

No. 627,032.

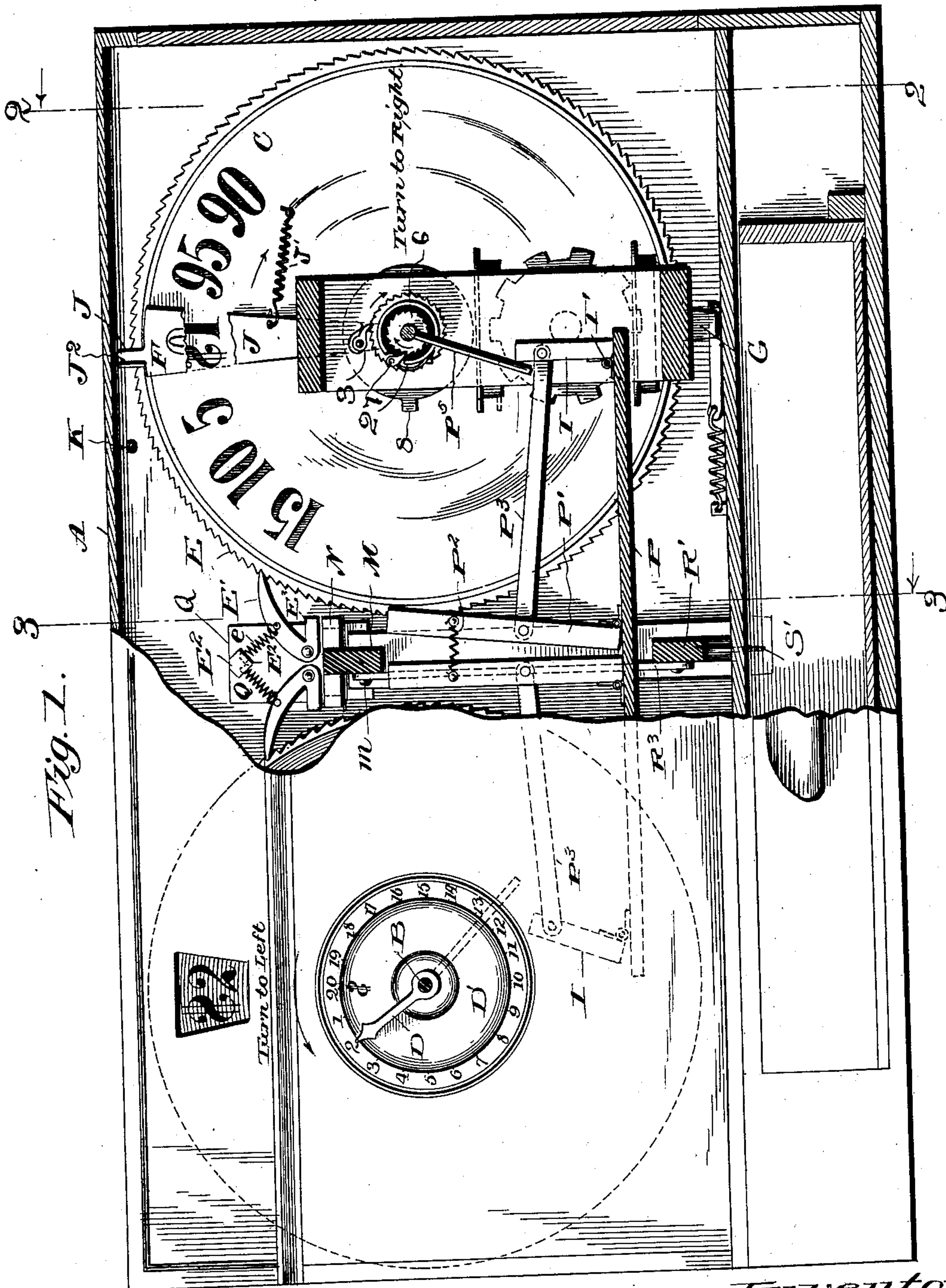
Patented June 13, 1899.

J. W. WHITNEY.
CASH REGISTER.

(Application filed Feb. 8, 1898.)

3 Sheets—Sheet 1.

(No Model.)



