

(No Model.)

2 Sheets—Sheet 1.

W. G. LATIMER.
CASH REGISTER.

No. 532,423.

Patented Jan. 8, 1895.

Fig 1.

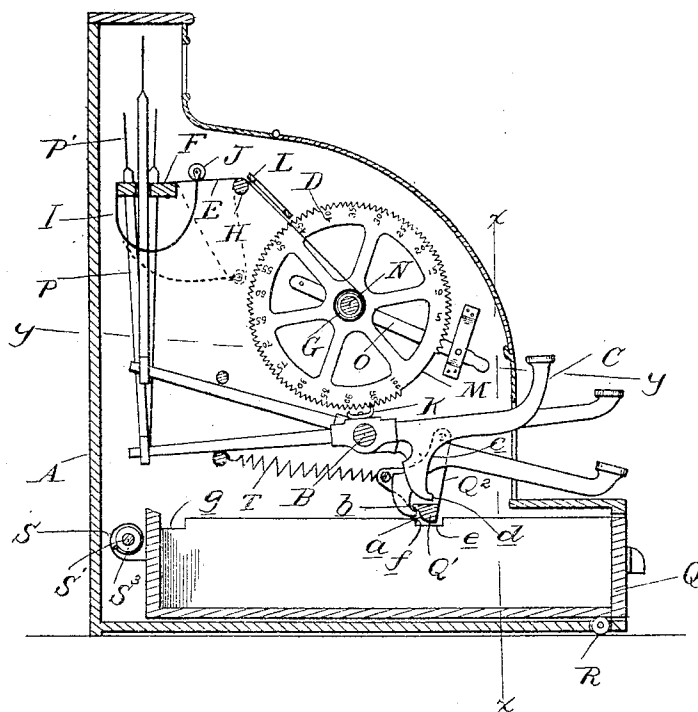
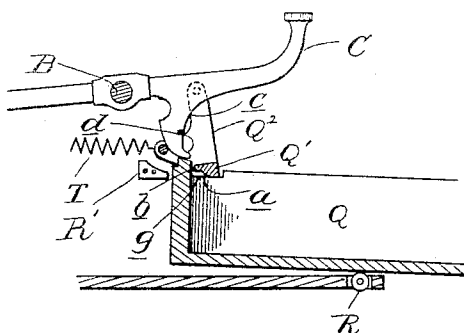


Fig. 3.



Witnesses.
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UNITED STATES PATENT OFFICE.

WILLIAM G. LATIMER, OF DETROIT, MICHIGAN, ASSIGNOR TO THE VICTOR CASH REGISTER COMPANY, OF SAME PLACE.

CASH-REGISTER.

SPECIFICATION forming part of Letters Patent No. 532,423, dated January 8, 1895.

Application filed September 19, 1893. Serial No. 485,895. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM G. LATIMER, a citizen of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Cash-Registers, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention consists in the peculiar construction, arrangement and operation of the registering mechanism and the actuating mechanism therefor, and the peculiar construction of the indicating mechanism, and the peculiar construction of the cash drawer and its co-operation with the operating mechanism of the registering and indicating devices, all as more fully hereinafter described.

In the drawings, Figure 1 is a vertical, central, longitudinal section through my improved cash register. Fig. 2 is a vertical section thereof on line $x x$ showing the front of the casing removed. Fig. 3 is a similar section to Fig. 1, showing the keys and cash drawer in different position. Fig. 4 is a perspective view, showing the drawer and its locking latch. Fig. 5 is a horizontal section on line $y y$, Fig. 1.

A is a suitable casing supporting the operating parts of the machine and having a hinged front section or door A', whereby the internal portions of the machine may be observed.

B is a transverse shaft secured in the sides of the casing and upon which are pivoted a series of keys C, each key having a definite value and marked to indicate that value. I preferably employ a marking for the keys, which show figures in multiples of five up to one dollar, and with a gradually increasing series of dollar keys, as high as desired.

