

W. G. LATIMER.
CASH REGISTER AND INDICATOR.

No. 474,993.

Patented May 17, 1892.

Fig. 2.

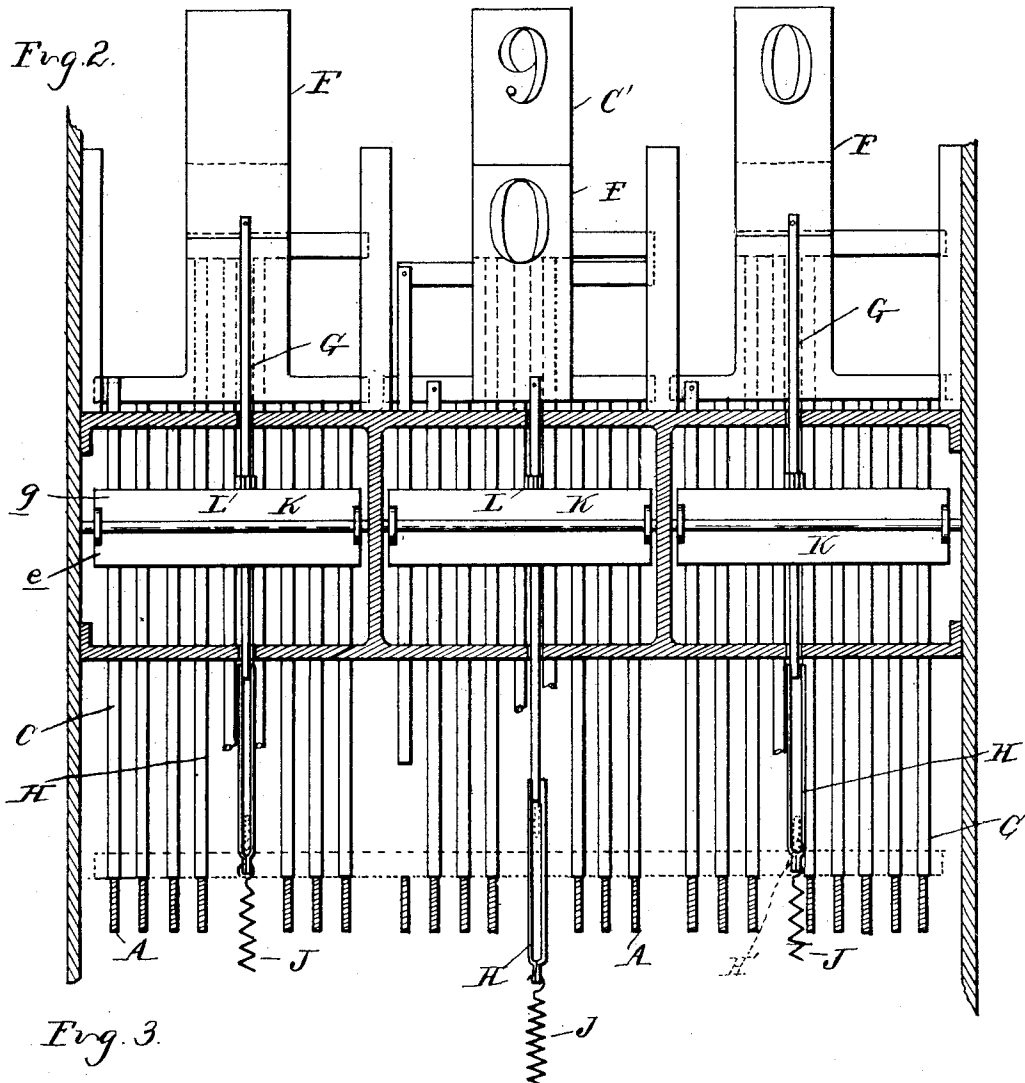
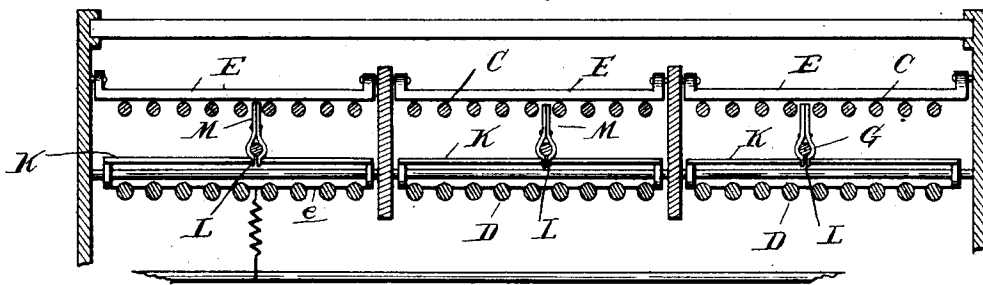