Witnesses:
L. C. Hills.
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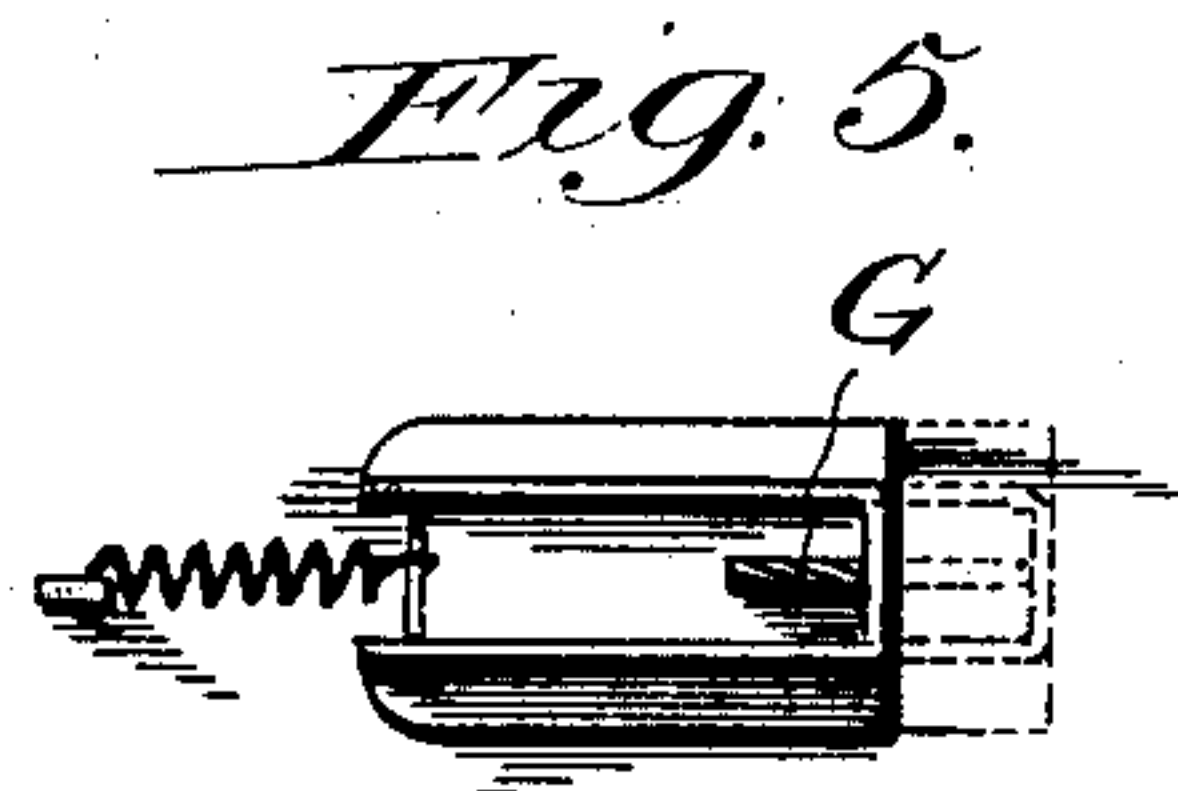
