

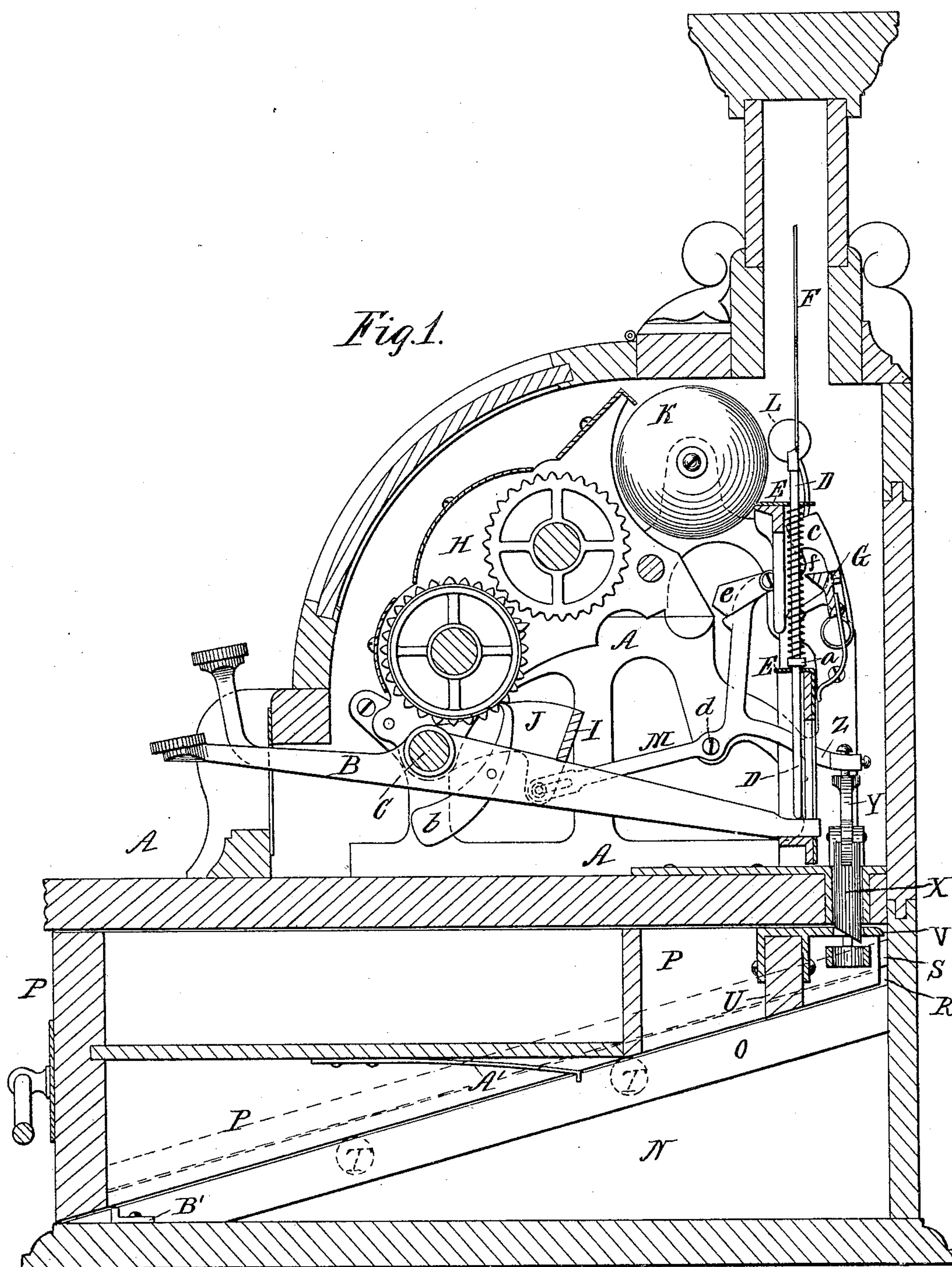
(No Model.)

5 Sheets—Sheet 1.

W. S. CRAIG.  
CASH INDICATOR AND REGISTER.

No. 406,428.

Patented July 9, 1889.



Witnesses:  
W. C. Jirdiniston.  
Charles Billow.

Inventor  
W. S. Craig  
by Peck & Pector  
his Attorneys.

(No Model.)

