(No Model.) 2 Sheets—Sheet 1.

L. T. BACKUS.

CASH REGISTER AND INDICATOR.

No. 596,973. Patented Jan. 11, 1898.

Fig. 1.

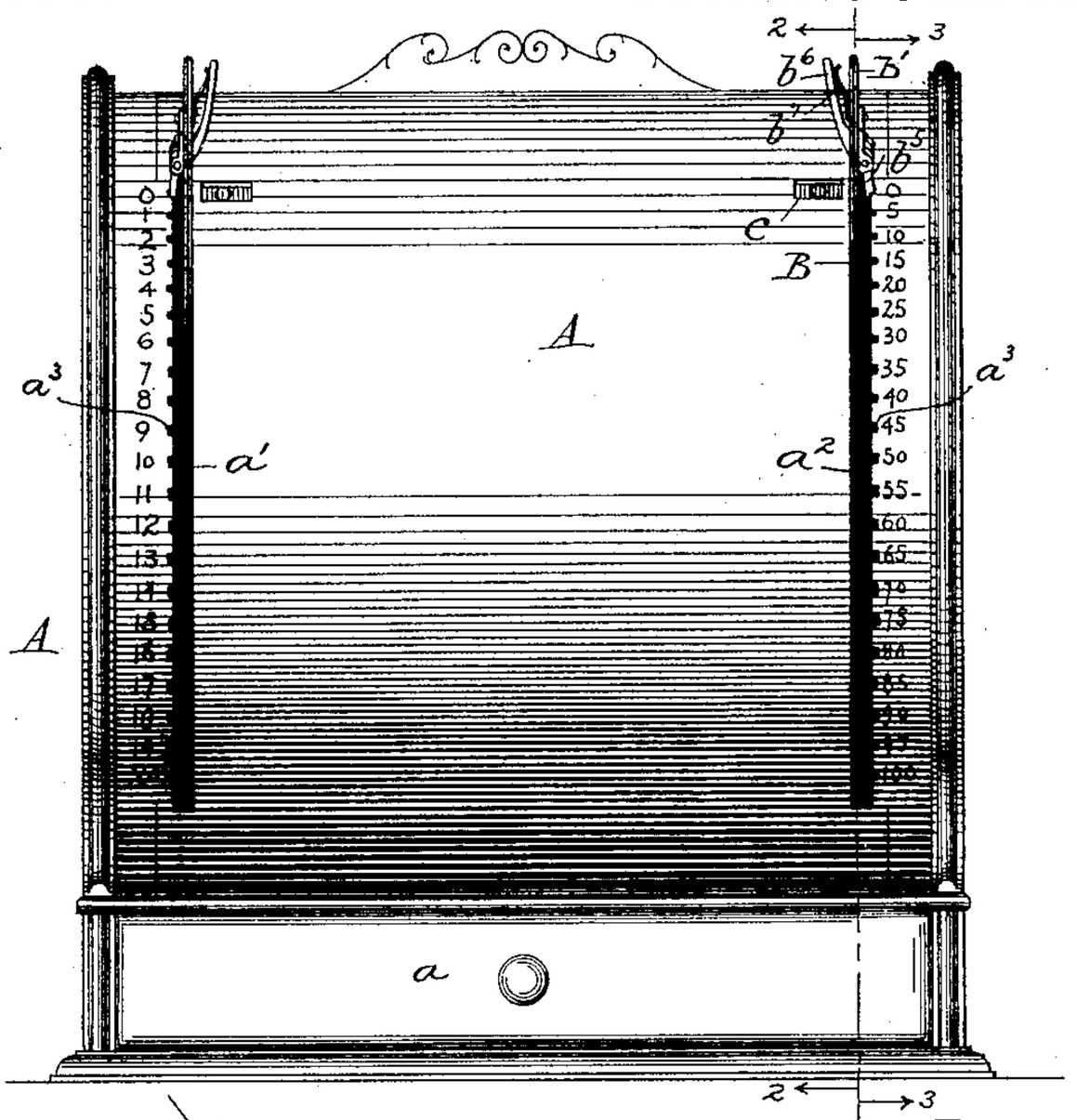
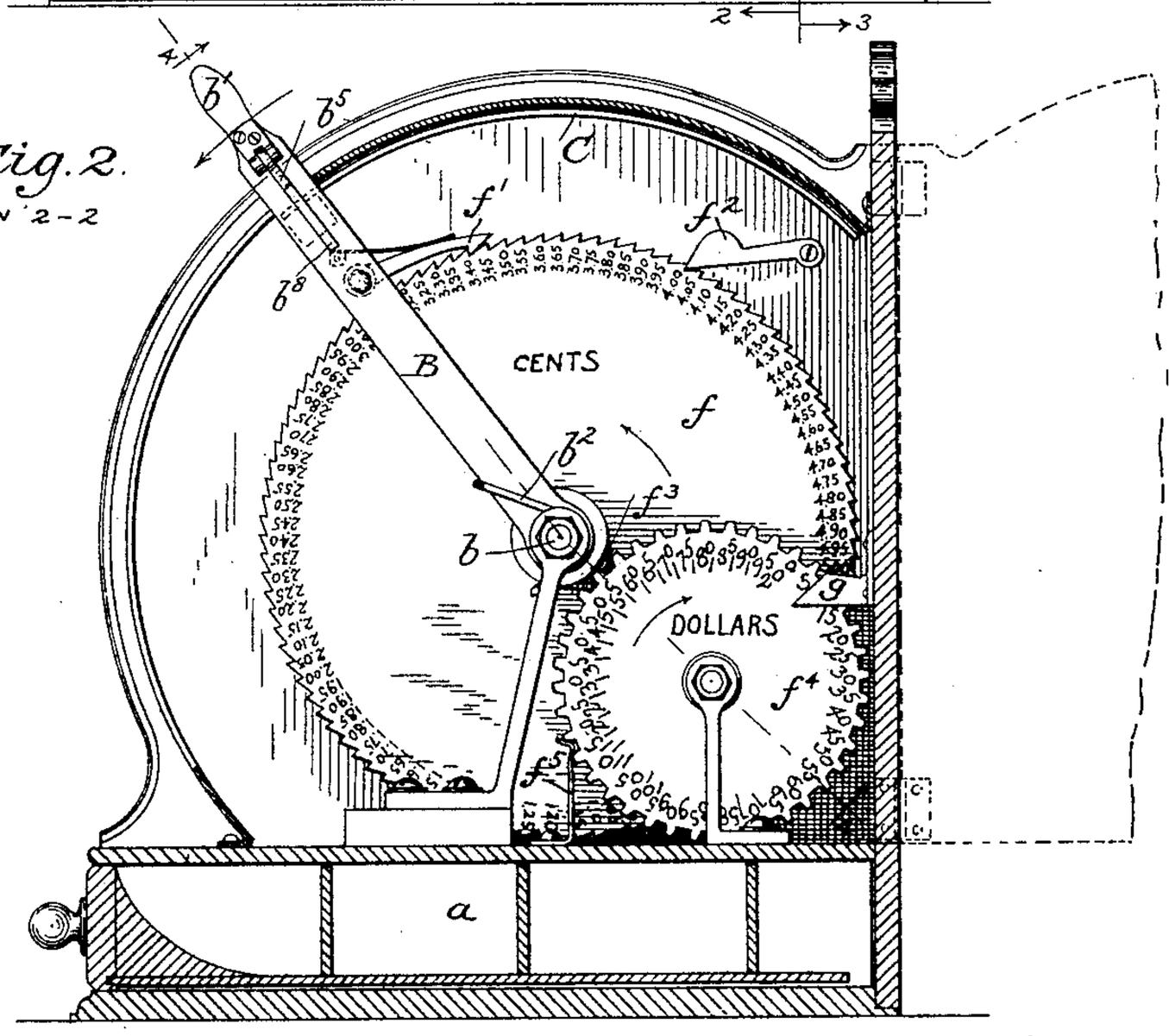


Fig. 2.