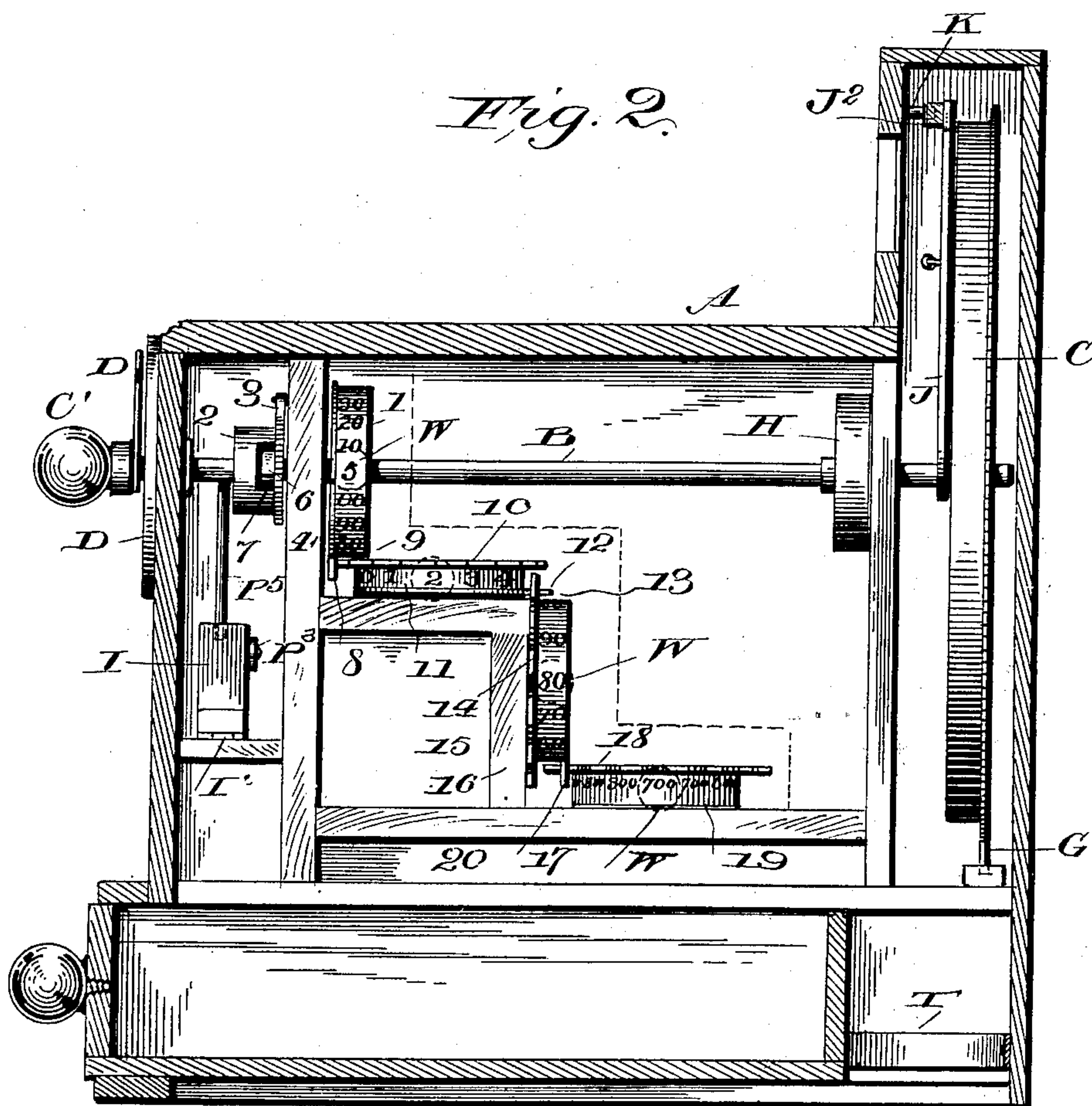
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3 Sheets—Sheet 2.