5 Sheets—Sheet 2.

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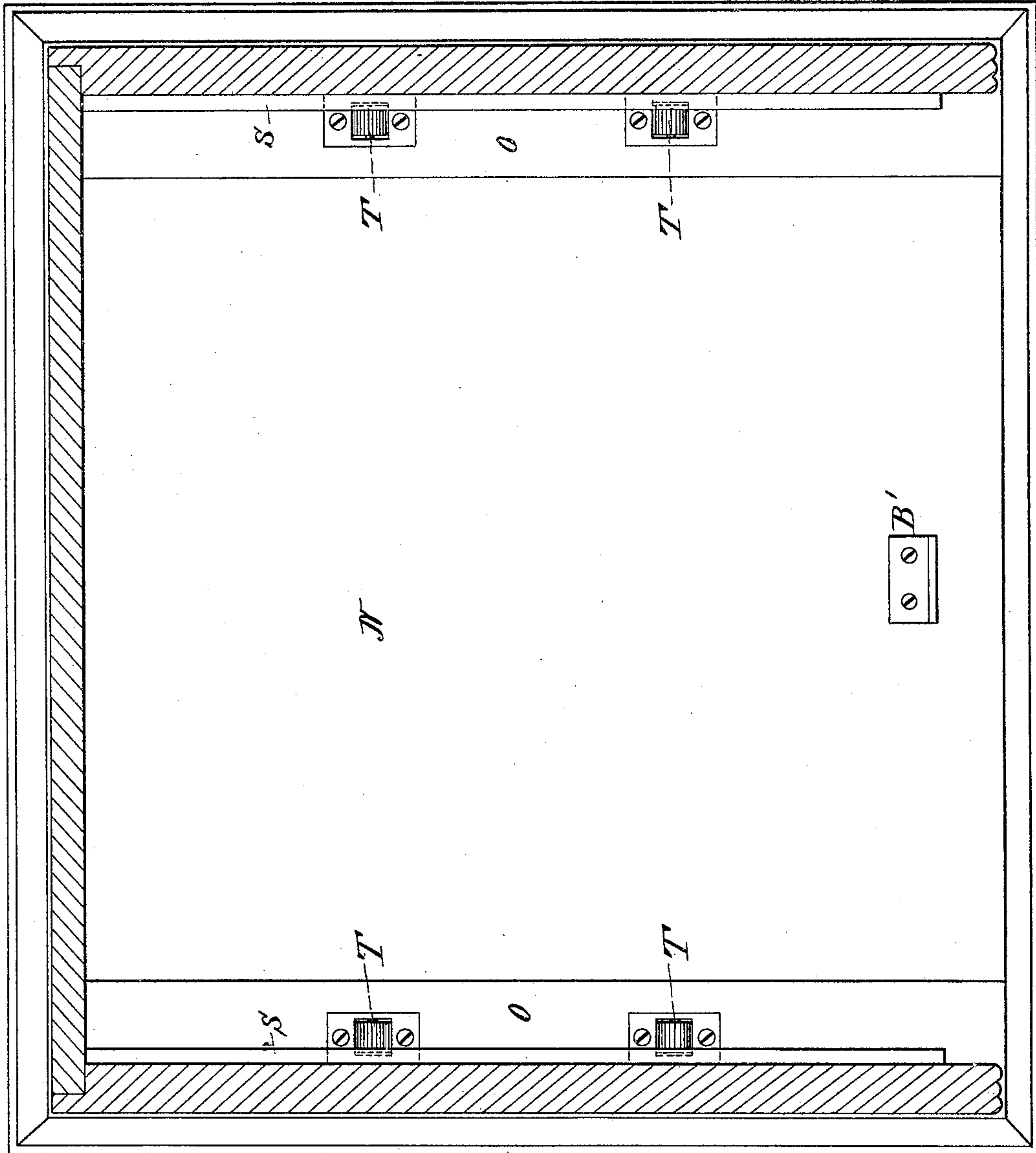


Fig. 2.

Witnesses:  
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Inventor  
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(No Model.)