ON 2-2



Witnesses
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Inventor
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Attorney

(No Model.) 2 Sheets—Sheet 2.

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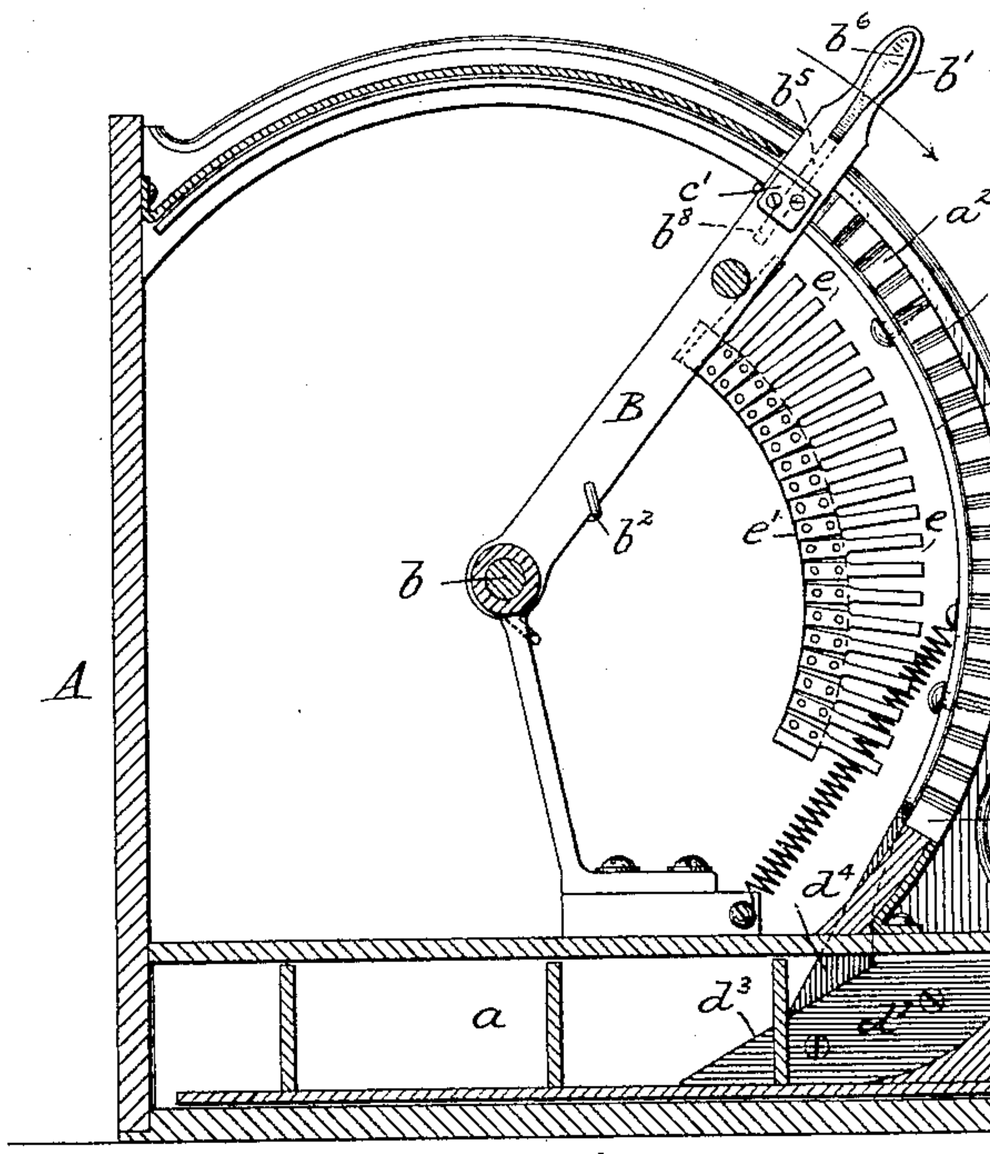
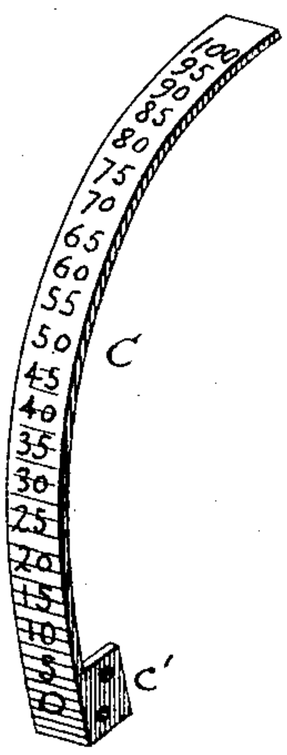