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3 Sheets—Sheet 3.

Fig. 3.

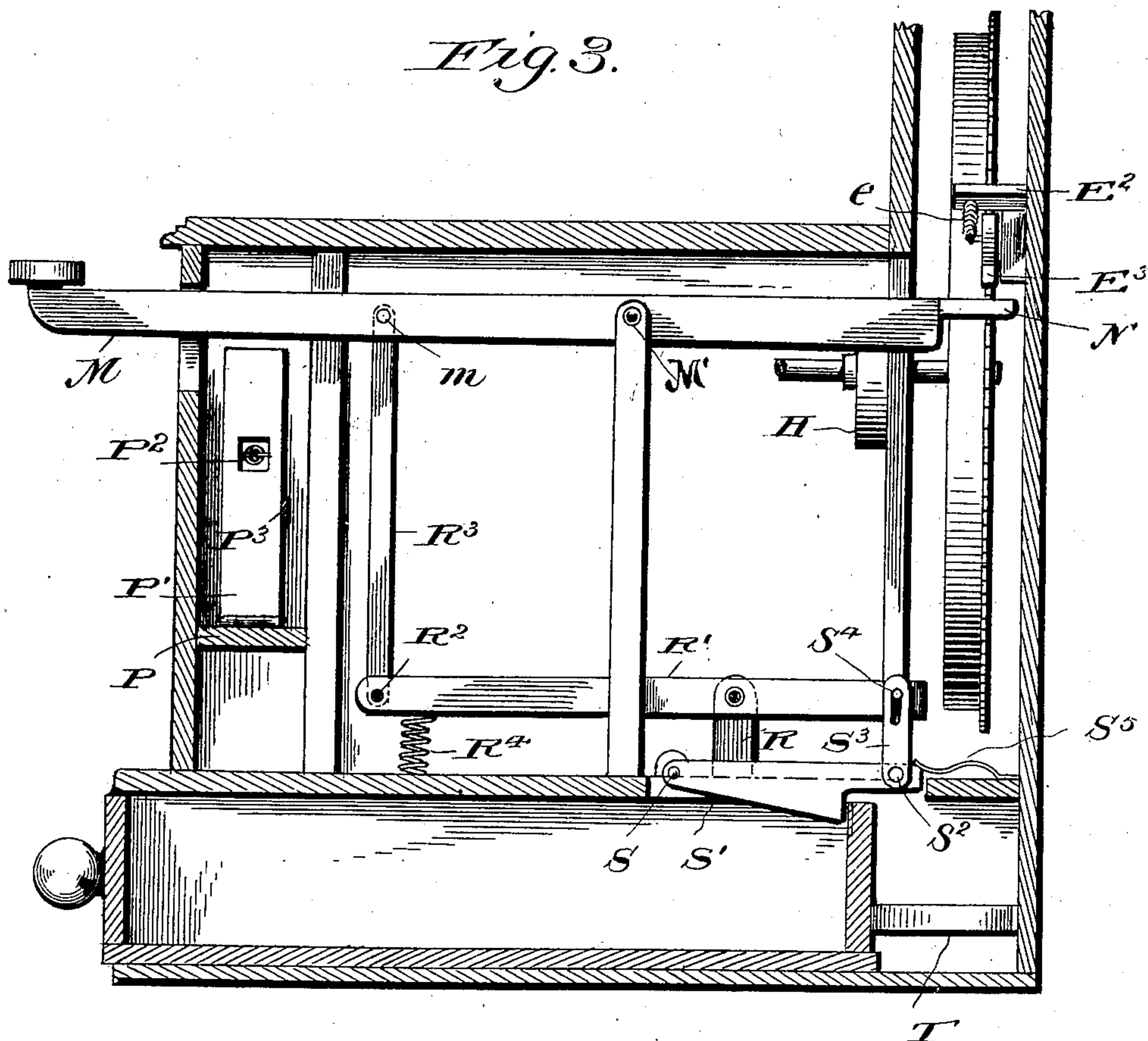


Fig. 4.

