

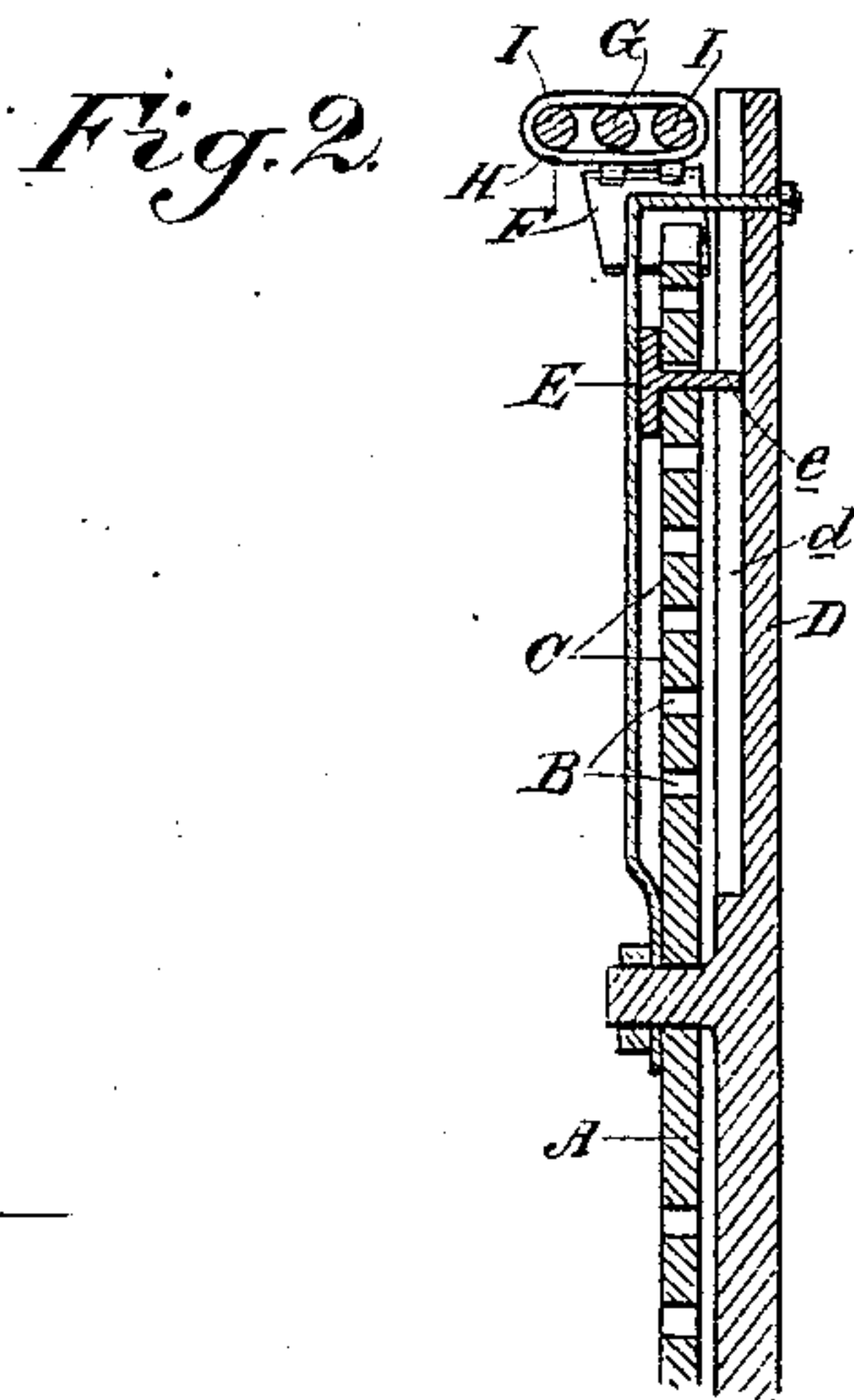
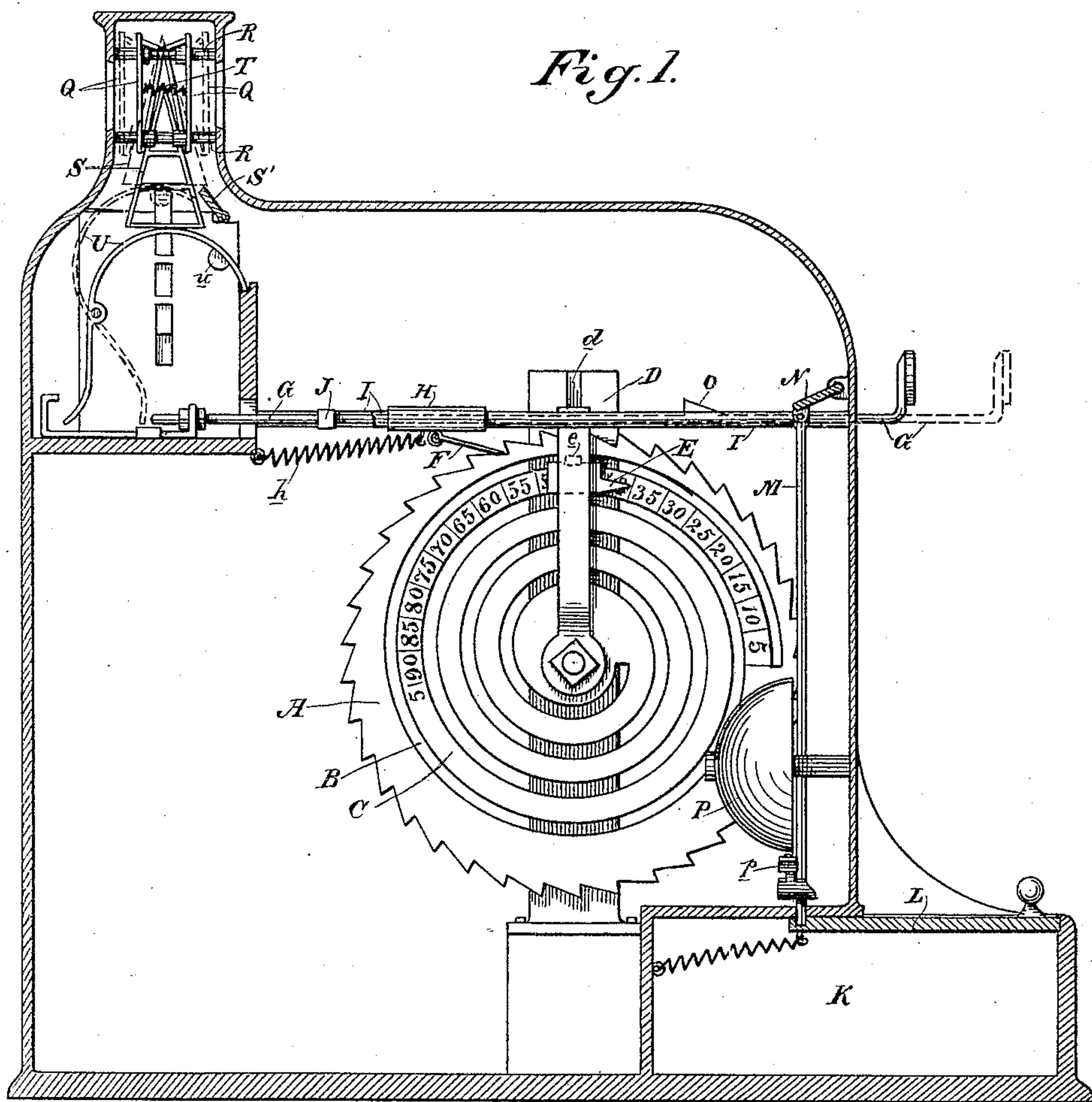
(No Model.)