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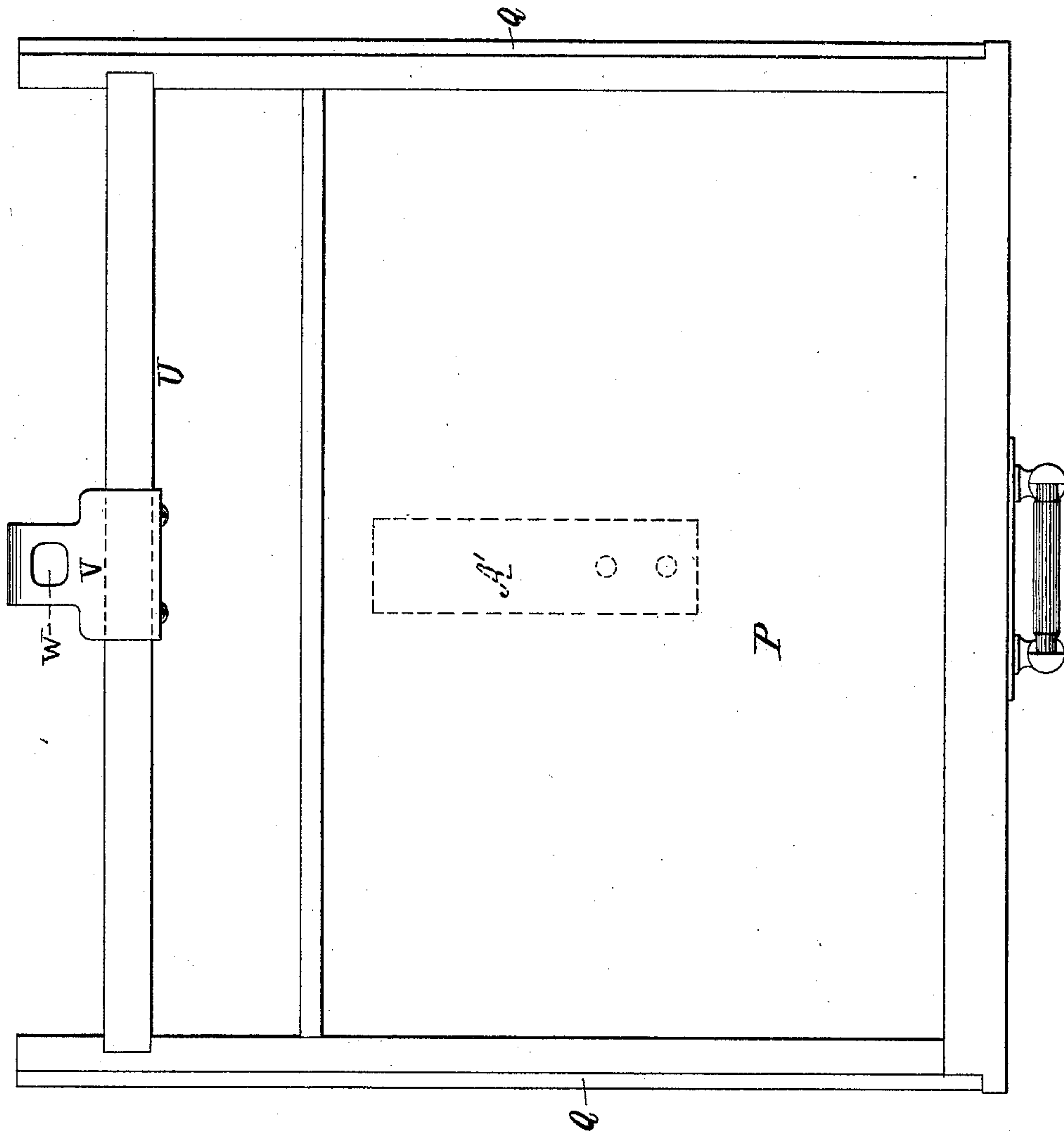


Fig. 3.

Witnesses:  
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His Attorneys



(No Model.)