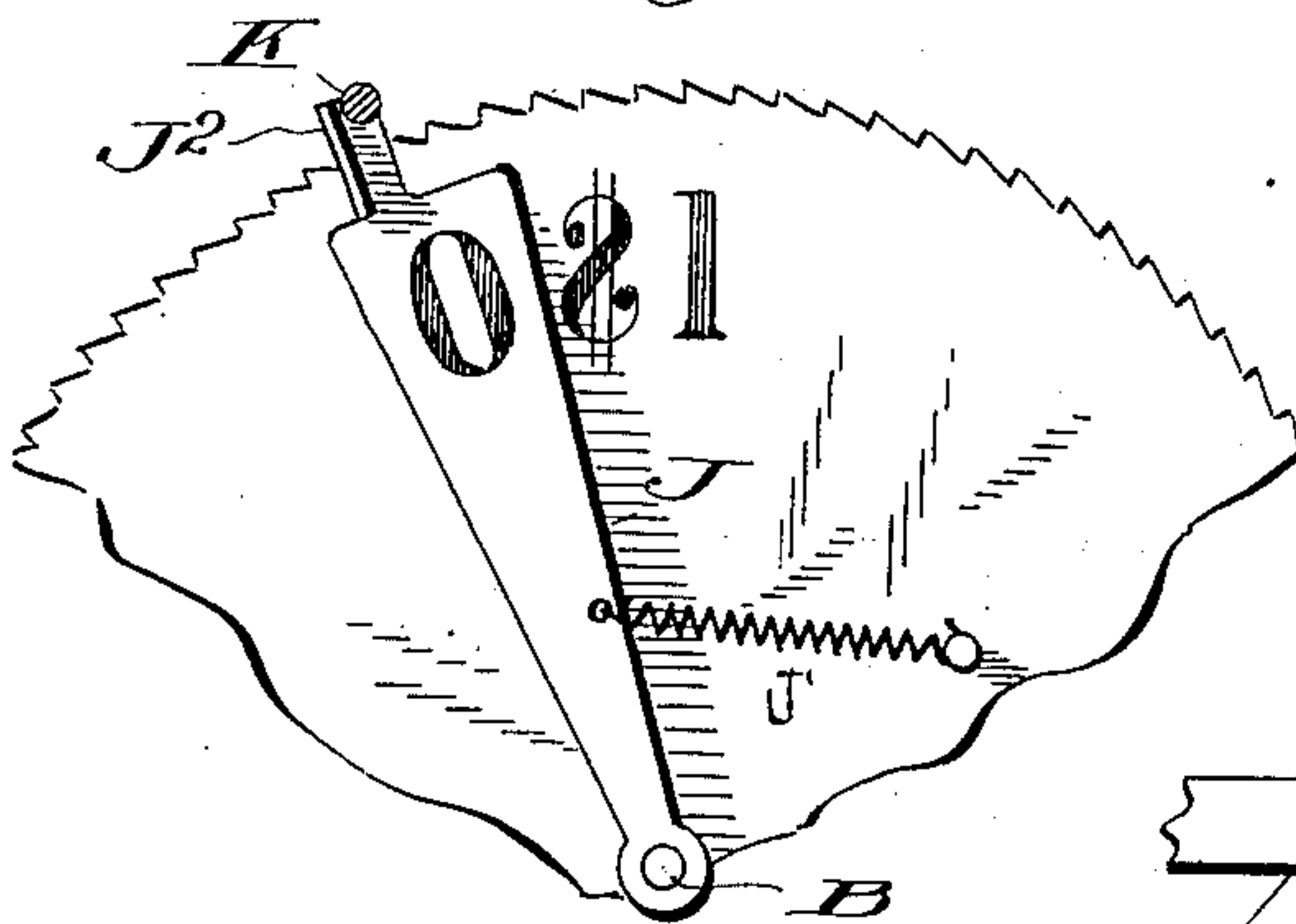
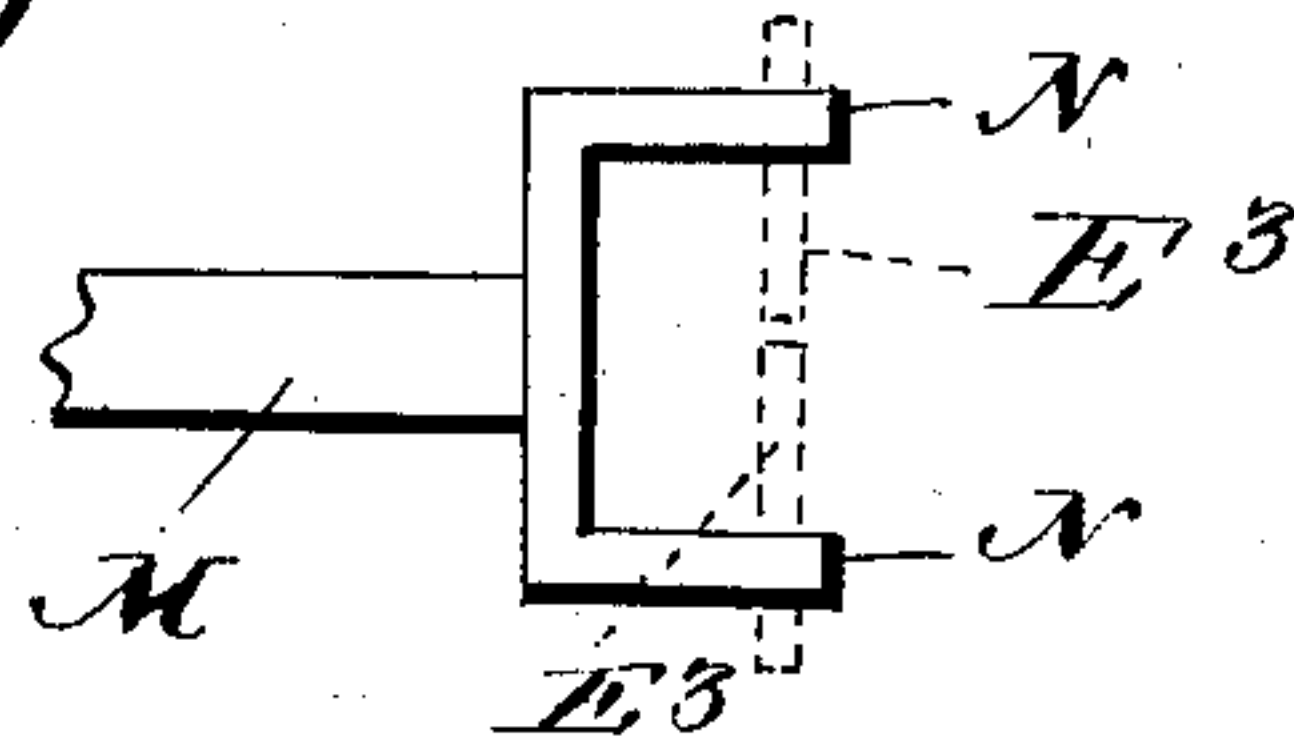