2 Sheets—Sheet 1.

E. T. TAYLOR.
CASH REGISTER.

No. 485,998.

Patented Nov. 8, 1892.



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(No Model.)

2 Sheets—Sheet 2.

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Fig. 3.

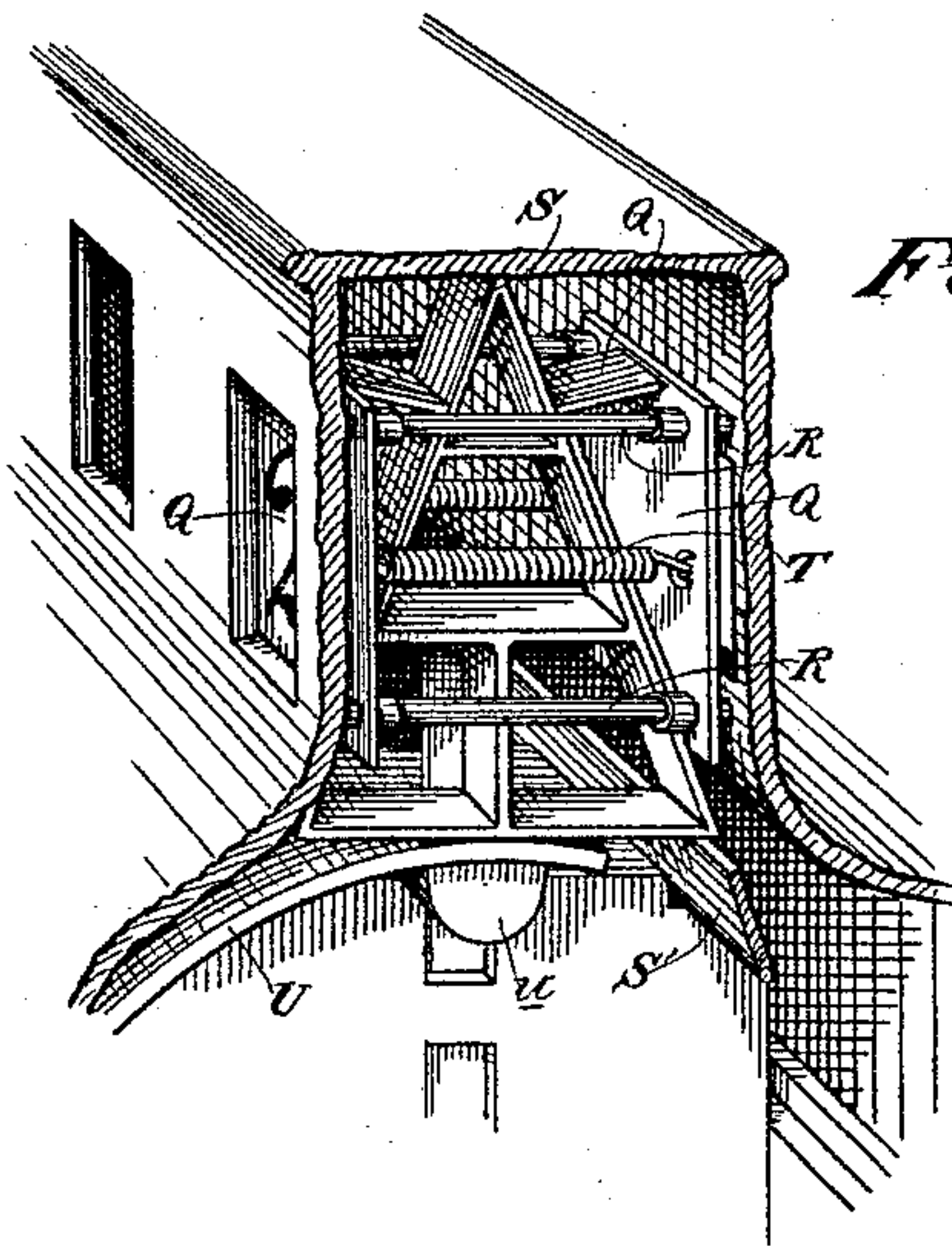
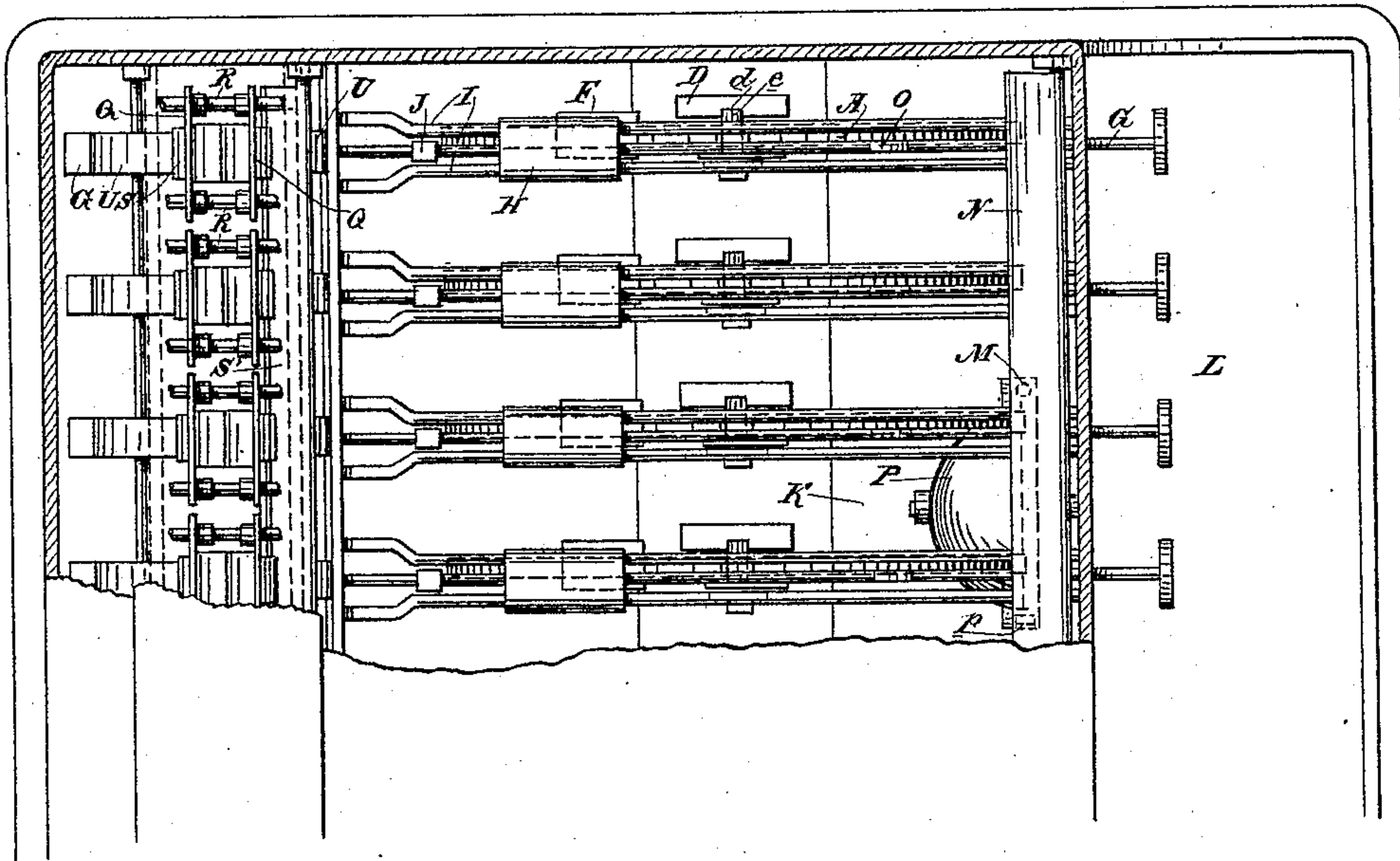


