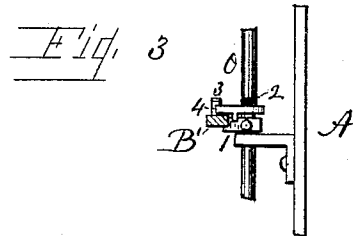
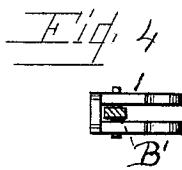
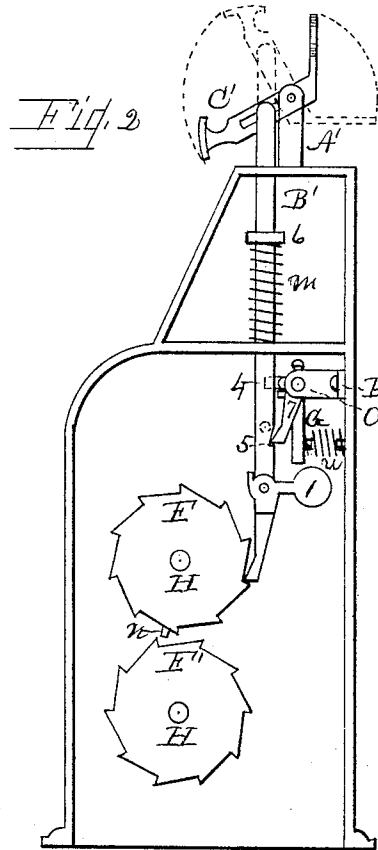
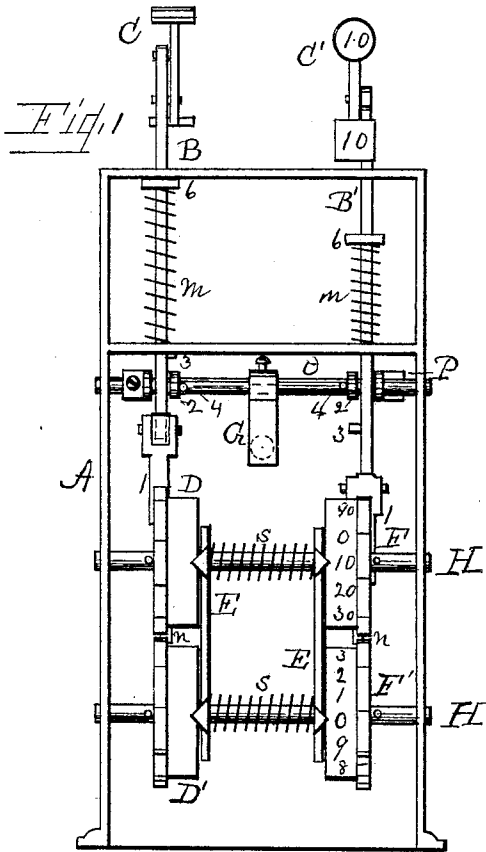


(No Model.)

J. A. KIENARDT.
CASH REGISTER AND INDICATOR.

No. 477,598.

Patented June 21, 1892.



Witnesses

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Inventor

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UNITED STATES PATENT OFFICE.

JOHN A. KIENARDT, OF DAYTON, OHIO, ASSIGNOR OF ONE-HALF TO ALBERT E. SINGER, OF SAME PLACE.

CASH REGISTER AND INDICATOR.

SPECIFICATION forming part of Letters Patent No. 477,598, dated June 21, 1892.

Application filed August 28, 1891. Serial No. 404,038. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. KIENARDT, 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; and I do hereby declare that the following is a full, clear, and exact description of the invention, which 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 of reference marked thereon, which form a part of this specification.

My invention relates to improvements in cash registers and indicators adapted for use by storekeepers to accurately record the sales during a day or other period of time and for indicating to the purchasers the exact amount of their purchases, which is disclosed by an amount shown on an extension of the operating key or keys, when the same is brought into view, and can be read from the front or rear of the machine.

The functions of my invention are similar to inventions in use, the object being to simplify the mechanism and thereby obviate the liability to derangement.

The several features of my invention will be fully hereinafter set forth and specifically claimed.

The mechanism is illustrated in the accompanying drawings, in which—

Figure 1 is a front elevation of the machine with the front plate removed. Fig. 2 is a side elevation with the end wall removed. Fig. 3 is a view in detail of the disengaging mechanism. Fig. 4 is a top view of the gravitating pawl.

Like letters and numerals designate like parts throughout the several views.

The case A is used simply to support the operative mechanism and for which a metallic frame may be substituted and the whole inclosed in an ornamental metallic or wooden case. In the illustration but two keys are shown and a series of recording-wheels; but in a practical machine there are duplicates of these parts suitable to various denominations of money.

On the top of the case or frame are the standards A', to which the operating-keys C C' are pivoted. Within the ends of said frame are bearings for the shafts H H, and within standards P, attached to the back of the frame, is held the shaft O, on which the pawls 7 are rigidly attached.

The operating-key comprises an angular body and orifice for a pivot near its center, a longitudinal slot at the left of its center, a curved surface at the left end, on which are printed numbers and which is engaged by the finger of the operator, and on the opposite end is a circular head on which tablets with numbers are attached, to the front and rear, said numbers corresponding to the number on the finger end of said key.