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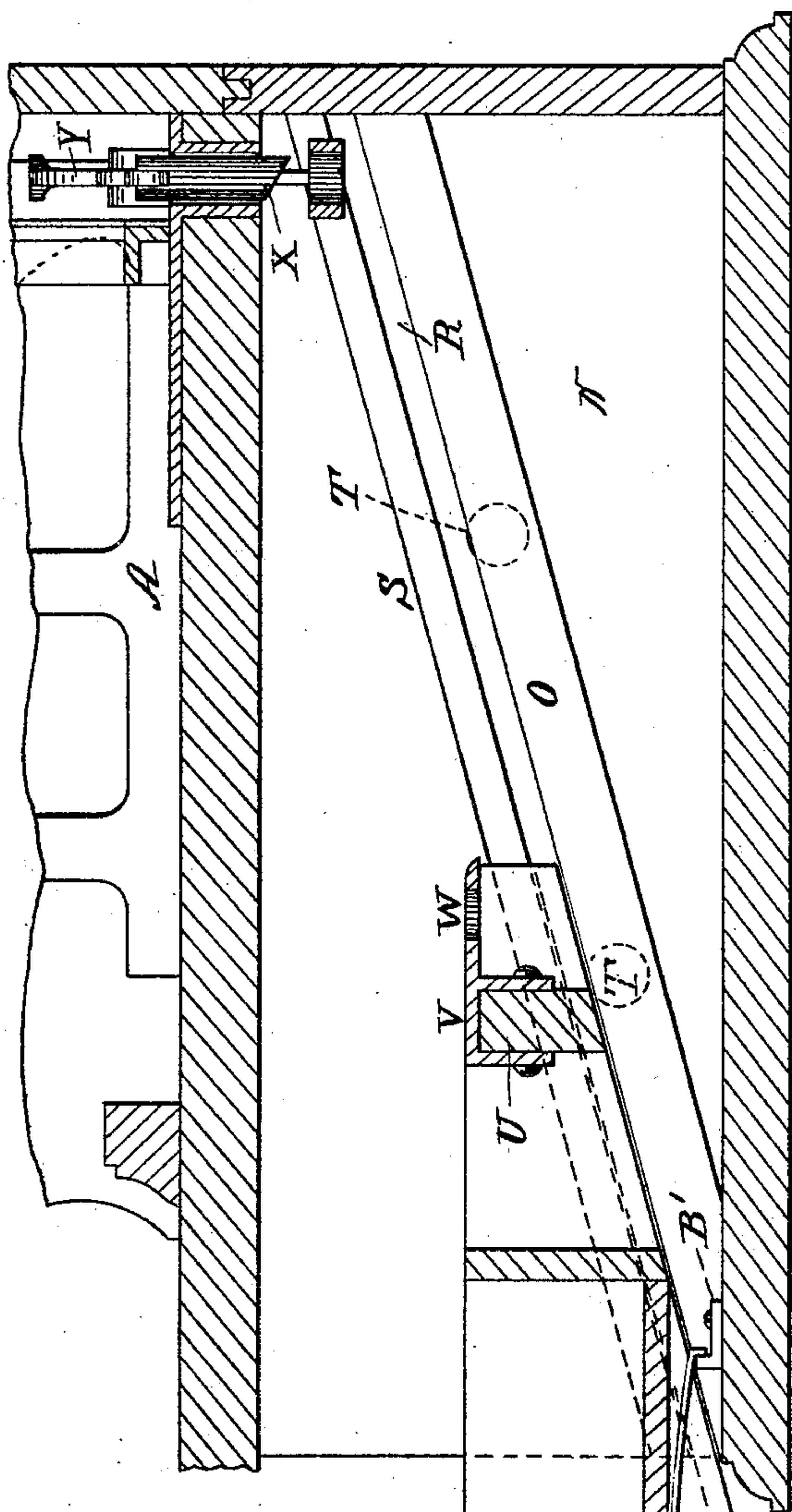