Fig. 6



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UNITED STATES PATENT OFFICE.

JOSEPH WARREN WHITNEY, OF GREAT FALLS, MONTANA.

CASH-REGISTER.

SPECIFICATION forming part of Letters Patent No. 627,032, dated June 13, 1899.

Application filed February 8, 1898. Serial No. 669,555. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH WARREN WHITNEY, a citizen of the United States, residing at Great Falls, in the county of Cascade and State of Montana, have invented certain new and useful Improvements in Cash-Registers; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in cash-registers, and especially to a rotary indicating-register and adding mechanism, whereby a series of purchases are automatically recorded at the revolutions of the dial, means being provided to return the dial to its starting-point before a second purchase can be registered and recorded.

A further part of the invention resides in the provision of a rotary cash register and indicator in which a rotary dial has secured thereto a spring-actuated shutter which at one revolution of the said dial will automatically disclose the highest amount which can be registered on the dial, and means for returning the indicating-dial to its starting-point and opening the money-drawer by one movement of a lever, which as it is depressed releases a pawl engaging with the dial and allows the wheel to return so that the shutter which normally registers "0" will come opposite the sight-aperture, suitable means being provided to prevent the rotation of the dial more than one revolution.

A still further part of the present invention resides in the provision of a locking means whereby it will be impossible for a person to open the money-drawer until the indicating-dial which has been returned to register a purchase amount will return to "0" or its starting position.

The invention relates, further, to the novel construction, combination, and adaptation of parts, as will be hereinafter more fully described and then specifically defined in the appended claims.

I clearly illustrate the invention in the accompanying drawings, which, with the letters

and figures of reference marked thereon, form a part of this specification, and in which drawings similar letters and figures of reference indicate like parts throughout the several views, in which—

Figure 1 is a front elevation of my improved cash-register, part of the casing being broken away to better illustrate the mechanism within, said view showing two registering-dials, one to register amounts from five cents to one dollar, the other purchases amounting to dollars. Fig. 2 is a central vertical section on line 2 2 of Fig. 1, looking in the direction of the arrow. Fig. 3 is a sectional view on line 3 3 of Fig. 1, showing the mechanism for releasing the money-drawer. Fig. 4 is a detail view of the shutter, showing the same in the position that it assumes when a dollar purchase is being indicated opposite the sight-aperture, the said shutter having caught on a lug on the casing and being held back under the tension of a spring in such position until the releasing-lever shall have been depressed, which will allow the dial to rotate in a reverse direction and the shutter to regain its normal position. Fig. 5 is a detail view. Fig. 6 is a detail view showing the shape of the angle-plate secured to the end of the lever, provided for releasing the pawls from the teeth of the dials.

Reference now being had to the details of the drawings by letter, A designates the casing of the register, which supports the operating mechanism. Mounted in the opposite side walls of the register is the main shaft B, to one end of which is keyed the rotary indicating-dial C, and at the opposite end and outside of the front wall of the casing is mounted the knob C', whereby the shaft and indicating-dial may be rotated. Fastened to the said operating-shaft, between the turning knob and the front wall of the register, is the indicating-pointer D, which is adapted to register opposite the numerals on dial D', which is secured to the front wall of the register. The upright portion of the casing, in which is located the rotary dial, has on its front vertical wall a sight-aperture F, opposite which the purchase amount is disclosed.