Fig. 3 ON 3-3

Fig. 4 ON 4-4

Fig. 5.



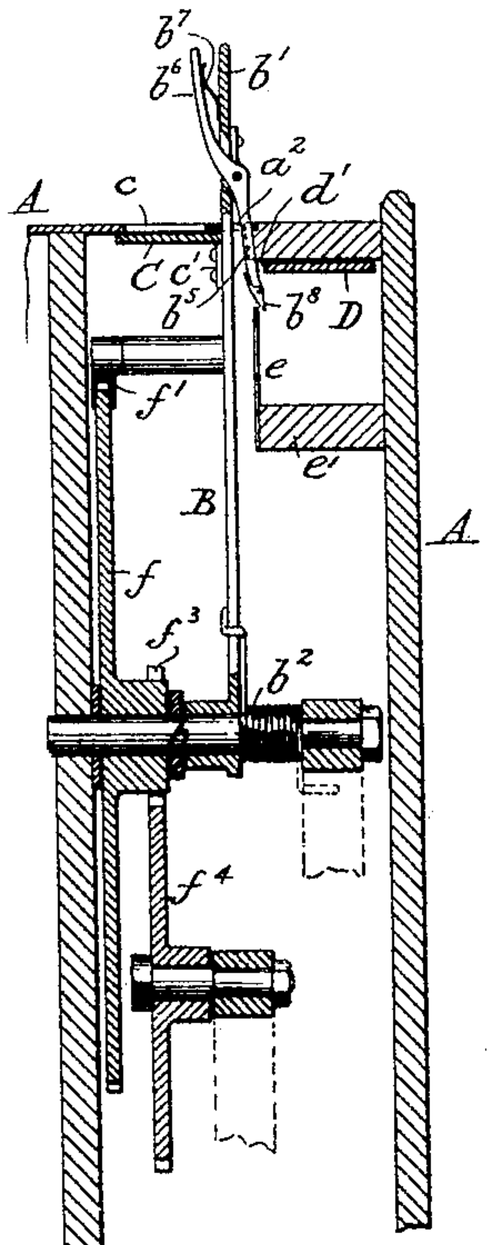
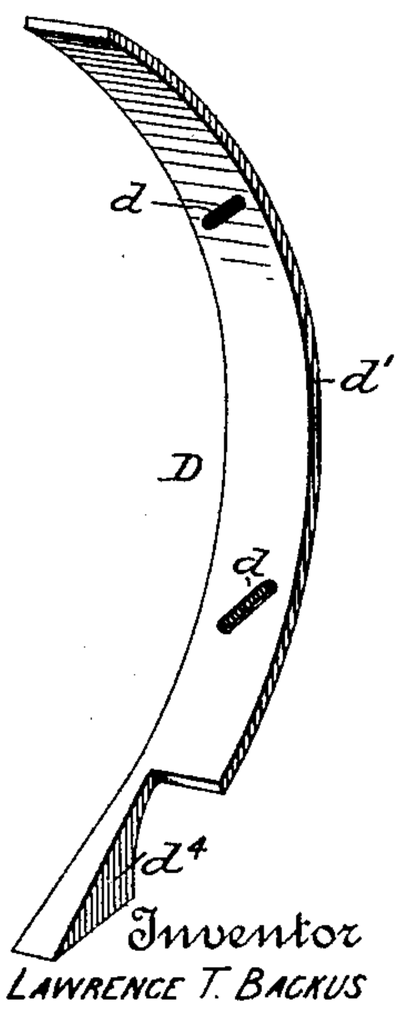


Fig. 6



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UNITED STATES PATENT OFFICE.