Fig. 4.

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UNITED STATES PATENT OFFICE.

EDWARD T. TAYLOR, OF OAKLAND, CALIFORNIA.

CASH-REGISTER.

SPECIFICATION forming part of Letters Patent No. 485,998, dated November 8, 1892.

Application filed April 25, 1892. Serial No. 430,608. (No model.)

To all whom it may concern:

Be it known that I, EDWARD T. TAYLOR, a citizen of the United States, residing in Oakland, county of Alameda, State of California, have invented an Improvement in Cash-Registers; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to improvements in that class of apparatus known as "cash-registers." Its object is to provide a continuous register of great capacity and a novel means for indicating the amount of each purchase by a visible signal.

It also relates to certain details of construction, which will be more fully explained by reference to the accompanying drawings, in which—

Figure 1 is a vertical cross-section through my register. Fig. 2 is a cross-section through the registering-disk. Fig. 3 is a plan view of register. Fig. 4 is a detail of the indicating-plates and their connections.

In my invention the registering device consists of a circular toothed disk A for each of the different amounts—such as five, ten, fifteen, twenty cents, &c.—and each of these disks has a groove B in the form of a scroll extending from the center to the outside, thus forming a corresponding scroll-surface C between the grooves or channels, and upon this surface are marked figures from "5" upward, the lowest figure being in the present case shown at the outer end of the scroll and the highest figures near the center. The periphery of the disk A has ratchet-teeth corresponding with the distance between the figures, and the disk is advanced the distance between two of these teeth and between two adjacent figures at each operation of the connected parts, as will be more fully described hereinafter.

The disk A turns upon a central pivot attached to a vertical guide D, having a slot *d* extending from the top downward in line with the central shaft upon which it turns.

E is an indicator having a bar which extends through the spiral slot B of the disk, and it has a tongue *e* upon the back, which travels in the slot *d* of the vertical guide D.