The circumference of the indicating-dial is notched, as at E, and a spring-actuated pawl E' is provided, which engages in the said

notches or teeth, allowing the dial to rotate only to the right or in the direction in which the registering-dial rotates in the act of registering a purchase amount at the sight-aperture. The said indicating-dial has a stop or projection G on its circumference, which is provided to allow the dial to make only a complete revolution and no farther. In the drawings this stop is shown in Fig. 1 at its lowest limit and abutting against a spring-actuated slide, which is provided to break the force of the reverse movement of the dial when the dial has registered an amount and the pawl engaging with the circumference of the same has been released, allowing the dial to return to its starting position, which is accomplished by means of the coiled spring H, which has one end secured to the support in which the operating-shaft is mounted, its other end fastened to the shaft, so that as the dial is rotated to the right in the act of registering a purchase the spring will wind up, and at the moment the pawl is released from one of the engaging teeth or notches in the circumference of the dial the latter will under tension of the said coiled spring return to its starting position and will register "0" at the sight-aperture. Pivoted to the face of the said dial is the shutter J, which is adapted to carry a "0," and secured to the shutter is a spring J', the other end of which spring is secured to the circumference of the rotary dial. This spring is adapted to hold the shutter normally, so as to obscure the highest amount of purchase that can be registered on the said dial, which will be one dollar. A lug J² is struck up from the said shutter and extends at right angles to the face of the shutter forward and is adapted to strike against a pin or projection K on the inner wall of the upright portion of the casing when the indicating-dial has made nearly a complete revolution or after the numeral "95" begins to pass the sight-aperture, moving to the right. As the dial begins to rotate from this position the said lug catches against the pin or projection, holding the shutter from further rotation, while the tension of the spring will allow the dial to make its complete revolution, disclosing the amount at the aperture. After the one-dollar amount appears at the sight-aperture the lug on the under side of the indicating-dial will have struck against the sliding stop underneath the wheel and prevent any further rotation in a forward direction. The pawl E' will hold the dial in this position until the pawl is released from its engaging notch, after which the coiled spring on the shaft will return the dial to its starting position and the shutter under the tension of its spring will close over the dollar amount on the dial and the shutter registering "0" will appear opposite the sight-aperture, as will be readily understood.

For operating the pawl I provide a lever M, which is fulcrumed at M' on a support within the casing, the inner end of the said lever

having a laterally-extending bracket-shaped member N, as shown clearly in side elevation in Fig. 3, the ends of which bracket are bent at right angles and about the edges of the support Q, to which the pawl E' is pivoted. As the outer end of the said lever is depressed and end of the said member N is raised against the lower end E³ of the pawl, as plainly seen in Fig. 3, and the dial-engaging end of the said pawl is raised out of the notch in the circumference of the said dial a spring e is provided, which is connected at one end of the pawl, its other end to a lug E², to return the pawl to its engaging relation with the notches or teeth in the circumference of the indicating-dial when pressure is relieved from the operating-lever.

The money-drawer-releasing device is operated by the lever which releases the pawl in the following manner:

Pivoted to the standard R is a lever R', the outer end of which is pivoted at its upper end to the operating-lever M at m. Underneath the outer end of the said lever R' is a spring R⁴, which is adapted to hold the lever R' normally in a horizontal position. Pivoted to the portion of the casing, as at S, is one end of the drawer-engaging catch S', which has a downwardly and rearwardly tapering portion adapted to engage over the rear end of the drawer when the latter is closed. The other end of the said member S' is pivoted at S² to the link S³, which latter is slidingly pivoted, as at S⁴, to the inner end of the lever R'. A spring S⁵ is provided to return the catch S to its normal position after it has been raised by the depression of the operating-lever for the purpose of allowing the drawer to open, and a spring T has one end secured to the wall of the register behind the drawer, its other end bearing against the drawer to throw it forward when the catch is released.

Mounted on the platform P of the register in front of the dial and underneath the operating-lever M is the hinged block P', which is connected by means of a spring P² to a second block of the same construction and hinged to the said platform. This block P' has a lever P³, pivoted at one end thereto, and its other end pivoted to a block I, which block is hinged, as at I', to the said platform at a location substantially underneath the operating-shaft. Mounted on the said operating-shaft is an arm P⁵, the free end of which is adapted to strike against the said block I when the shaft is rotated in a reverse direction after it has indicated a purchase amount at the sight-aperture, and as the dial returns to "0" the said bar P⁵, striking against the block I, causes the block P' to tilt laterally from its vertical position and out of the path of the lever M, which is depressed for the purpose of allowing the money-drawer to be opened. It will be noted that there is a slight space intervening between the lower edge of the operating-lever and the upper end of the block P' a sufficient distance to allow the lever

M to be depressed for the purpose of disengaging the pawl E' from the notched circumference of the indicating-dial to allow the dial to rotate and with its shaft the said bar P⁵.