LAWRENCE T. BACKUS, OF ATCHISON, KANSAS.

CASH REGISTER AND INDICATOR.

SPECIFICATION forming part of Letters Patent No. 596,973, dated January 11, 1898.

Application filed March 16, 1894. Renewed March 31, 1896. Serial No. 585,665. (No model.)

To all whom it may concern:

Be it known that I, LAWRENCE T. BACKUS, of Atchison, in the county of Atchison and State of Kansas, have invented new and useful Improvements in Cash-Indicators; and I do hereby declare the following to be a full, clear, and exact description of said invention, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to cash-registers, and has particular reference to that class of machines in which the amount of a purchase is indicated and registered by the movement of a lever to a greater or less extent, according to the value of said purchase.

The object of my invention is to produce a registering and indicating mechanism which is simple in construction, comparatively cheap in cost, and which is provided with means for audibly distinguishing between different amounts registered.

To these ends my invention consists in the construction and combination of parts, as hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a front elevation of my machine provided with two levers, one of which is adapted to register and indicate varying amounts from five cents or multiples thereof to one dollar, the other lever being connected with mechanism to register and indicate amounts of one dollar and multiples thereof. Fig. 2 is a section on the dotted line in Fig. 1, looking in the direction of arrows 2 2. Fig. 3 is a section on the same line, looking in the direction of the arrows 3 3. Fig. 4 is a detail section on the line 4 4 of Fig. 2, looking in the direction of the arrow. Fig. 5 is a detail perspective view of the indicating-plate. Fig. 6 is a detail perspective view of the catch-releasing bar.

Similar reference-letters indicate similar parts in the several views.

A is the casing of the machine, in the lower part of which is the money-drawer, fitted to slide freely in suitable ways. The front portion of the upper part of the casing is provided with two slots a' and a^2, through one of which, preferably the right-hand one a^2, projects the operating-lever for the cents-registering mechanism. This latter mechanism alone will be described in detail, and it will be understood that the mechanism at the left side of the casing is similar in all respects to that which will be described, but bears different figures to register and indicate dollars.

One edge of the slot a^2 is provided with twenty notches a^3, and the front wall of the casing opposite said notches bears the numerals from "5" and its multiples up to "100."

On a pin or rod b, secured in the casing, is freely mounted a lever B, having a handle b'. A spring b^2 is coiled around the rod b and has one end bent under the lever and its other end held by any suitable means, as a pin b^4, said spring serving to press the lever upward toward the upper end of its slot. A latch b^5 is pivoted to the handle b' and is provided with a handle b^6, adjacent to the lever-handle b', so that both may be grasped simultaneously, said latch being adapted to engage either of the notches a^3, being pressed toward said notches by a spring b^7. This latch has a projecting toe b^8, for the purpose hereinafter described. A little above the upper end of the slot a^2 and slightly to one side thereof the casing is provided with an opening c. Attached to the lever b and extending upwardly and rearwardly therefrom is the curved indicating-plate C, bearing the numerals "5" and its multiples to "100," said numerals being spaced equally to the notches a^3 and the numbers being in the reverse order from the numbers of the outside of the casing, whereby when the lever is depressed until the latch b^5 engages any one of the notches the same numeral on the indicating-plate will show through the opening c, as the numeral on the casing opposite the engaged notch. This indicating-plate if extending directly back from the lever and in line therewith would show its numerals through the upper end of the slot a^2 when the lever is depressed. Therefore the said plate is provided with an offset ear c', said ear being attached to the lever, thus bringing the plate under the opening c, which is at one side of the line of the slot a^2.