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

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

CASH REGISTER AND INDICATOR.

SPECIFICATION forming part of Letters Patent No. 474,993, dated May 17, 1892.

Application filed January 21, 1892. Serial No. 418,741. (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.

10 This invention relates to new and useful improvements in cash-registers; and the invention relates to the construction of the indicating mechanism, all as more fully hereinafter described.

15 In the drawings, Figure 1 is a vertical central section through a cash-register embodying my invention. Fig. 2 is a section thereof on line $x x$. Fig. 3 is a cross-section on line $y y$. Fig. 4 is a cross-section on line $z z$.

20 I have shown my improvement applied to a cash-register such as shown in my patent, No. 409,107, of August 13, 1889, and embodying three banks or series of keys. Each series of keys comprises nine keys numbered from "1" to "9." The first bank to the right represents units; the next bank tens, and the third bank dollars. In previous machines of this kind a stationary cipher-sign has been used to be read in connection with the digits. In my present construction I use a movable cipher-sign, and it is the construction and operation of the cipher-sign, in combination with the indicating and registering mechanism, that is the subject of my present improvement.

35 A are the keys pivoted upon the transverse shaft B. Each key at its rear end actuates a tablet-rod C and a register-actuating rod D. The rod D carries suitable devices—such as the swing-rack D'—to move the registering mechanism.

40 The tablet-rods C each carry at their top a tablet C', having marked thereon a suitable number corresponding with the value of the key. Each tablet-rod is provided on its rear with a lug a , having the inclined faces b and c and the horizontal face or shoulder d . In the rear of each group of tablet-rods is a pivoted bar E, which extends entirely across each group, each one being independent of the other bars. As a key in any group is actuated, it carries up its tablet-rod. The incline b

on the lug a will move out the bar E of that group a sufficient distance to disengage it from the shoulder d of any previously-operated tablet-rod and allow it to fall. As soon as the tablet has been raised a sufficient distance to carry the lug a above the bar E, that bar will be caused to fall beneath the shoulder d and prevent the descent of the actuated tablet-rod. Thus the actuation of a key in any group will cause any other previously-operated key in that group to fall, while the actuated tablet-rod will be held up. The action of the tablet rods or keys of one group have no connection with the operation of the tablet-rods or keys of another group. With this construction it is evident that if I were to first indicate "53" and then have a succeeding sale in which "3" alone were to be indicated, that if I struck the 3-key it would continue in its raised position, but the "5" would not fall, as it would be in a tens-group of tablet-rods, which would not be effected by the actuation of the units-group.

Instead of making connection between all the groups, so that the moving of a key in one group will throw down all the tablet-rods in the other groups, I obscure from view the tablets of the groups in which a key is not actuated, providing means, as before described, for throwing down the previously-actuated tablets in each group upon the actuation of another key in that group. To accomplish this, I arrange a cipher-tablet F in front of the tablets of each group. This tablet may either carry a cipher or be a blank, as desired; but in the units and tens banks I preferably arrange it with a cipher, while in the dollars-bank it may be made blank. Each one of these ciphers is carried upon a rod G, moving in suitable guides in the frame of the machine between the tablet-rods C and the register-actuating rods D. At its lower end there is a yoke H, with which a finger H' upon the universal bar I engages.

J is a spring acting to throw down the cipher-sign and hold it normally in its lowest position.