D are registering wheels, one for each key, marked preferably on the side with increasing multiples of the key value. Each of these wheels is provided with an actuating device tending to rotate it about its axis; the actuating device which I preferably employ consisting of a tape E secured at one end to a cross-bar F and at the other end is attached to a hub G of each registering wheel D, pass-

ing over an idler pulley or guide bar H between.

I is a spring having a cross-head at its upper end in the shape of a roller J, bearing upon the tape E between the cross-bar F and the idler H, acting with its tension to draw the tape downward and thereby uncoil that portion which is wound upon the hub of the registering wheel and thereby rotate that wheel. The wheel is held from movement by means of a pallet K, secured upon the key lever over its pivotal point and so arranged that the actuation of any key lever will allow its registering wheel to move one notch. The registering wheel forms a scape wheel and with the pallet on the key lever forms an escapement, the power being applied through the spring I and tape E.

L is a slotted bar arranged across a suitable point in the tape and through which figures on the tape may be read, these figures indicating the number of revolutions of each registering wheel, and in order to properly separate the figures so that there may be no mistake as to the number of revolutions, I provide each registering wheel with a plain portion M at a point in its circumference, so that when it reaches such plain portion the wheel will slip, say ten teeth, allowing the tape to move a sufficient distance to bring one number out from the slot in the bar L and bring a new one into proper position to be read.

The tapes E are marked as shown in Fig. 4, the marks indicating the total of the amounts registered on the registering wheels; that is to say, the wheel farthest to the left is a one cent registering wheel and the total amount registered during one revolution is one dollar, which at the completion of the first revolution of the wheel is indicated by the figure 1 on the tape. The second indicates 2 and so on. The next adjoining wheel is a two cent wheel and the first full revolution thereof registering the amount of two dollars, which causes the figure 2 on the tape to appear. The second revolution causes the figure 4 to appear and so on. The third and remaining wheels increase their numbering in a like manner, the third being a three cent wheel, the fourth a four cent wheel and so on to the last wheel,

the indicating marks on the tapes being arranged accordingly.

The wheels D are journaled upon the shaft N, which I preferably support in levers O at the ends, so that when desired, the registering wheels may be lifted from engagement with the pallet to be returned to their initial position.

When it is wished to read the numbers on the tapes and wheels it is only necessary to open the door A' in the front of the casing.

Upon the rear of each key is secured a tablet rod P, bearing at its upper end, a tablet P' indicating the value of the key depressed, which is exhibited through a glass panel in the front of the casing in the usual manner.

Q is a cash drawer below the keys.

Q' is a universal bar suspended from links Q² at the ends of the casing. This bar is provided on its rear face with the curved or inclined face *a* and the locking lug or lip *b*. Each key forward of its pivotal point is provided with a curved arm *c* having a corresponding locking lug *d* at its lower end, adapted to engage with the locking lug on the universal bar. The universal bar engages in notches *e* in the top of the sides of the cash drawer, when the cash drawer is in its closed position, thereby locking the universal bar from movement until the drawer shall have been opened. Opening the drawer therefore is the first thing to do in the operation of my machine. In opening the drawer, the shoulder *f* at the rear of the notch *e* will strike the curved face of the universal bar Q' and move that bar forwardly to the position shown in Fig. 3, free of all the keys, and in which position any of the keys may be operated. The operator draws out the drawer until it moves past its central point and tilts upon the roller R at the forward end of the casing. In this position, the rear end of the drawer locks on the front edge of the locking lug R', while the universal bar engages into notches *g* at the rear of the sides of the drawer. The machine is now in position for the operation of any of the keys. Depression of the forward end of the key lever will rock the arm *c* rearwardly and downwardly, and striking the rear end of the cash drawer will depress the same sufficiently to disengage it from the locking lugs R' when the tension of the coil springs S will rotate the shaft S' winding up the cord S² upon the drum S³ and quickly drawing the drawer to its closed position. At the same time, the spring T will draw the universal bar Q' into engagement with the arm *c* of the actuated key and lock it in its depressed position, returning the parts to the position, shown in Fig 1, thus maintaining the actuated key depressed with the tablets elevated and exposed to view until the next operation.