5 In the drawings I have illustrated two dials side by side in the casing, which are similarly constructed, and while my description has been confined to the details of but one they are both similarly operated, the second dial
10 being provided for the purpose of recording purchases amounting to dollars, the dial at the right being adapted to register amounts from five cents to and including one dollar. In operating the second dial, or the one to the
15 left, a similar pawl is provided and a locking mechanism of the same general construction as has been described in connection with the dial shown at the right hand of Fig. 1 of the drawings.

20 Mounted loosely on the shaft B is a registering-wheel 1, which has secured thereto a ratchet-wheel 2, which is allowed to turn in one direction in the act of registering a purchase amount. A pawl 3, which is pivoted to
25 the support 4 of the register, engages with the ratchet-teeth on the said wheel, and mounted on the operating-shaft is a ratchet-wheel 6. Pivoted to the said ratchet-wheel 2 is a pawl 7, which is adapted to engage with
30 the teeth of the ratchet-wheel 6 for the purpose of rotating the ratchet-wheel 2 as the operating-shaft is rotated to the right, thus allowing the ratchet-wheel and the registering-wheel 1 to remain stationary in the re-
35 verse movement of the operating-shaft to "0." A lug 8 is provided about the periphery of the registering-wheel 1, which is adapted to engage at each revolution of the said wheel in a notch 9 in the circumference of the
40 ratchet 10, which is secured to the second registering-wheel 11, which is mounted horizontally on a support within the casing. The underside of the said registering-wheel 10 has a lug 12, which is adapted to engage in one
45 of the notches 13 in the ratchet-plate 14, secured to the face of the vertically-arranged registering-wheel 15, which is pivoted to the support 16 of the casing. This registering-wheel 15 has a lug 17, which at each revolution
50 engages with a similarly-notched ratchet-plate 18 on the registering-wheel 19, horizontally mounted on the platform 20 of the casing. From the foregoing it will be noted that at each revolution of the registering-wheel 1
55 a partial or one-tenth of a revolution will be imparted to the wheel 11, and at each revolution of the wheel 11 a one-tenth revolution will be imparted to the registering-wheel 15, and at each revolution of the wheel 15 a partial or one-tenth revolution will be imparted
60 to the wheel 19, and the total amounts of pur-

chases may be read at the sight-aperture W in the wall adjacent to the registering-wheel.

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

1. In a rotary cash-register, the combination with the operating-shaft, the dial mounted thereon, spring for returning the dial to its starting position after registration is effected,
70 the shutter mounted on the operating-shaft, a spring secured at one end to the said shutter, its other end fastened to the rotary dial, a projection on the casing, the upper contracted end of the shoulder being bent at right
75 angles and designed to strike against said projection to disclose the highest numeral on the dial, as set forth.

2. In a rotary cash-register, the combination with the operating-shaft, the spring thereon,
80 the rotary dial with notched circumference, the spring-actuated pawl engaging with the said notches, the operating-lever and connection between the same and said pawl, the block pivoted beneath the operating-lever,
85 the bar secured to the main operating-shaft, a second block pivoted to a portion of the register and against which said bar is adapted to strike and tilt the same, as the rotary dial returns to its starting position, and a link
90 connection between the said blocks, as shown and described.

3. In a rotary cash-register, the combination with the operating-shaft, the notched dial mounted thereon, of the ratchet-wheels and
95 pawls for allowing the registering-wheels to rotate in one direction only, a second registering-wheel mounted at right angles to the first-mentioned registering-wheel, sprocket-plates secured to the said wheels, and meshing
100 with each other, the pivoted pawls and operating-lever, the hinged post held normally under said lever, and means for tilting said post out of the path of the operating-lever, as shown and described.
105

4. In combination with the tilting operating-lever of a cash-register as described, the pivoted lever R' and link R³ connecting the same, the said operating-lever and pivoted catch S' having a notched portion designed to
110 engage with the rear end of said money-drawer, a link S² pivoted at its lower end to the said catch, its upper end having a sliding pivotal connection with said lever R', and the springs S⁵ and R⁴, as described and for
115 the purpose set forth.

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

JOSEPH WARREN WHITNEY.

Witnesses:

A. ANDERSON,
EUGENE PRIOR.