

(No Model.)

E. RECTOR.  
CASH INDICATOR AND REGISTER.

No. 420,018.

Patented Jan. 21, 1890.

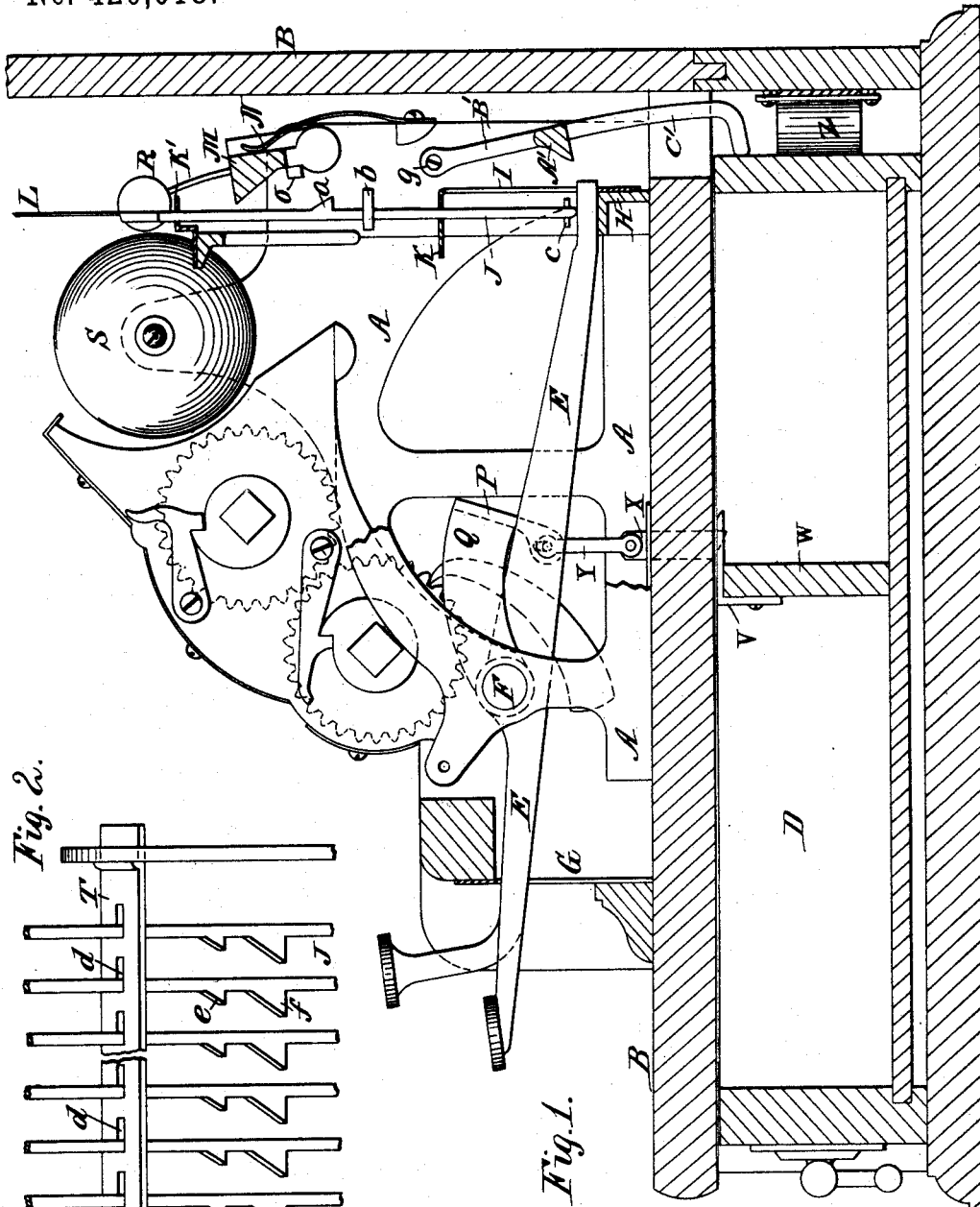


Fig. 2.

Fig. 1.

Witnesses:  
W. C. Jirdiniston.  
Charles Billon

Inventor:  
Edward Rector

# UNITED STATES PATENT OFFICE.

EDWARD RECTOR, OF CINCINNATI, OHIO.

## CASH INDICATOR AND REGISTER.

**SPECIFICATION** forming part of Letters Patent No. 420,018, dated January 21, 1890.

Application filed October 22, 1889. Serial No. 327,810. (No model.)

*To all whom it may concern:*

Be it known that I, EDWARD RECTOR, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Cash Registers and Indicators, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to improvements in the construction of such machines, by which their simplicity and efficiency are increased, and its novelty will be herein set forth, and specifically pointed out in the claims.

