 3 is a detail, being a top or plan view of the above device and a section of part of the carrier held thereby. Fig. 4 is a detail, being an end view of the track supporting and inclining device. Fig. 5 is a detail, being a vertical section through the carrier. Fig. 6 is a detail, being an under side view of the cash-receptacle with the cap removed. Figs. 2, 3, 4, 5, and 6 are enlarged as compared with Fig. 1.

This invention relates to that class of store-service apparatus in which a track extends from the cashier's desk to one or more of the several salesmen's counters, and a suspended carrier travels by gravity and spring force on the track.

The objects of my invention are to improve the means for inclining the track; to improve the means for receiving, holding, and releasing the carrier at the termini of the track, and to improve the device for carrying cash, which I accomplish, as illustrated in the drawings, and hereinafter described.

In the drawings, A represents the ceiling of a store.

B B' are two bifurcated brackets secured to the ceiling A—one B at the cashier's desk, and the other B' at the salesman's counter—for supporting the track.

C C' are straight swinging arms pivoted at their centers between the arms of the brackets B B', respectively.

D is the track, made, as shown, of a single wire secured to the lower ends of the straight swinging arms C C'.

E is a wire secured to the upper ends of the straight swinging arms C C'. This wire E is longer than the track D, so that they will not cross each other when their inclina-

tion is reversed by swinging the straight arms C C'. The wire E is provided with a turn-buckle *a* to tighten it and the track D.

F F' are the frames of the device for receiving, holding, and releasing the carrier. The frames F F' are each, as shown in Figs. 2 and 3, pivoted on a pin *b* in the lower ends of the swinging arms C C', respectively, and each at its front end is provided with a pointed projecting stem *c*. The track-wire D passes through an upward projection *d* on each of the frames F F', and is secured to the pivots *b*.

*e* is a pawl which is pivoted in the stem *c*, near the end of the stem, and projects through the case of the stem.

*f* is a rod which extends through the frame F, and is pivoted at its forward end to the pawl *e*, and at its rear end to an elbow-lever *g*, pivotally mounted in the frame F.

*h* is a coil-spring on the rod *f*, which spring presses the pawl *e* outward.

G G' are stops secured to the brackets B B', respectively.

H H' are catches secured to the upper ends of the swinging arms C C', respectively, and adapted to engage with the stops G G' and hold the arms in the positions shown in Fig. 1.

I I' are ropes attached to the spring-catches H H', respectively, by which the catches are released from the stops and the position of the arms C C' changed.

J is the frame of the carrier. This frame J is suspended on wheels *i*, which run on the track D. The interior of the frame J is in form and size adapted to receive the stem *c* at either end, and is provided with teeth *j*, with which the pawls *e* can engage.

K is a coil-spring in the carrier J, which presses against two blocks *k k'* at opposite ends of the carrier. The blocks *k k'* are each adapted to receive one of the pointed stems *c*. When the stem *c* of the frame F is in engagement with the block *k*, the block *k'* presses against the frame J at the opposite end, compressing the spring K between the blocks *k k'*.

L is a plate secured to the under side of the carrier J.

M is a ring, which has a beveled or inclined interior face, and is suspended below the plate L by suitable rods *l*.

N is a cup or receptacle for cash, adapted



to pass through the ring M to bring its upper edge in contact with the plate L.

*m* is a flange made with or secured to the lower edge of the cup N, which flange forms  
5 a chamber for the holding-catches of the cup N.

O are catches which project through holes in the flange *m*, and are pressed outward by springs *o*.

10 P is a plate secured to the bottom of the cup N, on which plate the springs *o* are secured.

*p* is a circular boss on the plate P, which boss is provided with holes *n* to receive and  
15 guide the inner ends of the catches O.

*q* is a rod or pin secured to the boss *p*.

Q is a conical stem which slides vertically on the pin *q*.

R are bell-crank levers pivotally mounted  
20 in brackets *r*, secured to the plate P. One arm of each lever R is suitably attached to one of the catches O, and the end of the other arm is forced against the conical stem Q by one of the springs *o*.

25 S is the handle attached to the stem Q.

T is a cap which covers the chamber formed by the flange *m*.

The operation is as follows: The carrier J (see Fig. 1) travels from the salesman's counter to the cashier's desk on the track D.  
30 When the carrier arrives at the desk, the stem *c* of the frame F enters the end of the frame J of the carrier and engages with the block *k*, compressing the spring K, which makes a yielding stop for the carrier. The  
35 pawl *e* in the stem *c* engages with the teeth *j*, preventing the retraction of the carrier. When it is desired to return the carrier, the cashier pulls downward on the rope I, withdrawing the catch H from the stop G and  
40 swinging the arm C to a nearly-horizontal position and the arm C' to a vertical position, thereby reversing the inclination of the track D. The catch H' and stop G' hold the arm C' in its vertical position. When the arm C  
45 assumes its horizontal position, its end rocks the elbow-lever *g* and withdraws the pawl *e*

from the teeth *j*, permitting the spring K to force the carrier-frame J off from the stem *c*, and causing the carrier to descend the inclined  
50 track D to the salesman's counter, where it is received, held, and released by the frame F', as at the cashier's desk, as already described. The carrier thus travels in either direction  
55 by gravity and spring force. The cash is to be placed in the cup N, and the cup is then to be passed through the ring M until it comes in contact with the plate L, when the catches O will spring out above the upper edge of the  
60 ring M and hold the cup against retraction. When it is desired to withdraw the cup N, the operator pulls downward on the handle S, which draws the conical stem Q downward and retracts the catches O through the bell-crank levers R, permitting the cup N to be  
65 withdrawn through the ring M.

The carrier J is shown in connection with a cash-cup only; but it is evident that a parcel-carrier can be used instead of the cash-cup.

What I claim as new, and desire to secure  
70 by Letters Patent, is—

1. The brackets B B', swinging arms C C', track D, and wire E, in combination with stops G G', catches H H', and ropes I I', substantially as and for the purpose specified.  
75

2. The frame F, having a pointed stem *c* and a pawl *e*, in combination with a carrier-frame J, having teeth *j* and spring K, substantially as and for the purpose specified.

3. The toothed carrier-frame J and the frame  
80 F, having a stem *c*, a pawl *e*, rod *f*, and an elbow-lever *g*, in combination with a swinging arm C, adapted to engage with the lever *g*, substantially as and for the purpose specified.

4. The carrier-frame J and beveled ring M,  
85 supported therefrom, in combination with the cup N, spring-catches O, bell-crank levers R, conical stem Q, and handle S, substantially as and for the purpose specified.

CHARLES A. WHIPPLE.

Witnesses:

ELLA SWICK,  
R. C. HUNT.