Fig. 4

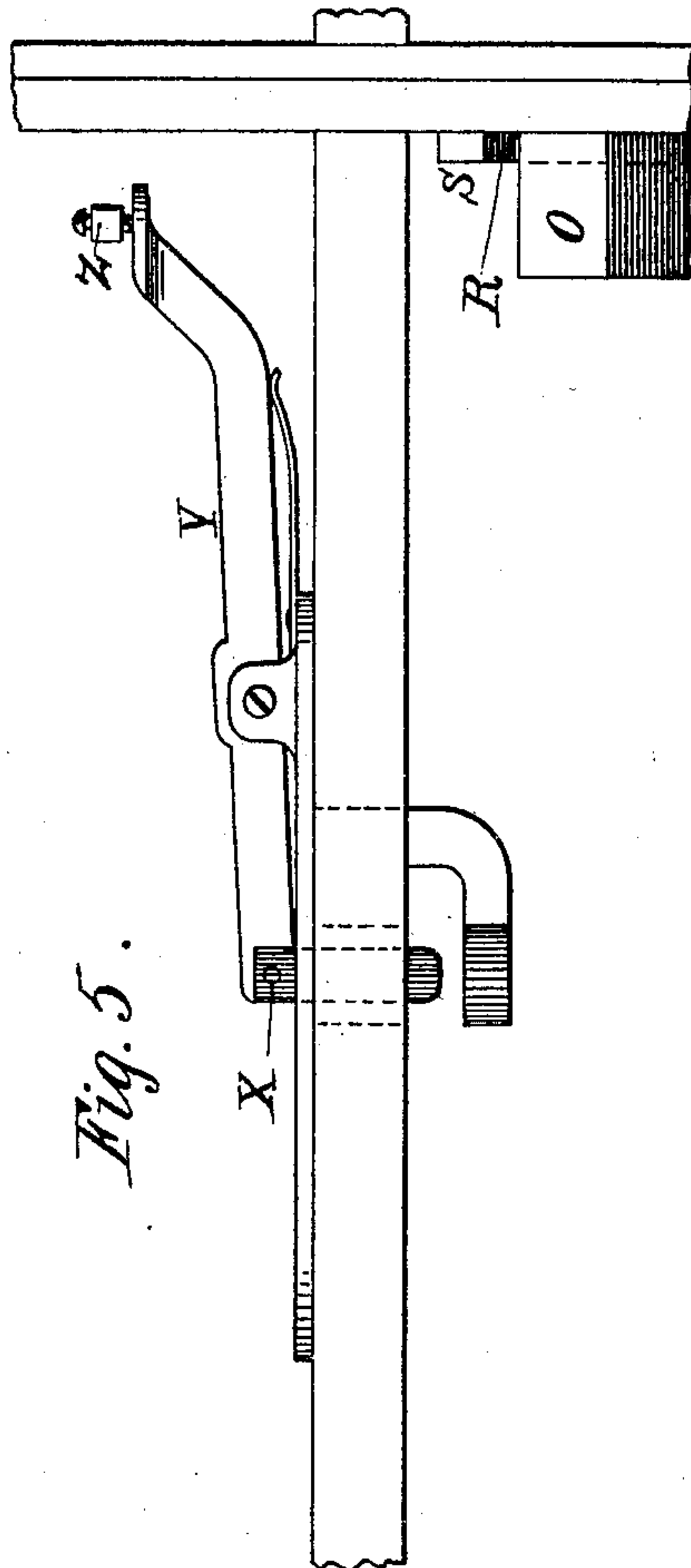


Fig. 5.

Witnesses:  
W. C. Jirdiniston.  
Charles Billon.

Inventor  
Wm S. Craig  
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his Attorneys.