In Fig. 1 I have shown the cipher-sign in its elevated position, and in Fig. 2 I have shown two cipher-signs raised and one retracted. It is evident that as the bar I is a bar universal to all the keys that upon the

actuation of any key in any bank all of the cipher-signs will be lifted and will obscure the view of any tablet which will be raised behind it. I provide suitable means for holding up this cipher-tablet in every bank of keys in which the keys are not moved. For instance, as shown in Fig. 2, the 9-key in the tens group alone has been actuated and the dollars and units cipher-signs remain up, while the tens cipher-sign is lowered and the "9" is exhibited. Any suitable mechanism may be employed to effect this result; but that which I prefer to employ in this machine consists of a vibrating wing K, pivoted transversely across the rear of the register-actuating rods D. The pivotal point of this wing is substantially at its middle, so that there is an arm above and an arm below its pivotal point. The rod G is provided with a shoulder L, which preferably is provided with an extension M, passing between two of the tablet-rods and acting as a guide to prevent the twisting or turning of the rod G in its vertical movement.

The register-actuating rod is provided with a cut-away portion N, in which the lower arm *e* of the wing engages. Upon the actuation of any key in a group, the register-actuated rod, the tablet-rod, and the rod G will be carried up. As the register-actuating rod rises, the arm *e* of the wing will be actuated by the incline *f*, withdrawing the upper arm *g* thereof out of the path of the shoulder L, and will hold it out of the path of that shoulder until said shoulder has passed the arm *g* in its descent, thus leaving exposed to view the tablet which has been actuated in that group. Now suppose the indication to be, as shown in Fig. 2, of ninety cents and a sale of one dollar is made, the operator depresses the 1-key in the dollars-bank, which will carry up all the cipher-signs, the 9-tablet in the tens bank will remain elevated, and the cipher-sign in the dollars-bank will fall in the manner previously described, but the other two cipher-signs will remain in their elevated position for the reason that the wing will be beneath the shoulder L. The operation of this will be evident from the fact that it is necessary to actuate a registering-rod in any group in order to throw out of engagement with that shoulder the arm *g*, and the only group in which that has been accomplished is in the dollars-group.

To prevent the simultaneous operation of two keys in a bank, I form a trough O beneath the keys in front of their pivotal point, and on their lower faces I form a lug P. In the trough are placed a number of circular disks or spheres Q, held normally together by the tension of springs Q' at either end. On the depression of a key the spheres will separate a

sufficient distance, so that one lug only may pass between them, which movement will cause the end balls to bear against the stops R, thereby effectually preventing the depression of any other key, for there will not be a space sufficient for the lugs P to pass between the spheres.

What I claim as my invention is—

1. In a cash-register, the combination, with a series of independent groups of indicating devices and independent means for elevating the same, of a shield for each group and means for obscuring an elevating-indicator upon the actuation of a key of another group, substantially as described.

2. In a cash-register, the combination, with a series of groups of keys and corresponding groups of tablets actuated thereby, and means for retaining the tablets in an actuated position, of a shield for each group and means arranged to obscure the actuated tablets in groups in which a key is not operated, substantially as described.

3. In a cash-register, the combination, with a series of groups of keys and corresponding groups of tablets actuated thereby, of independent holding-up mechanism for each group of tablets, and a shield for each group adapted to obscure the actuated tablets in groups in which a key is not operated, substantially as described.

4. In a cash-register, the combination, with a series of groups of keys and a corresponding group of tablets actuated thereby, of a shield for each group, elevating means common to all the shields, a holding-up latch for each shield, and means for holding the latch of any shield inoperative upon the actuation of a key in that group, substantially as described.

5. In a cash-register, the combination, with a series of groups of indicating devices and actuating devices therefor, of a shield for each group, a connection between the actuating devices of each group and all of the shields, a latch for each shield, and a tripping device for each latch operated by the actuating mechanism of each group, substantially as described.

6. In a cash-register, the combination, with the keys, the tablet-rods, and registering-rods, of a shield, a supporting-rod therefor between the registering-rods and tablet-rods, and a latch normally in operative position, but moved into inoperative position by a shoulder on the registering-rod, substantially as described.

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

WILLIAM G. LATIMER.

Witnesses:

M. B. O'DOHERTY,
N. L. LINDOP.