It is to be understood that the money-drawer is free to be withdrawn at any time and before the operation of the machine.

In order to automatically close all of the notches a^3, so that the lever B will be moved to the upper end of the slot a^2 by the action of the spring b^2, I provide a catch-releasing bar D. This bar is a curved plate fitted to the inside of the casing and provided with inclined slots d, through which studs or screws pass into the inside of the casing. Owing to the inclined slots, the bar D when it moves up or down moves also slightly laterally, sufficiently when in its uppermost position to present its smooth edge d' slightly beyond the notches a^3, so that the latch b^5 will be released or pushed out from the notch with which it has been engaged and the lever B released to be moved upward by its spring. When the bar D drops, it also moves away from and across the notches, whereby the latch b^5 may be engaged with any one of said notches. The bar D may descend by gravity or it may have a spring to aid its descent. To effect the lifting of the bar, a plate d^2, having an inclined edge d^3, is attached to the drawer a, and said inclined edge d^3 is adapted to operate against the inclined lug d^4 on the lower end of the bar D.

It will now be understood that when the drawer is opened the bar D will descend and leave the notches a^3 free to be engaged by the latch b^5, and when the drawer is pushed in or closed the bar D is lifted and immediately moves across said notches, pushing the latch b^5 out of the notch in which it has been left, and the lever B will return to its uppermost position.

As will be readily understood, since the bar D closes the notches or detents and prevents the latch from entering any one of them during the return of the lever, it also prevents the toe b^8, which is carried by said latch, from sounding any of the reeds during such return movement.

In order to audibly indicate the notch with which the lever has been engaged, I attach a set of reeds e to the inside of the casing, said reeds being of different lengths, and consequently of different tones, and attached to a supporting-bar e'. The free ends of these reeds are arranged in an arc concentric with the pivotal point of the lever B, and therefore their supporting-bar is eccentric to said point. The free ends of the reeds are located in a radial line with the notches a^3, and the projecting toe b^8 of the latch, when the latter enters one of said notches, picks over the end of the proper reed and gives a sound that will indicate the amount of the registry to the proprietor, who may be at some little distance from the clerk who is operating the register.

Freely mounted on the rod b is a ratchet-wheel f, having its edge toothed and having its side marked with numerals from "5" and its multiples up to "500." A pawl f' is attached to the lever B and adapted to engage the toothed ratchet f and move the latter. A detent-pawl is indicated at f^2. On the hub of the ratchet f is a pin f^3, adapted at each revolution of the ratchet f to engage one of forty notches in the wheel f^4. This latter wheel is provided with numerals from "5" and its multiples up to "200" and indicates dollars.

To the inside of the casing is secured a pointer g, its end extending toward the point of intersection of the wheels f and f^4. When the machine is at "0," the numeral on the wheel f, which shows past the wheel f^4, will be "500" (or five dollars) and the numeral on the wheel f^4 opposite this point will be "200."

The first registry of an amount purchased will bring the proper indicating-numerals on the wheel f past the edge of the wheel f^4, and continued operations of the machine will turn the wheel f until the amount, five dollars, has been registered. Then the pin f^3 causes the wheel f^4 to move one step and bring the numeral "5" on the latter opposite the pointer g. If the next operation of the lever B is to register fifty cents, the "50" on the wheel f will be brought past the edge of wheel f^4, and thus there will be indicated at the point of intersection of the two wheels, opposite the pointer g, the amount, five dollars and fifty cents. The pointer g is so shaped or beveled that its upper edge underscores or defines the two amounts on the two wheels that are to be read together. From this it will be readily understood that the proprietor on opening the end of the casing or looking through an opening therein, which may be provided opposite said point of intersection of the wheels, may at once see the total amount which has been registered.

A detent for the wheel f^4 is shown at f^5.

The operations of the parts which are not obvious having been already described a further description of the operation is unnecessary.