The point of the indicator E is in front of the disk, so that as the latter revolves the

figures move beneath this indicator-point, and for each revolution that the disk makes the indicator is moved toward the center by reason of the scroll form of the groove by which it is guided. This constantly carries the indicator over a new set of figures for each revolution of the disk until it reaches the center, and thus gives a very long registering-surface in a very small space.

It will be understood that the description of one register serves for as many as it may be desired to use, the disks standing side by side in a properly-constructed case.

Each registering-disk is operated by a pawl F, which is moved by a sliding rod G. In the present case I have shown this rod as moving horizontally above the top of the disk, and the pawl F is pivoted to the lower portion of a slide H, which is movable upon guides I, parallel with the rod G. The sliding rod G has a lug J fixed to it, so that when the rod is pulled forward it will move a certain distance before this lug comes in contact with the pawl-carrier H. When this lug comes in contact with the pawl-carrier, it moves it forward, and the pawl, engaging a tooth of the disk, advances the disk one tooth. When the rod G returns to its normal position, the pawl-carrier is also drawn back by a suitable spring *h*, which acts upon it. The object in moving the rod G over a considerable distance before the pawl acts is to operate the indicator, which shows the amount of the purchase.

The cash-drawer K has a sliding cover L, which is locked by a vertical rod M, extending down through the top of the drawer inside of the main case and out of reach, and the upper end of this rod is connected with a horizontal tilting plate N, pivoted within the case.

Upon the sliding rod G is an angular or inclined plate O, which when the rod has been pulled out far enough to actuate the pawl and turn the disk forward one tooth and figure will act upon the tilting plate N, which actuates the locking-rod, and will turn it about its pivot-points, thus raising it and the locking-rod M to allow the cover of the drawer to open. This cover is actuated by any suitable spring or weight, so that it will fly open as soon as unlocked.

The tilting plate N, by which the cash-

drawer is actuated, is of sufficient length to be acted upon by any one of the rods G, of which there is one to each of the registering-disks A. Where the rods G extend through the front of the main case they carry figures indicating the amount which they are to register, as "5," "10," "15," &c.

The movement of the rod M, which unlocks the cash-drawer, also actuates the hammer of a bell or sounder P, so that attention will be called to the fact that the cash-drawer has been opened.

In order to indicate the amount of each purchase, I have a series of figures Q, mounted upon guide-bars R, extending transversely across a chamber in the upper part of the main case. Openings are made on opposite sides of the chamber in line with each of the sets of figures, and the figures are prominently exposed when an amount is paid in, and the corresponding rod G is pulled by forcing the figures outwardly, so that they temporarily stand within the openings which are opposite them. This operation is produced as follows: Each of the pair of figures is mounted upon a plate and the backs of these plates are so formed that a wedge S, which is forced up from below, passes between them, and thus moves the plates upon their guide-rods, forcing them away from each other until the figures upon their outer faces are brought into the openings through which they are to be exposed, the plates being correspondingly separated by the action of the wedge. The base of the wedge is raised above the edge of a tilting plate S', which falls beneath it and holds it in place until another wedge has been raised. The edge of this second wedge pushes the plate outward and releases the first one, which then falls. All the indicator-plates are actuated in the same manner. As soon as the wedge is removed from between the plates, a spring T acts to draw them together again and correspondingly withdraw the figures from the openings in which they were exposed. In the present case I have shown the wedge adapted to move vertically from below, and it is actuated by a lever U, which is fulcrumed so as to act upon the lower part of the wedge and force it upward when the lever is moved. This lever is connected, as shown, with the sliding rod G, so that when this rod is pulled outward to rotate the disk A, open the drawer, and strike the bell the same action forces the wedge upwardly and separates the figure-carrying plates, forcing them outwardly, so that the figures are exposed in the openings, thus indicating the amount which should be placed in the cash-drawer when it is opened. As soon as the rod G is released from the pull it is moved back by a spring, gravitation, or other contrivance u, thus returning the lever U to its original position and leaving the wedge supported by the plate or latch S'. When this is released by raising another wedge or by any suitable releasing device, the wedge will drop by gravitation, and the indicator-

plates, being thus released, will be retracted from the openings.

It will be manifest that in place of the wedge various arrangements of levers or other connections may be made with the plates carrying the figures, so that they will be forced outward into the openings when the cash-drawer is opened and retracted, as above described.