While the cash drawer is closed, and the parts are in position as shown in Fig. 1, no key can be operated, the bar Q' serving not only as a lock to hold down the operated key or keys,

but also to prevent the operation of any of the unoperated keys. Thus the opening of the drawer, not only allows the return of the depressed keys, but permits the operation of any desired key or keys of the series.

While I have shown the single bar Q' effecting a lock for both the operated and unoperated keys, I do not desire to limit myself to such functions for said bar.

What I claim as my invention is—

1. In a cash register, the combination with a registering wheel and key, of a numbered tape coiled on a portion of said wheel, and means acting on the tape to draw the same from and actuate the wheel when released by said key, substantially as described.

2. In a cash register, the combination of a key, the registering wheel, a numbered tape coiled about the hub of the wheel, a spring to draw said tape to rotate the wheel, and means for controlling the rotation of the wheel from the key, substantially as described.

3. In a cash register, the combination of a wheel, a key, a numbered tape connected to the wheel, a spring actuating the tape to rotate the wheel, and a scape lever actuated by the key to control the rotation of the wheel, substantially as described.

4. In a cash register, the combination of a toothed registering wheel having a broad interdental space on the toothed section, a key, a tape, a spring for maintaining a tension thereon, said tape actuating the wheel, a scape lever for controlling the wheel on the actuation of a key, and a slotted bar across which the tape moves and beside which the figures thereon are adapted to be read, substantially as and for the purpose described.

5. In a cash register, the combination of a series of register controlling keys, a lock for all the unoperated and the operated keys in the closed position of the cash drawer, and connections whereby the opening of the cash drawer releases said locks and returns the operated keys to their initial position, and permits the operation of any key in the series, substantially as described.

6. In a cash register, the combination with a series of keys, and indicating devices actuated thereby, of a lock to hold an actuated key depressed, and a cash drawer adapted to release said lock upon the opening thereof, substantially as described.

7. In a cash register, the combination of register controlling devices comprising a series of keys, a cash drawer, and means for closing the cash drawer rendered operative by the operation of the controlling devices, substantially as described.

8. In a cash register, the combination of a series of register controlling keys, a cash drawer, a motor acting to close the drawer, a stop or lock for holding the drawer open, and means for releasing the lock by and upon the operation of any one of the register controlling keys, substantially as described.

9. In a cash register, the combination of a

series of register controlling keys, a cash drawer, a spring acting to close the drawer, a stop or lock for holding the drawer open, means for releasing the lock by the operation of any 5 of the keys, and a lock for the operated key or keys applied by the closing of the drawer, substantially as described.

10 10. In a cash register, the combination of the register actuating devices, a cash drawer, a spring acting to close the drawer, a stop or lock for holding the drawer open, means for releasing the lock by the operation of the register actuating devices, and a lock for the register actuating devices applied by the closing 15 of the drawer, substantially as described.

11. In a cash register, the combination of a series of register controlling keys, a cash drawer, a spring acting to close the drawer, a stop or lock for holding the drawer open means

for releasing the lock by the operation of any 20 key, and a lock for all the operated and unoperated keys, applied by the closing of the drawer, substantially as described.

12. In a cash register, the combination of the keys, the arms *c* thereon, the universal bar 25 *Q* swung below the keys, and connection between the cash drawer and said bar, whereby it acts as a lock for the keys in the closed position of the drawer, and is moved into its unlocked position as the drawer is opened, 30 substantially as described.

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

WILLIAM G. LATIMER.

Witnesses:

M. B. O'DOHERTY,

OTTO F. BARTHEL.