In the accompanying drawings, Figure 1 is a side elevation of a machine embodying my invention, partly in section, and with a portion of the frame-work broken away. Fig. 2 is a detail in perspective of a modification of some of the parts shown in Fig. 1.

The same letters of reference are used to indicate identical parts in both the figures.

The frame-work A, which supports the operating parts of the machine, is contained in the usual case or cabinet B, having at its upper rear side a glass-covered reading-opening (not shown) for the exposure of the indicating-tablets, and provided in its lower portion with a drawer-compartment, in which is fitted the money-drawer D. The operating-keys E are pivoted on a shaft F, extending across the front of the machine. Their front ends project through a slotted guide-plate G at the front of the machine, and are provided with numbered finger-buttons, while their rear ends, normally resting on the cross-piece H of the frame-work, play up and down in the slotted guide-plate I and carry the tablet-rods J, vertically guided in the cross-pieces K K', and having the indicating-tablets L at their upper ends. Each of these tablet-rods has a shoulder a upon its rear side, which co-operates with the pivoted wing or supporting-bar M, which is normally pressed forward by a spring N against a lug O on the side of the frame-work. Heretofore, in the machines having tablet-rods and a supporting-wing of this character, it has been necessary to provide a train of intermediate tripping mechanism between the keys and wing, to push

the latter backward a given distance as a key was operated and its tablet-rod lifted, and then allow it to be thrown forward to normal position by the spring which bears against it; for while the shoulders on the tablet-rods could themselves be made to push the wing backward to enable them to pass above it, it was necessary that the wing be moved farther backward than the shoulder on an upwardly-moving tablet-rod would push it, in order to insure the release and dropping of any other tablet-rod which might be held up by its shoulder resting on the wing. The shoulders on the rods all being the same size, unless their alignment were perfect and the operating edge of the wing perfectly true and the adjustment of the parts exact, the pushing back of the wing by the rising tablet-rod would not always release the elevated rod or rods. This intermediate mechanism between the keys and wing was generally actuated, upon the operation of each key, by a bar which extended across all of the keys and was moved by the operation of any one of them, such as the bar P, which extends across and rests upon the tops of all the keys E, and is hung by side arms Q on the pivotal shaft F of the keys E. This intermediate mechanism was necessarily composed of several parts, was more or less complicated, increased the cost of the machine, and if not well constructed was liable to get out of order. One feature of my invention consists in entirely doing away with such mechanism and causing the supporting bar or wing to be properly actuated directly by the tablet-rods themselves. This I accomplish by providing each tablet-rod with two shoulders or projections, one above the other and the lower one larger than the upper, the upper one being an engaging shoulder to support the tablet-rod upon the wing and the under one a releasing-shoulder for moving the wing farther than it is moved by the engaging-shoulder, for the purpose of releasing the previously-elevated tablet-rod.

In Fig. 1 the upper shoulder a has a beveled upper side to enable it to readily push the wing backward far enough to let it slip by. As the tablet-rod continues to rise the lower shoulder b strikes the beveled under side of

the wing and pushes it backward farther than it was moved by the upper shoulder, and thereby moves it from under the shoulder of any tablet-rod which may be then resting upon it, permitting the latter to drop back to its normal position. The tablet-rod has a pin *c* through its lower end, which strikes the under side of the guide-piece *K* and prevents the rod being thrown upward far enough for the lower shoulder *b* to pass above the edge of the wing. When the operated key is released, the tablet-rod drops back with it until the upper shoulder *a* is arrested by the wing, which holds the tablet-rod elevated with its tablet exposed to view until another key is operated, whereupon this tablet-rod is released in the manner above described and drops back to normal position. There is a gong-hammer *R* carried by the wing *M*, which strikes a gong *S* every time the wing is pushed back by and flips under the shoulder *a* of an operated tablet-rod.

In Fig. 2 I have shown a different form and arrangement of the supporting-bar for the tablet-rods. It consists in this instance of a longitudinally-sliding bar *T*, carried in guides in the side frames and provided with slots *d*, through which the tablet-rods *J* pass. This bar is normally pressed in one direction by a spring—in this instance to the right by a spring *U*, bearing against its left-hand end. Each of the tablet-rods has two shoulders *e f*, each having a beveled upper side and the lower being larger than the upper, as shown. As a tablet-rod is lifted its upper shoulder *e* pushes the bar *T* to the left against the resistance of the spring *U*, the bar flipping back under the shoulder as soon as it has passed. As the tablet-rod is lifted farther upward the lower shoulder *f* pushes the bar *T* again to the left, this time farther than the shoulder *e* had moved it, so that any rods whose shoulders are resting on the bar will be released and drop down. The upward movement of the tablet-rod is arrested in any suitable manner, as by a projection on it striking its guide, when the lower point of the shoulder *f* has reached the lower side of the bar *T* and prevents the shoulder passing above the bar. If desired, the bar *T*, instead of having the slots *d*, through which the tablet-rods pass, may have projections on its sides, with which the shoulders on the rods co-operate in the same manner as with the end walls of the slots *d*.