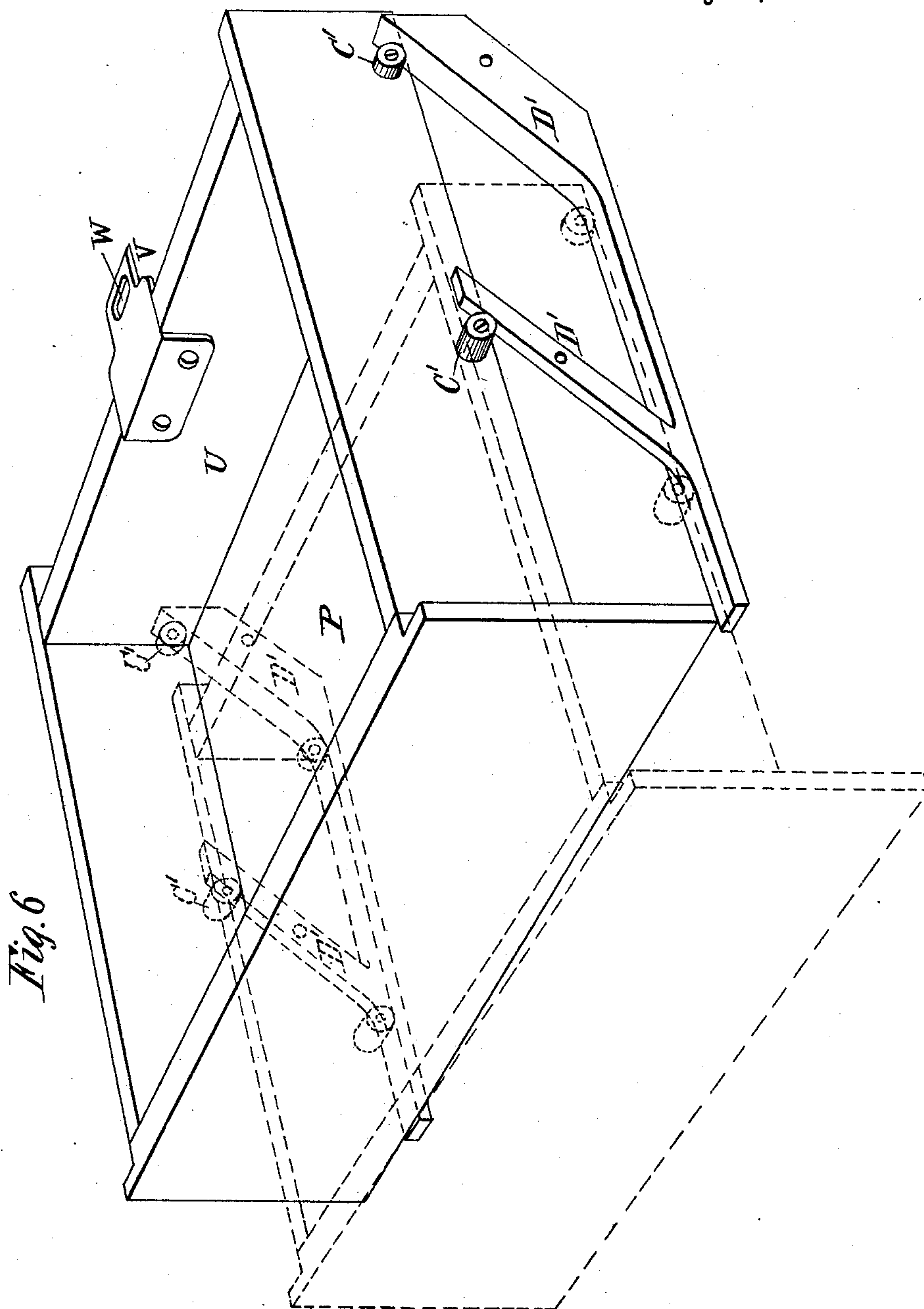
(No Model.)

5 Sheets—Sheet 5.

W. S. CRAIG.  
CASH INDICATOR AND REGISTER.

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Witnesses:  
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# UNITED STATES PATENT OFFICE.

WILLIAM S. CRAIG, OF DAYTON, OHIO, ASSIGNOR TO THE NATIONAL CASH REGISTER COMPANY, OF SAME PLACE.

## CASH INDICATOR AND REGISTER.

SPECIFICATION forming part of Letters Patent No. 406,428, dated July 9, 1889.

Application filed March 11, 1889. Serial No. 302,798. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM S. CRAIG, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Cash Registers and Indicators, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates more particularly to the money drawer or till of such machines; and it consists in a novel method of propelling such drawer from its compartment in the machine. Heretofore the drawer in such machine has been arranged to be moved in and out of its compartment in a horizontal plane, suitable means being provided for locking it in its closed position and for unlocking it when it was desired to open it. For the purpose of automatically propelling the drawer from or partially from its compartment when unlocked, it has been the practice to employ either a spring arranged to be put under tension when the drawer was pushed into its compartment and to propel it therefrom when unlocked, or independent weights so connected with the drawer as to be lifted when the drawer was moved into position in its compartment and to throw it out when unlocked.

My present invention consists in doing away with the use of such springs and weights and causing the drawer when released to be automatically propelled from its compartment by its own gravity.

In the accompanying drawings I have illustrated one method of accomplishing this result by the employment in the drawer-compartment of an incline which the drawer ascends as it is pushed into its compartment and down which it travels by its own gravity when released to propel itself out of its compartment.

Figure 1 is a sectional side elevation of a cash-register embodying my invention. Fig. 2 is a top plan view of the interior of the drawer-compartment. Fig. 3 is a top plan view of the drawer. Fig. 4 is a sectional side elevation of the lower part of the machine, showing the drawer partially propelled from

its compartment. Fig. 5 is a detail view of a portion of the rear side of the machine, showing the locking-bolt and actuating-lever. Fig. 6 is a perspective view of the drawer removed from its compartment and showing a modified form of incline for it to travel on.