The dotted lines C', Fig. 2, show the position of the key before the same is depressed by the finger, and the solid lines show the same when depressed. The bar B' is held in quadrangular orifices in the frame, in which the same freely moves. At the top end of this bar is a pin, which engages the slot of the operating-key. Beneath is the collar 6, against which the spiral spring m bears. Near the lower end is the notch 5, which is engaged by the end of the pawl 7, and an orifice at the lower end for a pin, on which is held the pawl 1. The lower end of the spiral spring m rests on a division of the frame, and the function of said spring is to hold up the bar. The pawl is pivoted to this bar, and said pawl comprises the lower part, adapted to engage the ratchet-teeth of the wheel F, a forwardly-projecting part at the top to arrest or limit the forward movement of the lower end of said pawl, and an open projecting part to the rear, which serves as a weight to carry said pawl into engagement with said wheel. On the inner surface of the bar is the pin 3, which engages the loose arm 4, pivoted to the shaft O. On this shaft is rigidly attached the pawl 7, to which in a practical machine a series of like pawls would be attached, the function of which is to engage a notch in the bar and thereby holding down the same. The effect of this is to hold the outer end of the operating-key up, thus exposing to view the number impressed thereon.

At Fig. 3 the relation of these parts are shown as would appear from a top view in Fig. 2. B' is the bar, with its pin 3; O, the shaft, with the pawl 1 rigidly attached; arm 4, with its lug projecting over a lug on the upper side of the pawl, and the pin 2 to hold the arm from moving laterally on said shaft. The arm G is fixedly attached to the shaft, and between its lower end and the frame is the spiral spring *u*, which causes the pawls to press forward against the bar and to engage the notch of the same.

At C, Fig. 1, the operating-key is shown in its normal position, or before it is depressed. As the said key is being pressed down, the pin 3 engages the arm 4, and thereby disengages the right-hand pawl from the bar and the key C' is raised to its normal position. In the upward movement of the bar the pin carries up the end of the arm 4 and passes it freely. The effect of depressing a key will release one or more keys, which may be held down by their respective pawls, and thereby is exposed to view the number on the rear end of said depressed key, it being the amount of the purchase-money, if the proper key has been depressed to make the proper record in the machine.

H H are two shafts held rigidly in the sides of the frame. On these are placed the two pairs of wheels D D' and F F', and pins are used on the outside of all of them to prevent their moving laterally. Plates E E, which embrace the shafts, are held against the inner surfaces of said wheels by the spiral springs S S to prevent said wheels moving only as they are operated by their respective pawls. On these plates are points to indicate the number to be read in taking the record of the machine. On the peripheries of these wheels are printed numbers. That on F from a "0" to "90," on ten equal divisions, and a full turn of this wheel would show one dollar on the lower wheel, likewise divided, which would show the amount in dollars. The movement is given by the pin *n* in the upper wheel engaging a tooth in the lower wheel and carrying the same the space of one division. The first number on the upper wheel must be the same as that on the key with which the same is connected, and this relation must be preserved throughout any number of keys.

The operation is thus: Strike the key with "10" on its face to record the purchase of ten cents and you have "10" exhibited on the rear disk, which is brought into view and is so retained by the pawl engaging the bar until another key is struck, when the former is disengaged and assumes its normal position. The first movement of the key carries the ten-cent wheel forward and shows the pointer of the indicator-plate opposite of "10." Ten movements would show "1" on the lower wheel or dollar-wheel.

On the various keys a variety of numbers are used in a practical machine; but the additional parts are but a duplication of what has been shown and described. The recording-wheels give the sum of the amount of the value of their respective keys, as in like machines.

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

1. In a registering and indicating machine, the combination of the operating-key pivoted to standards on the top of the frame, said key provided with fingers and indicating-disks, both having the same number, the same being provided with a slot, the movable bar, with spring to elevate the same and provided with a pin to engage said slot, the gravitating pawl pivoted to the lower end of said bar, and the numbered ratchet-wheel engaged by said pawl, substantially as set forth.

2. In a registering and indicating machine for the purpose of holding the operating-key in position to exhibit the number on the rear disk, the combination of the shaft O, arm G, rigidly attached to said shaft, the spiral spring *u* to partially rotate said shaft, the pawl 7, carried forward by said spring, the notch 5 of the movable bar, and the pivotal operating-key connected with said bar by means of a pin and slot, substantially as set forth.

3. In a registering and indicating machine for the purpose of releasing the operating-key held in position to indicate the amount of purchase, the combination of the operating-key, the shaft O, the pawl 7, rigidly attached thereto, said pawl having a lug with horizontal face, the arm 4, held loosely on said shaft and provided with a lateral lug to engage the top of said pawl, the movable bar provided with pin 3, said bar being other than the one with which the exposed key or number is connected, said bar in its descent releasing the said key that it may resume its normal position by the action of its elevating-spring, substantially as set forth.

4. In a registering-machine, the combination of the binding-plates E E, the spiral springs S S, and the numbered ratchet-wheels D and F, and engaging-wheels D' and F', said binding-plates being provided with indicating-points to designate the numbers to be read on the respective wheels, substantially as set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

JOHN A. KIENARDT.

Witnesses:

B. PICKERING,
B. F. HERSHEY.