As soon as the transaction is complete, the sliding rod is retracted, as previously described, the levers by which the wedge was moved return to their places, the rod which locks the cash-drawer is released in readiness to again lock the drawer when it closes, the drawer is closed by hand and the rod locks it, and the indicating-figures remain in position until released by the showing of some other amount, as previously described. By this construction I avoid all use of gears and provide an exceedingly-simple mechanism, the register having very large capacity on account of the scroll arrangement of the registering-surface.

At the close of a day's business or other period the outer case is opened and each of the registering-disks examined and the amount indicated upon them taken off, and the indicating-point, with its guide, is moved to the commencement, the disks being set to correspond, thus leaving the apparatus again ready for work.

It will be manifest that the registering and an indicating mechanism and gong can be operated by a cord when the device is to be adapted to street-car service.

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

1. In a cash-register, a series of toothed revolving disks having each a series of figures and corresponding guides forming scrolls from the exterior to the center of the disks, indicators the points of which stand above the figures, and mechanism whereby they are gradually moved from the exterior toward the center of the disk as the latter is revolved, pawls engaging the teeth upon the periphery of the disks, the pawl-carriers and guides upon which the pawl-carriers slide, a rod for each disk, having an indicating-figure upon its outer end and movable parallel with the guides and pawl-carriers, and a lug upon the rod, by which the pawl-carrier is engaged and the pawl caused to engage a tooth of the disk, so as to advance the latter whenever the rod is drawn forward, substantially as herein described.

2. In a cash-register, a series of toothed rotary disks, each having a series of figures arranged in the form of a scroll upon its surface from the periphery to the center, sliding rods having indicating-figures upon the outer ends, pawls and sliding pawl-carriers which are engaged by the rods to rotate the disks one tooth whenever a rod is drawn forward, a cash-drawer, a rod by which it is locked when

the drawer is closed, a hinged movable plate extending above the line of numbered rods, and a lug or incline upon each of said rods, whereby the plate is lifted and the cash-drawer opened whenever either of the rods is drawn forward, substantially as herein described.

3. In a cash-register, a series of toothed rotary disks having their surfaces formed into scrolls upon which indicating-figures are marked from the periphery to the center, pawls adapted to engage the teeth of the disks, whereby either disk may be moved forward a single tooth when its pawl is actuated, sliding rods corresponding with the pawls, each having an indicating-figure upon its outer end, a cash-drawer and a bell, a rod by which the cash-drawer is locked and which engages the hammer of the bell, a pivoted oscillating plate to which the upper end of the rod is connected, a lug fixed upon each sliding numbered rod, which engages said plate to raise the locking-rod and open the cash-drawer and ring the bell at the same time, and indicating-figures mounted in the upper part of the case containing this mechanism, said figures being moved outwardly and exposed in openings in the case by connections from the sliding rod, substantially as herein described.

4. In a cash-register, the toothed registering-disks, pawls engaging the teeth, and sliding rods whereby the pawls are actuated to advance the disks, indicating-plates having figures corresponding with each of the sliding rods and the amounts marked upon the disks, said plates sliding outwardly from each other upon guide-rods, openings opposite the figures through which the latter are exposed when the plates are forced outwardly, and levers connected with the sliding operating-rods and with the movable indicating-plates, whereby the latter are separated from each other and exposed in their respective openings by the

movement of the rods, substantially as herein described.

5. In a cash-register, an indicating device consisting of figure-plates movable upon guide-rods transversely within a chamber having openings at opposite sides and in line with said plates, springs by which the plates are normally drawn toward each other and away from the openings, a mechanism by which the plates are simultaneously forced outward upon the guide-rods to expose the figures in the openings, a sliding rod connected with each of said mechanisms and having a figure upon its outer end corresponding with that of the indicator, and a toothed registering-disk with figures upon its surface corresponding with those upon the indicator, and the actuating-rod and mechanism whereby said disk is rotated in unison with the movements of the indicator, substantially as herein described.

6. In a cash-register, an indicating device consisting of character-plates movable upon guide-rods transversely within a chamber having openings at opposite sides and in line with the faces of the plates, springs by which the plates are normally drawn toward each other and away from the openings, a mechanism by which the plates are simultaneously forced outward upon the guide-rods to expose the figures in the openings, a locking-plate by which the figures are retained in view, said plate being actuated to release the character-plates and allow them to return to their normal position when any other set of figures is exposed, substantially as herein described.

In witness whereof I have hereunto set my hand.

EDWARD T. TAYLOR.

Witnesses:

S. H. NOURSE,

J. A. BAYLESS.