The same letters of reference are used to indicate identical parts in all the figures.

The registering and indicating mechanisms of the machine (shown in Fig. 1) may be of the usual well-known construction, and need not be here further described than to say that they are supported in a frame A and inclosed in the usual case or cabinet.

B are the operating-keys, pivoted on the shaft C, having their front ends projecting through the front side of the case and provided with numbered buttons, and carrying on their rear ends the vertical tablet-rods D, guided in cross-pieces E and carrying indicating-tablets F. The tablet-rods are provided with shoulders *a*, which are engaged by the pivoted wing G in the usual manner to hold the tablets exposed to view.

H are the registering-wheels arranged in two banks, those of the lower bank being actuated by the dogs *b*, pivoted to the operating-keys, and those of the upper bank being turned by those in the lower bank, in the usual manner.

I is a vibrating frame hung by side arms J on the shaft C and extending across the tops of all the keys, so as to be lifted upon the operation of any one of them.

K is the gong, and L its hammer, secured to an upward extension *c* of the wing G and actuated to strike the gong upon the operation of any key through the medium of the bell-crank arm M, pivoted to the frame, as at *d*, and connected at its forward end to the side arm J of the vibrating frame I and carrying at its upper rear end a tripping-dog *e*, which engages a wiper-block *f* on the extension *c* of the wing G, in the well-known manner.

The case or cabinet is provided in its lower portion with the drawer-compartment N, provided on each side with downwardly and forwardly extending inclines O, upon which rests and travels the drawer P, which has a correspondingly-inclined lower side.

Q are suitable guide-strips secured to the



lower outer edges of the drawer P and arranged to fit in the grooves R, formed between the guide-strips S and inclines O in the sides of the drawer-compartment.

5 T are friction-rollers journaled in and projecting slightly above the surface of the inclines O, to facilitate the movements of the drawer.

Secured to the upper rear cross-piece U of the drawer is the metal plate V, having an opening W, arranged, when the drawer is closed, to be engaged by a locking-bolt X, to lock the drawer in its compartment. This locking-bolt plays up and down through suitable guides and is carried on the end of a pivoted lever Y, Fig. 5, extending from the bolt to one side of the machine and having its outer end bent up to be engaged by a rear extension Z of the bell-crank arm M, so that  
10 whenever that arm is actuated by the operation of any key its rear extension Z depresses the outer end of the lever Y and lifts the bolt X to release the drawer. A suitable spring bearing against the under side of the lever Y  
15 holds it in its normal position with the bolt X down.

Secured to the under side of the money-box of the drawer is a rearwardly-extending spring hook or catch A', arranged, when the drawer  
20 is partially propelled from its compartment, to come in contact with and be caught by a stop-plate B', secured to the bottom of the drawer-compartment at its front side and bent up into the path of travel of the hook A'.  
25 When it is desired to entirely remove the drawer, the spring-hook can be pressed up by the hand to release it from the stop-plate B'.

It results from the construction and arrangement that, the drawer being locked in  
30 its compartment, as shown in Fig. 1, upon the operation of a key it will be released and will travel down the inclines O to the position shown in Fig. 4, where convenient access may be had to it for the purpose of depositing  
35 money and making change. Upon pushing the drawer back into its compartment it will become automatically locked and held therein until another key is operated. In this manner I am able to do away with the use of  
40 springs and independent weights for propelling the drawer from its compartment and cause it to be propelled therefrom by its own gravity.

It will be understood that my invention is  
45 not limited to the particular construction and arrangement of the parts which I have shown and described, as that may be largely varied without departing from my invention. For instance, the inclines O might be dispensed  
50 with and a series of rollers arranged in inclined order for the drawer to travel on be employed in their stead. Again, the construction shown in Fig. 6 may be employed, where the drawer P has a flat bottom, and is  
55 provided on its sides with rollers C', arranged to engage and travel upon inclined guides D', secured to the sides of the drawer-compart-

ment, so that when the drawer is pushed into its compartment it will travel up said inclined guides, and when released will by its own  
60 gravity travel down them to the position shown in the dotted lines. In Fig. 6 the rear rollers C' are shown narrower than the front ones, and the rear guides D' wider than the front ones, so that the rear rollers will clear  
65 the front guides when the drawer is first inserted in the compartment, and both sets of rollers will have proper bearing on their respective inclines. The front wall of the drawer is shown extended at its sides and bot-  
70 tom to fit the enlarged compartment made necessary to accommodate the inclined guides D' and rollers C'.