The money-drawer *D* has a locking-plate *V* secured to the upper side of its central partition-wall *W* about midway of the width of the drawer. A locking-bolt *X*, suitably guided in a vertical hole in the top of the drawer-compartment and having a beveled lower end, takes into a central slot in the locking-plate *V* whenever the drawer *D* is pushed in, and locks it in its closed position. This bolt is supported by a link *Y*, which is connected by slot-and-pin connection to a pendent lug upon the under side of the vibrating bar *P*. Whenever any key is operated and the bar *P* lifted

thereby, the bolt *X* is lifted out of engagement with the locking-plate *V* and the drawer *D* released, whereupon the latter is propelled forward out of its compartment by the spring *Z* bearing against its rear end.

In machines of this character it is desirable to prevent the operation of the machine while the money-drawer remains open, and to thereby compel the attendant to close the drawer after the registry of each sale. To this end I have devised novel and simple means for automatically locking the keys whenever the drawer is opened and unlocking them when it is closed. Extending across the rear of the machine just above and in rear of the ends of the keys is a locking-bar *A'*, which is suitably supported to move over and from over the rear ends of the keys. In this instance it is hung by side arms *B'*, one at each end, upon pivotal supports at *g*, and is free to swing backward and forward. Extending downward from the bar *A'* into the drawer-compartment is an arm *C'*, having in this instance a forwardly-bent lower end. There may be two of these arms, if desired, one at each end of the bar *A'*, and in the drawings they are shown as lower extensions of the side arms *B'*, by which the bar *A'* is supported. When the drawer *D* is locked in its closed position, its rear end, bearing against the lower end of the arm *C'*, holds the bar *A'* back in the position shown in Fig. 1. When any key is operated and the drawer thereby unlocked and propelled forward by the spring *Z*, the bar *A'* swings forward by gravity against the plate *I* and over the ends of the keys *E*, thereby locking the latter from operation. When the drawer is again pushed in, its rear end strikes the lower end of the arm *C'* and moves the bar *A'* back to the position shown in Fig. 1, unlocking the keys and leaving them free to be operated.

The particular form and arrangement of the bar *A'* are not material, and may be largely varied without departing from my invention, it only being necessary that the bar be suitably supported and arranged to move forward over the rear ends of the keys when the money-drawer is opened, and to be moved backward from over the keys by the drawer as the latter is closed.

I am aware that it is not new in machines of this character to provide means for automatically locking the keys from operation when the cash-drawer is opened, and unlocking them when it is closed; but, aside from the radical differences in construction and mode of operation between my invention and the devices heretofore employed for that purpose, my invention is an improvement upon such devices, in that the unoperated keys become locked the moment an operated key has been moved sufficiently to lift the drawer-bolt and release the drawer and remain locked during the further operation of the key.

In the prior devices with which I am acquainted the keys do not become locked un-

til the operated key has been reset to normal position, so that as long as the attendant holds down the front end of the operated key any of the other keys may be operated while the money-drawer remains open.

Having thus fully described my invention, I claim—

1. In a cash register and indicator, the combination, with a series of operating-keys and a movable supporting-bar, of a series of tablet-rods carrying indicating-tablets and actuated by the operating-keys, and each of said rods being provided with two shoulders or projections co-operating with the supporting-bar, one of said shoulders acting as an engaging-shoulder to support the tablet-rod in elevated position, and the other operating as a releasing-shoulder to so move the supporting-bar as to release the previously-elevated tablet-rod, substantially as and for the purpose described.

2. In a cash register and indicator, the combination of the operating-keys E, the longitudinally-sliding bar T, and the tablet-rods J, each provided with the two shoulders *e* and *f*, arranged to co-operate with the bar T, sub-

stantially in the manner and for the purpose described.

3. In a cash register and indicator, the combination of the operating-keys E, the money-drawer D, and the locking-bar A', extending across the rear ends of the keys and arranged to move over the ends of the keys when the drawer is opened, and to be moved from over them by the drawer when the latter is closed, substantially as and for the purpose described.

4. In a cash register and indicator, the combination of the operating-keys E, money-drawer D, locking-bolt X therefor mediate-ly connected with the keys E, spring Z, and the locking-bar A', extending across the rear ends of the keys E and arranged to move over the rear ends of the keys when the drawer is opened, and to be moved from over them by the drawer when the latter is closed, substantially as and for the purpose described.

EDWARD RECTOR.

Witnesses:

CHARLES BILLON,  
W. C. JIRDINSTON.