While in Fig. 1 I have illustrated the upper part of the casing A as of the same width as the base or the money-drawer a, it is to be understood that it may be much narrower, since the indicating and registering mechanisms are of a very compact form. The wheels f and f^4 overlap each other, and the lever B, mounted on the rod or spindle of and close to one of the wheels, extends directly through the slot in the casing. Thus all of the parts of each set of mechanisms are brought into compact relationship, and the two sets for the dollars and cents may be arranged within a space much narrower than in machines where an indicating-cylinder is employed or a horizontal set of independent indicators.

Having now described my invention, what I claim is—

1. A cash-register comprising in its construction a lever for operating the registering mechanism, a latch connected with the lever, a series of detents for said latch, a series of reeds of different tones located adjacent to said detents, and a projection from said latch adapted to sound the reed corresponding with either one of the detents engaged by the latch.

2. A cash-register comprising in its construction the lever B for operating the registering mechanism, the latch b^5 pivoted to said lever and having the toe b^8, a series of detents for said latch, a series of audible signals having different tones located along the path of movement of the lever and latch, and the movable bar D adapted to close the detents and hold the latch and the toe b^8 at one side of the series of signals, whereby said toe is prevented from sounding the signals during the return movement of the lever.

3. A cash-register comprising in its construction a slotted casing having a series of detents or notches at one side of the slot and an opening separate from said slot, a lever extending through said slot and carrying a latch adapted to engage said notches, a plate inside the casing and attached to said lever and having numerals adapted to show through said opening, a movable plate adapted to be moved across or recede from said notches, a series of audible signals adjacent to said notches, and registering mechanism operated by said lever, substantially as described.

4. In a cash-indicator, the combination with a slotted casing having a series of detents or notches at one side of the slot, of a lever extending through said slot and carrying a latch adapted to engage said notches, indicating and registering mechanism operated by said lever, a series of audible signals located inside the casing adjacent to said notches, and a projection from said latch adapted to engage and sound the signal devices, substantially as described.

5. A cash-register comprising in its construction a casing having two slots and two independent indicating and registering mechanisms, each of said mechanisms consisting of a series of detents along the side of the slot, a lever extending through said slot and carrying a latch adapted to engage said detents, the overlapping registering-wheels ff^4 having numerals on their sides, a pawl carried by the lever to actuate said wheels, and a plate attached to said lever and bearing numerals adapted to show through an opening in the casing.

6. In a cash-register, the combination with a casing having a slot in its front and a series of detents or notches at one side of the slot, of a single lever extending directly through said slot and carrying a laterally-movable latch adapted to engage said notches, a laterally-movable plate adapted to be moved across or recede from said notches, and indicating and registering mechanism operated by said lever, substantially as described.

7. In a cash-register, the combination with a casing having a slot in its front and a series of detents or notches at one side of the slot, of a single lever extending directly through said slot and carrying a laterally-movable latch adapted to engage said notches, a laterally-movable plate adapted to be moved across or recede from said notches, a drawer, means carried by said drawer for moving said plate, and indicating and registering mechanism operated by said lever, substantially as described.

8. In a cash-register, the combination with the drawer, and the casing having the slot provided with notches a^3 in its edge, of the lever B having a latch to engage said notches, the plate or bar D fitting the inside of the casing and having inclined slots d, projections from the casing entering said slots d, and means operated by the drawer to elevate said bar to cause it to move across the notches a^3, substantially as described.

9. In a cash-register, the combination with the casing having the slot provided with notches a^3, of the lever B having a latch to engage said notches, and having a pawl f', the ratchet-wheel f having a pin f^3 on its hub and having numerals on its side, the notched wheel f^4 overlapping the wheel f and adapted to be moved by the pin f^3 and also having numerals on its side, and the pointer g having its edge adapted to define the numerals on the two wheels that are to be read together.

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

LAWRENCE T. BACKUS.

Witnesses:

A. W. HARRISON,

HARRY Y. DAVIS.