Having thus fully described my invention, I claim—

1. In a cash register and indicator, the combination, with the operating-keys and the case or cabinet provided with a drawer-compartment, of a drawer fitted therein and arranged  
75 when released to be automatically propelled therefrom by its own gravity, and means for releasably holding the drawer in its compartment actuated by the operating-keys to re-  
80 lease the drawer, substantially as described.

2. In a cash register and indicator, the combination, with the operating-keys and the case or cabinet provided with a drawer-compartment, of a drawer fitted therein and arranged  
85 when released to be automatically propelled therefrom by its own gravity, a locking device for locking the drawer in its compartment and actuated by the operation of the keys to release the drawer, substantially as  
90 described.

3. In a cash register and indicator, the combination, with the operating-keys and the case or cabinet provided with a drawer-compartment, of a drawer fitted therein, an incline upon which the drawer travels in and out of  
95 its compartment, and means for releasably holding the drawer in its compartment and actuated by the operating-keys to release the drawer, substantially as and for the purpose  
100 described.

4. In a cash register and indicator, the combination, with the operating-keys and the case or cabinet provided with a drawer-compartment, of a drawer fitted therein, an incline upon which the drawer travels in and out of  
105 its compartment, and a locking device for locking the drawer in its compartment and actuated by the operation of the keys to release the drawer, substantially as and for the purpose  
110 described.

5. In a cash register and indicator, the combination, with the case or cabinet provided with a drawer-compartment, of a drawer fitted therein, an incline upon which the drawer travels in and out of its compartment, friction-rollers interposed between the drawer  
115 and incline, a locking device for locking the drawer in its compartment, and the operating-keys mediately connected with said locking device to actuate the same to release the  
120  
125  
130



drawer, substantially as and for the purpose described.

5 6. In a cash register and indicator, the combination, with the operating-keys and the case or cabinet provided with a drawer-compartment, of a drawer fitted therein, an incline upon which the drawer travels in and out of its compartment, means for releasably holding the drawer in its compartment and actuated by the operating-keys to release the drawer, and a stop for limiting the outward movement of the drawer, substantially as and for the purpose described.

15 7. In a cash register and indicator, the combination, with the operating-keys and the case or cabinet provided with a drawer-compartment, of a drawer fitted therein, an incline upon which the drawer travels in and out of its compartment, friction-rollers interposed between the drawer and incline, a locking device for locking the drawer in its compartment and actuated by the operation of the keys to release the drawer, and a stop for limiting the outward movement of the drawer, substantially as and for the purpose described.

25 8. In a cash register and indicator, the combination, with a series of operating-keys, registering and indicating mechanisms actuated thereby to register and indicate the values of the keys operated, and a case or cabinet provided with a drawer-compartment, of a drawer fitted in said compartment and arranged when released to be automatically propelled therefrom by its own gravity, and a locking device for holding the drawer in its compartment and actuated upon the operation of a key to release the drawer, substantially as and for the purpose described.

9. In a cash register and indicator, the combination, with a series of operating-keys, registering and indicating mechanisms actuated thereby to register and indicate the values of the keys operated, and a case or cabinet provided with a drawer-compartment, of a drawer fitted in said compartment, an incline upon which the drawer travels in and out of its compartment, and a locking device for holding the drawer in its compartment and actuated by the operating-keys to release the drawer, substantially as and for the purpose described.

10. In a cash register and indicator, the combination, with a series of operating-keys, registering and indicating mechanisms actuated thereby to register and indicate the values of the keys operated, and a case or cabinet provided with a drawer-compartment, of a drawer fitted in said compartment and arranged when released to be automatically propelled therefrom by its own gravity, a bar common to all the operating-keys and actuated by the operation of any one of them, and a locking device for holding the drawer in its compartment and actuated by the movement of said bar, whereby when any key is operated its value is registered and indicated and the drawer is released and automatically propelled from its compartment, substantially as and for the purpose described.

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Witnesses:

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